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Improvement and deployment of the web-based database management system for computer science graduate program

Li-Chuan Fang

IMPROVEMENT AND DEPLOYMENT OF THE WEB-BASED DATABASE MANAGEMENT SYSTEM FOR COMPUTER SCIENCE GRADUATE PROGRAM

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in

Computer Science

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by

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ABSTRACT

This project attempts to address the active and ongoing need for both faculty and student access to graduate student resources; moreover, it addresses the need for an integrated system which possess the capability for additions and utilitarian changes without excessively extensive revisions or modifications. There exists a need for vastly improved database views and report generating capacity. Therefore, the current project has required extensive computer design technique applications aimed toward actual delivery and implementation of the needed improvements.

In addition to the need for enhanced and expanded student and faculty access to relevant data, the improvements must include capability for prompt and accurate information updates; rapid access for advisor; increased scalability, or the ability to adequately serve multiple system users simultaneously; reduced need for manual input, thereby, reducing occurrence of errors; improved security protection; and capability for online advising as provided by the Graduate Coordinator. Overall, the scope and approach must be comprehensive, accurate, adaptable to intended program users, and practical in nature. Thus, extensive analysis and design planning were

necessary from the outset, encompassing a wide range of applications and specifications from actual use considerations to final reports. Perhaps, more than any other single consideration, the new system must be deployed and ready for use.

ACKNOWLEDGMENTS

First, I wish to thank my project advisor, Dr. Josephine Mendoza, for her consistent, strong and persistent support. With Dr. Mendoza’s guidance, I was able to completely and comprehensively analyze, design, and implement the critical phases of this project.

Moreover, I would also like to affirm my indebtedness to Dr. Arturo Concepcion, my project committee member, who assisted me throughout the crucial elements of the system design. I am grateful to Dr. Tong Lai Yu for his expertise and general suggestions.

My appreciation also extends to Mr. Dung Vu and Sunny Lin for their intensive technical support. I am most indebted to Ms. Tiffany Chiang for her consistent expression of ideas, thoughts, and opinions relative to the project.

Lastly, I am extremely grateful for the unrelenting support of several family members, including whole-hearted support from my husband, and particularly my mother and younger brother. Without encouragement from them, I almost certainly would not have progressed as rapidly as I have toward final completion of this project.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Presently, the Department of Computer Science at California State University, San Bernardino utilizes a stand-alone system implementing Microsoft Access 2000 to manage the graduate student database. This has assisted the work of the Graduate Coordinator (GC) and the Program Assistant (PA). The system does feature an array of positive and highly utilitarian features. The system can generate both pre-defined reports and ad hoc reports, insert new student personal information, update existing student records, generate academic statistics, and provide weekly database backup. The reports display attendance status, academic standing as well as completed master projects and theses. The system also generates list of advanced to candidacy students who must be in continuous enrollment. The system is also able to generate GPA for all Computer Science courses taken by the students as well as prerequisites required for the students.

However, the current system suffers from certain limitations which need to be addressed. Significantly, the current system does not allow access by students nor by faculty. Graduate students can not update contact information such as current address, telephone number, or e-mail address. Currently, this is done by filling out a hard copy -Personal Information Update Sheet. Also, advisors can not retrieve the information on their advisees. Moreover, the system lacks scalability. With the current stand-alone system, only one person can use the system at a time.

These limitations were addressed by Mr. Dung Vu in his Master Project - "The Web-Based Database Management System for the Computer Science Graduate Program." Mr. Vu's system used Oracle 9i, designed to facilitate web access to the database information by Computer Science Department faculty and graduate students. The improvements were demonstrated as a prototype and not deployed. Vu's system added useful modules such as dynamic roles and functions; dynamic grouping; searching and task assignment. Students can update their personal information and view their status in the program, courses taken and grades earned. Although Vu's system is a great improvement from the MS Access stand-alone system, it needs further improvement. Vu's system still requires manual input of student grades by the PA. This deficiency was addressed by Ms. Yen-His Chiang in her Master Project, "Advising

Module: Graduate Application System for the Computer Science Graduate Program." Ms. Chiang provided a module that interfaced Vu's system to SIS+ (CSUSB Student Information System). The courses taken and grades earned by students are extracted automatically from SIS+ and entered into the appropriate database tables.

1.2 Purpose of the Project

In Winter 2005 as part of my internship, I analyzed the deficiencies in the web-based system developed by Mr. Dung Vu. The purpose of this project is threefold (1) to remove the deficiencies, (2) to add modules to reflect the changes in the policies of the graduate program in Computer Science, and (3) to deploy the system to be used by the department.

For students admitted since Fall 2003 and opting to do the Master Project option will have to take and pass the oral exam first before being advanced to candidacy and allowed to register for CSCI 690 - Master Project. In Fall 2004, the University replaced social security numbers with student ids in identifying student records. Dung Vu's system used social security numbers. My system will use the university-assigned student identification number.

Also in Fall 2004, the program added a new option – Comprehensive Exam.

The continuous enrollment module in the MS Access Database was not implemented in Vu's system. This project will implement this module. The login module is enhanced by two features: (1) encrypts the passwords to maintain security, and (2) forces the users to change initial passwords at first login. This project uses JSP, Oracle Database Server, and Web-Application Server to provide

- views of the database by the coordinator, faculty and students;
- improved communication access for students, such as emails to professors, committee, coordinator and program assistant;
- enhanced report capability that includes ad hoc and quarterly reports in addition to standard reports.

1.3 Significance of the Project

The proposed improved system will be fully deployed for use by the CSCI Graduate Program.

The Graduate Coordinator will directly advise students online. This will help eliminate the necessity of retrieving student data from numerous printed pages.

Moreover, updating data is difficult when using only a paper format. Computerized data facilitates prompt updates, keeping information current, and maximizing efficiency and accuracy.

Students can update their personal information in connection with current addresses and email addresses. They can also view their academic information, learning about current status, and be informed about the next steps to follow within their academic program. Moreover, if there is any incorrect information, the student can readily notify the Graduate Coordinator about needed corrections.

For the Program Assistant, there will no longer be a need for typing in student personal or academic data. This serves to reduce inevitable typographical errors. Further, the new system permits prompt, accurate report generation, including use of ad hoc reports. Also, the system will provide for alert emails to students, so as to promptly advise students whose grade point averages have fallen below the required 3.0 GPA. The system will also alert students about any courses where they earned at least a C-grade. These represent two examples of alert emails provided, though there exists several others as well.

Faculty advisors will also benefit from the new system. They can quickly view their advisees' academic records, including critical test scores, and these data may assist them in modifying instructional methods as needed without accessing SIS+.

The system can be presented to the CSUSB Graduate Council as a prototype for CSUSB Graduate Coordinator's Database Management System for possible adoption.

CHAPTER TWO

SOFTWARE REQUIREMENTS SPECIFICATION

2.1 Overall Description

2.1.1 Scope

During Winter 2005, I incorporated policy changes to the existing MS Access stand-alone system now in use by the Graduate Coordinator, and comprehensively examined the Web-Based Database Management System for the Computer Science Graduate Program. The intent was to implement changes useful to the coordinator, program assistant, students and faculty.

This project will provide the changes to correct deficiencies and develop practical and new application modules.

The changes are:

- Use the SID (Student Identification Number) rather than the Social Security Number as a student identifier.
- Revise the existing database table structure to accommodate the revised and new database application requirements.

- Implement the report-generation capability which was available in the MS access system but not implemented in Vu's system.

The new modules are:

- Comprehensive Exam Module: Starting in Fall 2004, the comprehensive exam option is the third option available to CSCI graduate students.
- Oral Exam Before Advancement to Candidacy Module: Starting in Fall 2003, students choosing the project option will need to take and pass the oral exam before being advanced to candidacy and register for CS690, the Master's Project. This module will provide guide questions and procedure that the students need to follow.
- Continuous Enrollment (CSCI698) Module: Students who have registered for the maximum number of units required for Project (5 units) or Thesis (9 units) or finished all courses and waiting to take Comprehensive Exam (1 unit) need to be in Continuous Enrollment. This module will

produce at the beginning of every quarter a listing of students who need to be in Continuous Enrollment.

2.1.2 Definitions, Acronyms, and Abbreviations

The following terms are defined as they apply to the project.

Browser - a program that accesses and displays files and other data available on the Internet and other network.

Graduate Coordinator for Advising (GCA) - a faculty member assigned to advise graduate students who have been accepted to the Master Program in Computer Science.

Graphical User Interface (GUI) - an interface for issuing commands to a computer utilizing a pointing device, (such as a mouse), that manipulates and activates graphical images on a monitor.

Hypertext Markup Language (HTML) - a markup language used to structure text and multimedia documents, to set up hypertext links between documents, and used extensively on the World Wide Web.

IEEE - Institute of Electrical and Electronics Engineers.

JSP (JavaServer Pages) - a technology that enables Web developers and designers to rapidly develop and easily maintain, information-rich, dynamic Web pages that leverage existing business systems.

Module - a portion of a program that carries out a specific function and may be used alone or combined with other modules of the same program.

NIC - (Network Interface Card) an adapter circuit board installed in a computer to provide a physical connection to a network.

OC4J - the core J2EE runtime component of Oracle Application Server.

Oracle - a relational database management system developed by Oracle Corp.

Program Assistant (PA) - a staff member in the Computer Science Department who assists the GCA.

SIS+ - Student Information System used by California Sate University, San Bernardino.

SRS (Software Requirement Specification) - a complete description of the behavior of the system to be developed.

Status - the current academic standing of a student who is enrolled in the university - Probation, Conditionally Classified, Classified, Preliminary Advanced to Candidacy, and Advanced to Candidacy.

XML (Extensible Markup Language) - a pared-down version of SGML (Standard Generalized Markup Language), designed especially for Web documents. It allows designers to create their own customized tags, enabling the definition, transmission, validation, and interpretation of data between applications and between organizations.

2.1.3 Product Perspective

Students can login, view personal information, update contact information, customize home page, and change password. Faculty can login, view own advisees, customize home page, and change password. In addition to the functions allowed for the faculty, the Graduate Coordinator can view not only own advisees but also any student or advisee of any faculty member. The Program Assistant can login, customize home page, change password, and update student information. The System Administrator can login, change password, and customize home page.

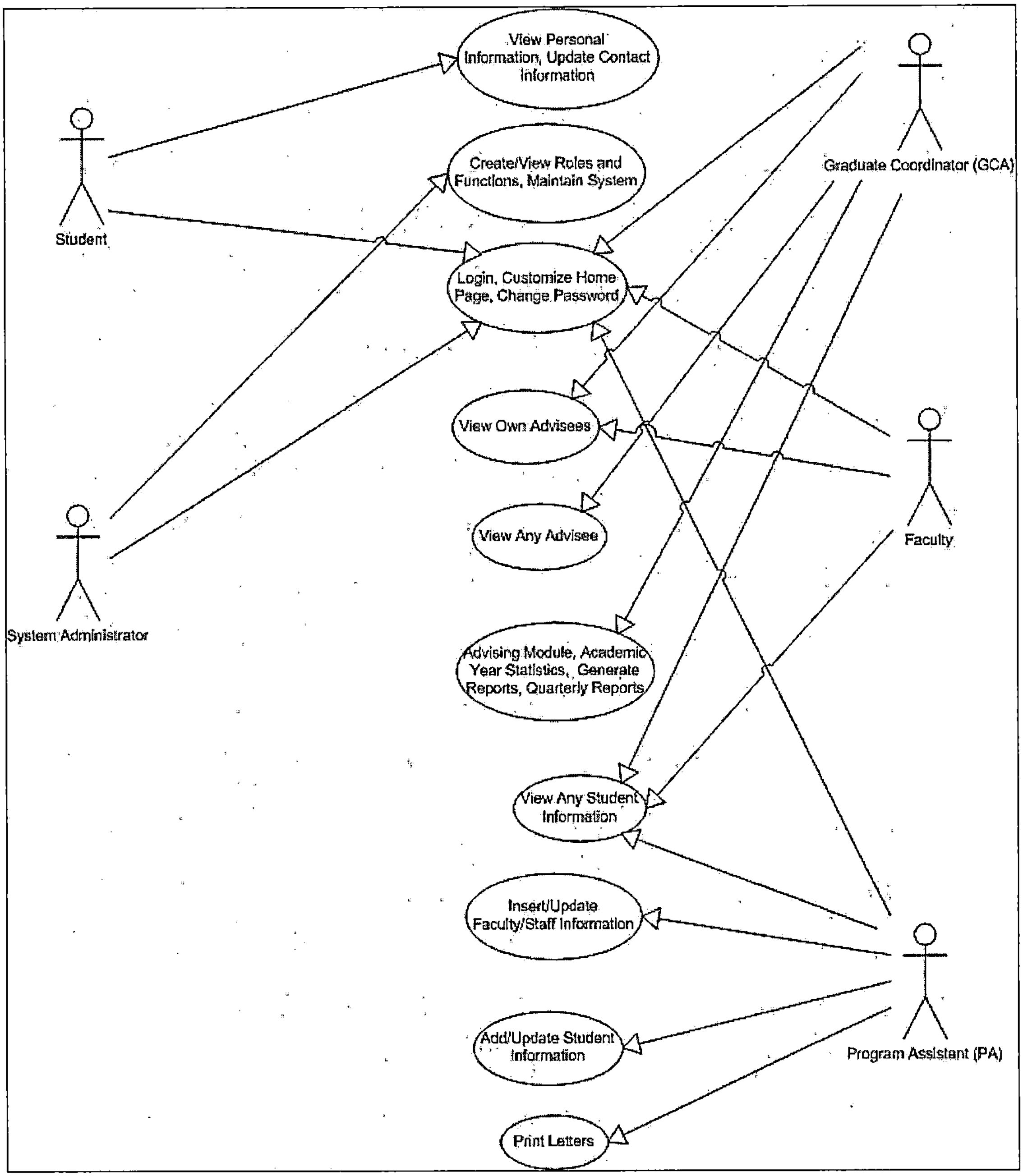

View Personal Information, Update Contact Information
Create/View Roles and Functions, Maintain System
Login, Customize Home Page, Change Password
View Own Advisees
View Any Advisee
Advising Module, Academic Year Statistics, Generate Reports, Quarterly Reports
View Any Student Information
Insert/Update Faculty/Staff Information
Add/Update Student Information
Print Letters
Student
System Administrator
Graduate Coordinator (GCA)
Faculty
Program Assistant (PA)

Figure 1. Use Case Diagram

2.1.4 System Interfaces

The Oracle Application Server with HTTP and Java Container J2EE (OC4J) at the server side interacts with a user at the client side.

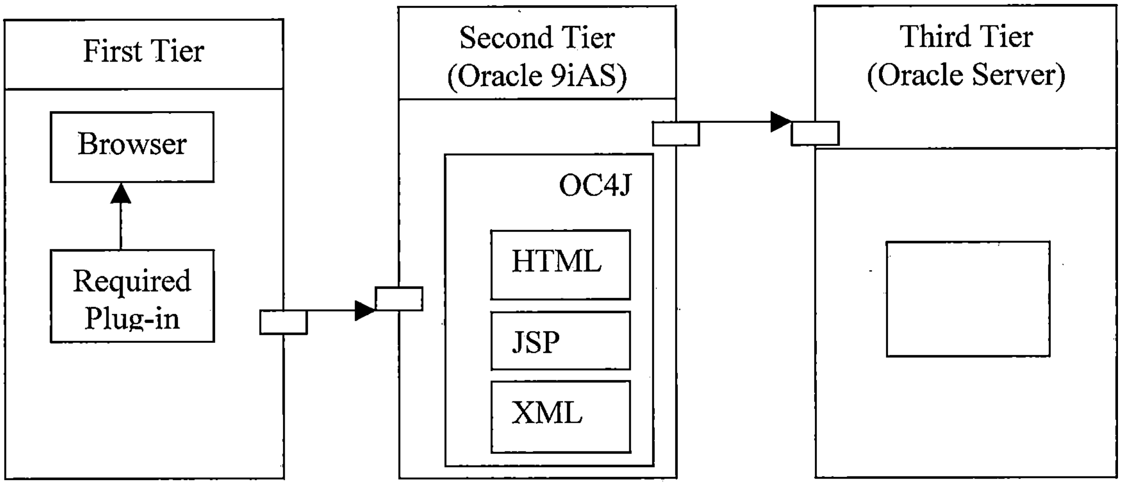


Figure 2. Three-Tier Architecture Diagram

2.1.5 User Interfaces

All user interfaces will be dynamic. They will allow the users to retrieve data from the database for updating or viewing. There are five roles allowed to log into this system - Graduate Coordinator, Faculty, Student, and Program Assistant, and System Administrator.

All users may use any web browser to interface with the client side. There is no restriction on the operating system used on the client side.

2.1.5.1 Faculty Component. This component will provide a faculty member the following functions: change password; communicate with all advisees, selected advisees, all committees, selected committees, graduate coordinator, department chair, dean of Graduate Studies, and program assistant; customize home page; view any student info; and view own advisees only.

2.1.5.2 Graduate Coordinator for Advising Component. This component will provide the Graduate Coordinator for Advising the following capabilities: view the academic year statistics; access the advising module; change password; communicate with all advisees, selected advisees, all committees, selected committees, Graduate Coordinator, Department Chair, Dean of Graduate Studies, and Program Assistant; customize home page; generate reports: pre-defined reports (reports on attendance status and reports on academic standing), ad hoc reports, and quarterly reports (courses taken with at least C-grade, student GPA below 3.0, students off probation, preliminary advanced to candidacy, less than maximum units for CSCI 690, less than maximum units for CSCI 699 and continuous enrollment); update student info; view any advisees; view any student info; view own advisees only (since GCA is also a Faculty Advisor and a faculty member).

2.1.5.3 Program Assistant Component. This component will provide the Program Assistant the following tasks: change password; insert or update comprehensive exam information; customize home page; insert new faculty; insert new staff; insert new student; print letters; update/view student information; update/view staff information; and view any advisee.

2.1.6 Database Interfaces

This application will have the interfaces required to access the Oracle database server through JSP requests made from the web server. The server implementation will use SQL queries embedded in JSP to access the information from the Oracle database server.

2.2 Users

Users are classified as application users and system administrator. Functions common to all users include ability to login, change password customize home page and log out. However, each user will have specific functions as described below.

1. *Application Users* - include the graduate student, program assistant (PA), faculty member, and Graduate Coordinator for Advising (GCA).

   a. *Faculty Member*: views personal and academic information of any student as well as view own advisees.

   b. *Graduate Coordinator:* accesses the advising module, views academic year statistics, generates pre-defined reports, ad hoc reports, and quarterly reports, updates/views any student information, and views her/other advisees.

   c. *Program Assistant:* inserts/updates faculty or staff, updates/views any student information, views any advisees, and prints letters which are automatically emailed to the students by the system.

   d. *Graduate Student:* updates his or her contact information, and views own personal and academic information.

2. *System Administrator* - installs and manages the Oracle 9i Database and the Oracle 9i Application Server. In addition, this person must be knowledgeable in Linux installation and have the

hands-on experience in troubleshooting and database performance tuning, backup and recovery.

2.3 Functions

New product functions include comprehensive exam, oral exam before advancement to candidacy, and continuous enrollment. These functions were added because they were not implemented in Vu's system.

Integration of data with SIS+ has required changes in existing tables. Details of the changes done will be provided in Section 2.3.2.

2.3.1 New Product Functions

The new product functions include:

1. Comprehensive Exam -- allows the system to implement the third master option.
2. Oral Exam Before Advancement to Candidacy -- allows the system to handle a new policy. Students admitted since Fall 2003 and choosing the project option must take and pass the oral examination before being advanced to candidacy and allowed to register for the Project course, CSCI 690. Students are allowed to retake the oral exam, if they failed the first oral exam.

3. Continuous Enrollment (CSCI698) -- allows the system to track registration in CSCI 698 of graduate students who have already enrolled for the maximum units required for a project or thesis course but have not completed the project or thesis, have not done a project presentation or thesis defense, and have not passed the project or thesis document format check.

2.3.2 Modifications to Existing Functions / Tables

The integration of data with SIS+ required changes in the existing database tables as follows:

Table 1. Comparisons between the Old System and New System

Old System	New System
1. Field terms coded as Quarter Year pairs, i.e. CC#### in which CC stands for first two letters of the quarter (Fa - Fall, Wi - Winter, Sp - Spring, Su - Summer), and #### represents the year	3-digit SIS+ coding, yyT: yy represents last 2 digits of year and T stands for the quarter number (1 - Winter, 2 - Spring, 3 - Summer, 4 - Fall)
2. Two tables for Project and Thesis options only	Added third table for the Comprehensive Exam option

Table 2. Yen-Hsi Chiang's Table Structures - Revised

Tables

<table>
<tr><th>Table Name</th><th>Description</th><th>Modification</th></tr>
<tr><td>GRADSTUDENTS</td><td>▪ Main table to store graduate student information</td><td>▪ Dropped columns: SSN, QTR_ADMIT, YR_ADMIT, QTR_CLASSFIED, YR_CLASSFIED, CUR_QTR_START, CUR_YR_START, CUR_YR_END, QTR_LASTATD, YR_LASTATD, TOEFL_SCORES, TOEFL_DATE, GRE_SUBJ, GRE_SUBJ_DATE, QTR_CANDIDACY, YR_CANDIDACY, PRO_THESIS, TITLE, ORAL_EXAM, PASS, PRESENTATION
▪ Added columns: ADMIT_TERM, IS_CS, CLASSIFIED_TERM, CANDIDACY_TERM, CUR_START, CUR_END, TERM_LASTATD, SIS_EMAIL, SIS_PHONE, NATIONALITY, EXIT_ACTION_ID
Modified column names<table>
<tr><td>Old</td><td>New</td></tr>
<tr><td>CSUSB_BS</td><td>IS_BS_CSUSB</td></tr>
<tr><td>CA_RES</td><td>IS_CA_RES</td></tr>
<tr><td>ETHNICITY</td><td>ETHNICITY_ID</td></tr>
<tr><td>PRO_THESIS</td><td>MASTER_OPTION</td></tr>
</table></td></tr>
<tr><td>STUDENTCOURSES</td><td>▪ Stores courses taken by a student
▪ Each student has as many records as courses taken</td><td>▪ Replace QUARTER_ID and YEAR columns with one new column COURSE_TERM VARCHAR2 (5) to represent when the course is taken
▪ Add a new column, DISCOUNT_GRADE CHAR (1), to indicate if this course will be counted in the GPA calculation</td></tr>
<tr><td>GRADES</td><td>▪ Defines letter grade and corresponding numerical grade and associated description, e.g. letter grade "A" corresponds to numerical grade "4.0".</td><td>▪ Replaces old system defined data values of GRADE_ID (letter grade) and SCORES (numerical grade) with SIS+ defined letter grade and numerical grade
▪ Adds a new column, GRADEID_DEFINITION VARCHAR2 (30), to store SIS+ Grade ID definition/description.</td></tr>
</table>

<table>
<tr><th>Table Name</th><th>Description</th><th>Modification</th></tr>
<tr><td>ETHNICSORGN</td><td>▪ Defines ethnic origin of student</td><td>▪ Replaces old system defined data values of ETHNICITY_ID and ETHNICITY with SIS+ ETHNICITY code
▪ Adds a new column, ETHNIC_DEFINITION VARCHAR2 (250), to store SIS+ Ethnic code definition and description</td></tr>
<tr><td>COUNTRIES</td><td>▪ Defines country where international student comes from.</td><td>▪ Adds a new column, DEF_STANDING VARCHAR2 (500), to store long description or definition of country code/id.</td></tr>
<tr><td>COURSES</td><td>▪ Defines courses taught or counted in the graduate program including recommended, prerequisite, elective and core courses.</td><td>▪ Adds the new column, DESCRIPTION VARCHAR2 (1024), to store course description
▪ Adds the new column, GROUPID CHAR (1), to store course group ID
▪ Adds the new column, QTR_OFFER VARCHAR2 (4), to store course offer quarter (F for Fall, W for winter, S for Spring, and X for Summer)
▪ Adds the new column, IS_GRADE_STORE CHAR (1), to indicate whether it is a course whose grade will be stored in departmental database.
▪ Adds the new column, IS_MS CHAR (1), to indicate whether it is a course which will be scheduled in the study plan.</td></tr>
<tr><td>QUARTER</td><td>▪ Defines quarters for courses taken.</td><td>▪ Change data definition for QUARTER_ID
<table>
<tr><th></th><th>Old</th><th>New</th></tr>
<tr><td>Winter</td><td>2</td><td>1</td></tr>
<tr><td>Spring</td><td>3</td><td>2</td></tr>
<tr><td>Summer</td><td>4</td><td>3</td></tr>
<tr><td>Fall</td><td>1</td><td>4</td></tr>
</table></td></tr>
</table>

Table Name	Description	Modification
ACADSTANDING	▪ Defines academic standing of students (probation, conditionally classified, classified, or advanced to candidacy)	▪ Adds a new column, DEF_STANDING VARCHAR2 (500), to store long description and definition of academic standing code.
ADMITSTATUS	▪ Defines admission status of students (probation conditionally classified, probation classified, conditionally classified, classified)	▪ Adds a new column, DEF_STANDING VARCHAR2 (500), to store long description or definition of admission status code.
CURRENTSTATUS	▪ Defines current status of students (Active, Incoming, Graduated, Inactive Attended, On Leave, Dismissed, Never Attended, Academic Probation, Withdraw)	▪ Adds a new column, DEF_CUR_STATUS VARCHAR2 (500), to store long description or definition of current status code.

Table 3. Yen-Hsi Chiang's Table Structures - New Data Tables

Table Name	Description
SIS_EXTRACT	▪ Stores raw data extracted from SIS+
SIS_CLASS_ATTEND	▪ Stores graduate student's classified status (Conditionally Classified, Classified, Advanced to Candidacy) and attending status (Attending, Withdrawn, Dropped)
EXAM	▪ Stores graduate student's exam information, e.g. TOEFL, WREE.
COMEXAM	▪ Stores graduate student's master comprehensive exam information
PROJECT	▪ Stores graduate student's master project information
THESIS	▪ Stores graduate student's master thesis option information

Table 4. Yen-His Chiang's Table Structures - New Lookup Tables

Table Name	Description
TERMS	▪ Academic terms valid at CSUSB. Term is in the format "YYT" where "YY" represents the calendar year and "T" is the Term Suffix which represents the specific quarter term within the calendar year, Winter is 1, Spring is 2, Summer is 3, and Fall is 4
EXAMINFO	▪ Information and rules regarding each specific type of exam, such as WREE, TOEFL
SIS_AA651_EXIT_ACTION	▪ List of SIS+ raw data and associated definition regarding the action which brought about the termination of this matriculation , "GD" for "Graduation", "LA" for "Leave of Absence", "DD" for "Disenroll/Drop"
SIS_EXTRACT_LAYOUT	▪ List of record layouts of SIS+ extract segments and data elements
SIS_RT047_ATTEND_STAT	▪ List of SIS+ raw data and associated definition regarding student's attendance, "W" for "Withdrawn Regular", "N" for "Not Attending", and "1" for "Dropped Regular Retained"
SIS_RT080_ACAD_ACTION	▪ List of SIS+ raw data and associated definition regarding the academic actions, "D" for "Disqualified", "U" for "Probation", "C" for "Continued on Probation", and "M" for "Dismissal"
SIS_RT14C_CLASSIFICATION	▪ List of SIS+ raw data and associated definition regarding to student's classification, "51" for "Conditionally Classified", "52" for "Classified", and "53" for "Advanced to Candidacy"
SIS_RT310_GRADE_TYPE	▪ List of SIS+ raw data and associated definition regarding the type of grading method, "CN" for "Credit/No Credit", "CE" for "Credit by Exam", "AU" for "Audit", and "DC" for "Discount credit on repeats"

Table Name	Description
SIS_RT312_GRADE_RULE	▪ List of SIS+ raw data and associated definition regarding the Grade Rule applicable, "E" for "Extended Education", "U" for "Undergraduate", and "G" for "Graduate" ▪ If a course section has a Grade Rule, this field will be initialized from the course section at the time of registration; otherwise the Grade Rule for the student academic program will be used
SIS_RT345_CLASS_ENROLL	▪ List of SIS+ raw data and associated definition to reflect the student's status (itemize values) in the class section ▪ Active requests, attempts, permits, authorizations and drops are included ▪ Based on the date in the calendar table, a course dropped after the deadline for withdrawal grades will be changed to enrolled with a grade of W

Table 5. Yen-Hsi Chiang's Table Structures - New Exception Handling and Log Tables

Table Name	Description
GRE_EXCP	▪ An exception handling log table to track the failed transaction data on GRE exam
LOG_AUTOPROC	▪ A log table that tracks execution of automation process ▪ Records starting and ending time when each stored procedure was executed
LOG_CLASSCHANGE	▪ A log table that tracks changes made on student's classification status
LOG_COURSEGRADE	▪ A log table that tracks change made on student's courses taken information of STUDENTCOURSES table
LOG_NEWSTD	▪ A log table that tracks new student record inserted into GRADSTUDENTS table by the automation procedure
LOG_STATUSCHANGE	▪ A log table that tracks any student's status change in GRADSTUDENTS table by the automation procedure
LOG_GPA_BELOW3POINT0	▪ A log table that stores those whose GPA is below 3.0
NUKELOG_CTL	▪ A lookup table which provides information for automation procedure to delete the old logs in assigned timely intervals
STDCOURSES_EXCP	▪ An exception handling log table to track failed transactions on migrating student courses taken and grade
STDCOURSES_NOSTORE	▪ A log table to track students' non-stored (filtered out by procedure) courses and grade, such as PE class or non CSCI courses.
STDINFO_EXCP	▪ An exception handling log table to track failed transactions on migrating graduate student's bio/demo data.
STDPREQ_EXCP	▪ An exception handling log table to track failed transactions on inserting prerequisite requirements

Table Name	Description
TOEFL_EXCP	▪ An exception handling log table to track failed transactions on migrating student's TOEFL exam
PROB_EXCP	▪ An exception handling log table to track failed transactions on migrating student's probation information
COMMITTEE_EXCP	▪ An exception handling log table to track failed transactions on migrating student's committee information
MASTEROPTION_EXCP	▪ An exception handling log table to track failed transactions on migrating student' project or thesis information
USER_LOG	▪ A log table that tracks application login activities, such as login time, IP, and the number of failed login attempts.
VISIT_LOG	▪ A log table that tracks application usage by capturing visitor's activities, such as visited pages and visited time.

2.4 Constraints

This system is only as good as the data that has been migrated from MS Access Database and extracted from SIS+. This system depends on the correctness of the data from MS Access Database and SIS+.

2.5 System Characteristics

2.5.1 Reliability

The system should handle failure when the Oracle database is down. The system must provide sufficient connection to the database system to maintain high availability. In this system, there are exception handlers to guarantee that the system is reliable.

2.5.2 Security

The system must be protected from any security risks. The Oracle Database as well as the Oracle Application Server must be protected. This system uses https protocol, which combines normal HTTP interaction over an encrypted secure socket layer. This ensures reasonable protection from eavesdroppers and man in the middle attacks.

2.5.3 Maintainability

The database and web application should be designed to deal with the changes and requirements without any significant modification. This application is implemented modularly so it is easy to maintain.

2.5.4 Portability

The system should be able to expand its service to different machines without any signification modification. Java and JSP are both portable to multiple operating systems and web servers. This system is portable since it is implemented in Java and JSP.

CHAPTER THREE

SOFTWARE DESIGN

3.1 Architectural Design

3.1.1 System Design

The Web-Based Database Management System uses two kinds of Oracle servers; one is the web application server and the other one is the database server. The Oracle Application Server, located behind a firewall, is the only computer that can connect directly to the database server. The Oracle Database Server is located in a private network and only allows the direct connection from the web server. This prevents hackers from cracking the database. For system deployment, the following are needed: (1) Firewall, (2) Oracle Application Server 10g, minimum 512 MB, and (3) Oracle Database Server 10g, minimum 512 MB.

3.1.2 Database Design

The new database design includes revision of several tables to accommodate changes in raw data sources and definitions as well as new database tables for storage of new data definitions. Moreover, specific new tables are created to collect activity information for automating processes in connection with data feed from SIS+.

Table 6. Revision of Database Tables

Table Name	Description	Modification
PROJECT	• Stores graduate student's master project option information	• Add an additional new column, MODIFY_DONE_FLAG CHAR(1), to indicate whether the modification to the project document as recommended by the student's committee has been done by the student
THESIS	• Stores graduate student's master thesis option information	• Add an additional new column, MODIFY_DONE_FLAG CHAR(1), to indicate whether the modification to the thesis document as recommended by the student's committee has been done by the student

Table 7. Newly Created Database Tables

Table Name / Column Name	Description
ADHOCLOG USER_ID SQLNAME SQLSTRING	• Stores the SQL statements which the user creates in the ad hoc reports • Identification number to verify the authorized user • Name of SQL statement which the user creates in the ad hoc reports • SQL statement which the user creates
TASKSCHEDULE SCHEDULE_ID SCHEDULE SCHEDULE_DAYS	• Defines frequencies for reported tasks • Identification number of the schedule • Name of the schedule • Duration of the schedule
ROLES ROLE_ID ROLE	• Defines roles of users (Graduate Coordinator, Faculty, Program Assistant, and Student) • Identification number of the role • A set or group of privileges that can be granted to users
FUNCTIONS FUNCTION_ID FUNCTION FUNCTIONPAGE PRIVILEGE_CODE	• Defines all registered functions to assign to roles and to users • Identification number of the function • Name of the function • JSP page of the function • Execution privilege token of the function
TASKSTATUS STATUS_ID STATUS	• Defines status of a task (denied, completed, failed, not yet evaluated, and uncompleted) • Identification number of the status • Description of the status
ROLEFUNCTIONS ROLE_ID FUNCTION_ID	• Stores functions assigned to each user role • Identification number of the role • Identification number of the function
TASKMANUAL TASK_CODE TASK_ACTION GUIDE	• Defines all pre-defined tasks • Identification number of the task • Brief description of the task • Guide to complete the task

Table Name / Column Name	Description
JOBS JOB_ID JOB JOB_SCRIPT	• Defines pre-defined job for pre-defined tasks • Identification number of the job • Name of the job • Description of the job
TASKBOOK TASK_CODE JOB_ID JOB_ORDER	• Stores jobs in each pre-defined task • Identification number of the task • Identification number of the job • Sequence number of the job within the task
TASKREGSTR TASK_ID TASK_CODE TASK_OWNER TASK_ASSIGNEE DATE_ASSIGNED DATE_DUE DATE_COMPLETE DATE_EXPIRED NOTES STATUS REPORT COMMENTS	• Stores tasks assigned to each student, faculty, or staff member • Identification number of the task • Code of the task • Identification number of the staff who assigns the task • Identification number of the staff or student who needs to complete the task • Date when the task is assigned • Date when the task is expected to be completed • Date when the task is actually completed • Date when the task expires or is no longer valid • Brief note about the task • Status of the task - completed, failed, denied, uncompleted • Comment from the assignee about the task • Comment from the assignor about the task
COMPEXAMFACULTY QTRYR COURSE FACULTY COMPEXAM_ID	• Stores all information for the comprehensive exam • Quarter / year of the comprehensive exam • Name of the core course • Faculty name who made the exam questions • Identification number of the comprehensive exam
LOGINTRACE USER_ID ISEXPIRED CHANGEPWORDDATE LASTLOGIN	• Tracks the user login information • Identification number of the authorized user • Flag to track if the user logins for the first-time • Date when password is changed • Time of last-time login

Table Name / Column Name	Description
JOB_CTL_TB JOB_SEQ RUN_DATE PROC_NAME COMMENTS	• Stores the system job information in the job scheduler • Identification number of the system job schedule • Date when the system job schedule is to be run • Name of the procedure for running the system job • Comments about the system job schedule
STUDENTEMAILLOG STD_ID SEND_DATE ISSEND COMMENTS TERMCODE REPORTCODE	• Tracks all information for emails sent to students • Identification number of the student • Date when email is sent to the student • Flag that indicates if the email has been sent • Content of the subject field of email • Quarter when the email is sent • Name of the report for which email is to be generated
DISMISS STD_ID DISMISS_TERM DISMISS_REASON	• Tracks a student's dismissal history • Identification number of the student • Quarter / year when the student is dismissed • Reason for dismissal
YEARS YEAR	• Defines year range for an academic year • Starting year and ending year for the academic year
STUDENTMAILS STD_ID TERM CATEGORY CONTENT	• Stores the contents of the emails sent to students • Identification number of the student • Quarter / year when email is sent to the student • Type of the email • Body of the email

CHAPTER FOUR

TEST AND MAINTENANCE

This chapter presents the quality assurance process. There are two methods used for testing - unit tests and scenario tests.

4.1 Unit Testing

The unit testing provides a systematic approach for testing the user inputs and intended results of the system and improves the overall quality of the system. The following table shows the unit tests for the system..

Table 8. Unit Tests

Page	Unit	Tests Performed	Result
Login	User Input	• Test valid user • Test invalid user	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Forgot Password	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Change Password	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Communications	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
Customize Home Page	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
	Menu	• Make sure all the menu items work appropriately	Pass

Page	Unit	Tests Performed	Result
View Any Student Info	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
View Own Advisees Only	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Academic Year Statistics	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Advising Link	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Generate Reports	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Quarterly Reports	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Update Student Info	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
View Any Advisee	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Comp Exam Info	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Insert New Faculty	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass

Page	Unit	Tests Performed	Result
Insert New Staff	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Insert New Student	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Update/ View Staff Info	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
Update Contact Info	User Input	• Verify that all fields take expected input • Test invalid data	Pass
	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass
View Student Info	Menu	• Make sure all the menu items work appropriately	Pass
	Buttons/ Links	• Ensure all buttons and links work as expected	Pass

4.2 Test Scenarios

Test scenarios are useful to determine if functional requirements have been met within the user interface. In the following sections, a scenario will be given, then screen shots will display the results.

4.2.1 Main User Login

This page presents the starting point for the system. A student, faculty, Graduate Coordinator, and Program Assistant will be required to enter a user-id and password initially created by the Web-Based Database Management System System Administrator.

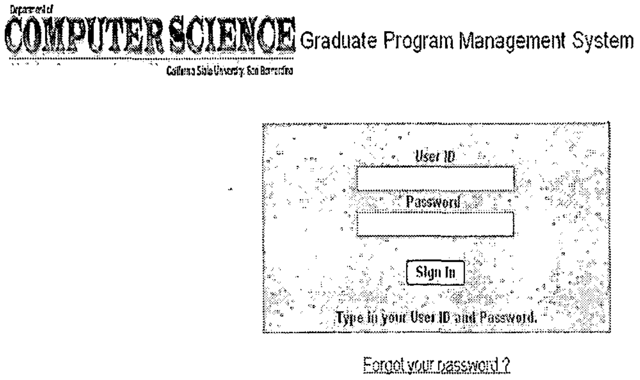
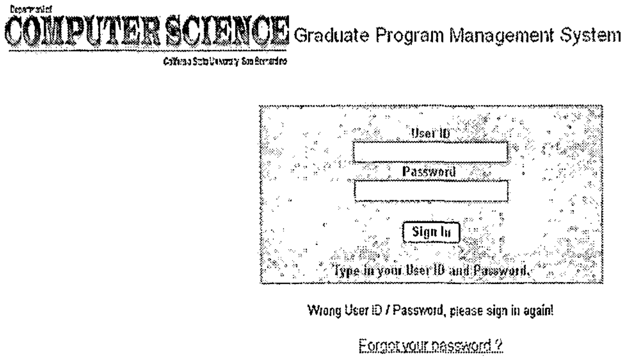
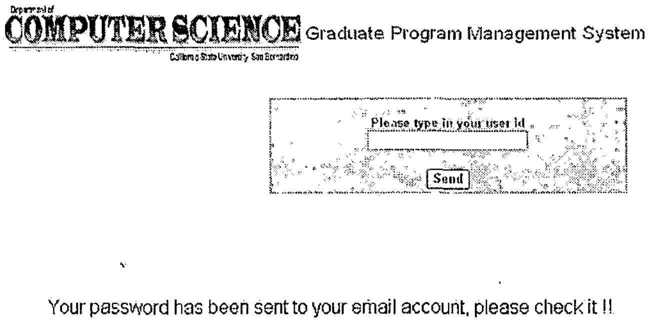
User Input: - User ID - Password Output: 1. Success - Verify the user id and password, then redirect to home page of appropriate user role: - Faculty - Student - Graduate Coordinator - Program Assistant	 Department of COMPUTER SCIENCE Graduate Program Management System California State University, San Bernardino User ID Password Sign In Type in your User ID and Password.
2. Failure - - Incorrect user id/password	 Department of COMPUTER SCIENCE Graduate Program Management System California State University, San Bernardino User ID Password Sign In Type in your User ID and Password. Wrong User ID / Password, please sign in again!
- Forget password Type in the user id and click on "Send" button	 Department of COMPUTER SCIENCE Graduate Program Management System California State University, San Bernardino Please type in your user id Your password has been sent to your email account, please check it !!

Figure 3. User Login

4.2.2 Faculty / Graduate Coordinator / Program Assistant / Student: Change Password

This function allows users to change their passwords as frequently as desired.

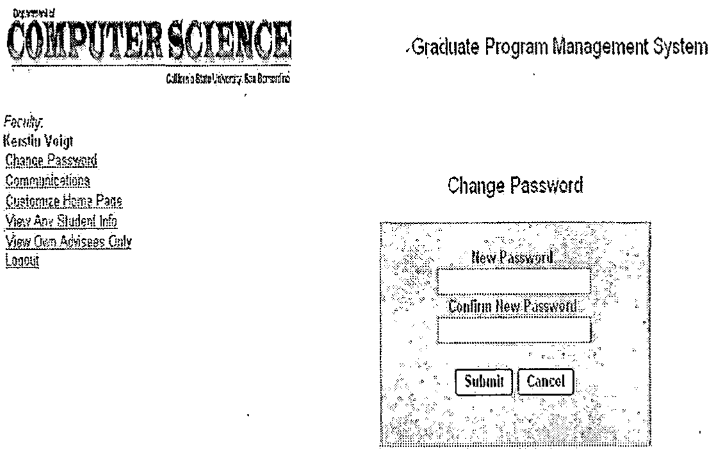
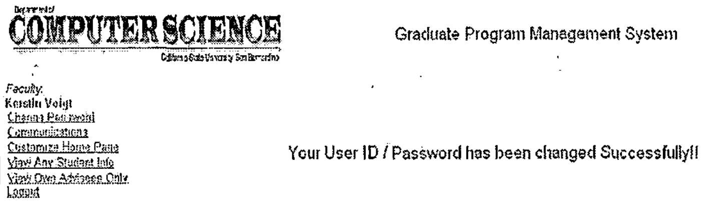
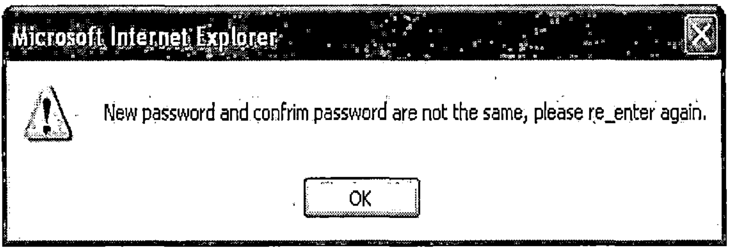
User Input: • Type the user's new password in both "New Password" and "Confirm New Password" input boxes • Click on the "Submit" button	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Change Password New Password Confirm New Password Submit Cancel
Output: 1. Success - 2. Failure - • New password and confirm password are the same	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Your User ID / Password has been changed Successfully!!  New password and confrim password are not the same, please re_enter again.

Figure 4. Change Password

4.2.3 Faculty / Graduate Coordinator: Communications

This module allows the faculty and/or Graduate Coordinator to email different groups. The functionality for each of the particular groups will be provided in detail in the following sections.

4.2.3.1 All Advisees. This function allows the faculty or Graduate Coordinator to send email to all his or her current advisees.

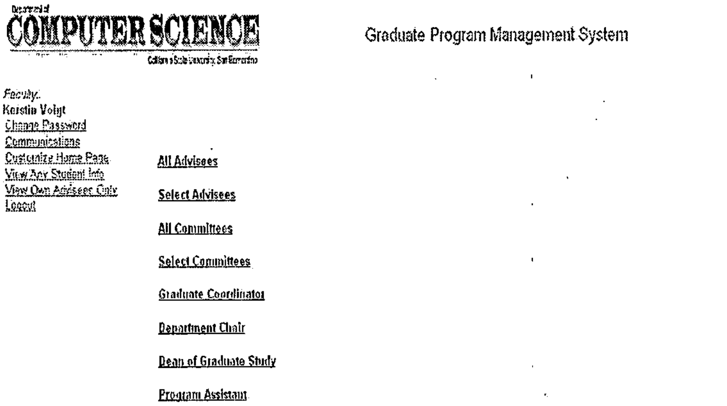
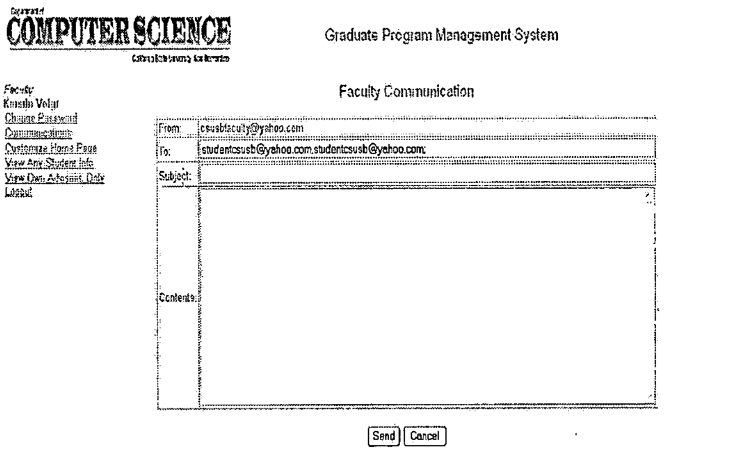
User Input: • Click on the "All Advisees" hyperlink	 Graduate Program Management System Department of COMPUTER SCIENCE California State University, San Bernardino Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
• A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field is automatically filled with email addresses of pertinent advisees; and SUBJECT and CONTENTS fields will be filled out by the sender	 Graduate Program Management System Faculty Communication From: csusbfaculty@yahoo.com To: studentcsusb@yahoo.com,studentcsusb@yahoo.com; Subject: Contents: Department of COMPUTER SCIENCE California State University, San Bernardino Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Send Cancel

Figure 5. Communications - All Advisees

4.2.3.2 Select Advisees. This function allows the faculty or Graduate Coordinator to send email to advisees selected from a list of current advisees.

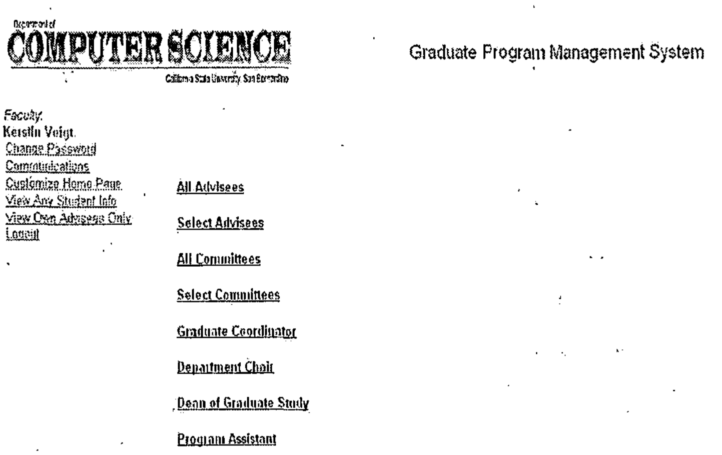
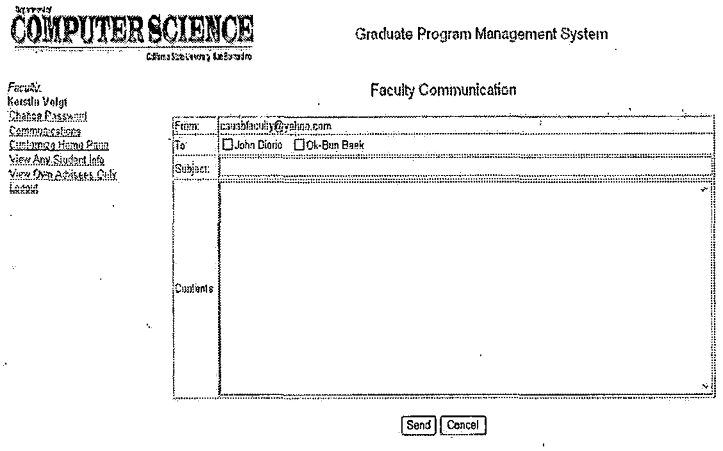
User Input: • Click on the "Select Advisees" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field presents a list of advisees that the sender needs to select from; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication Send Cancel From: csusbfaculty@yahoo.com To: □John Diorio □Ok-Bun Baek Subject: Contents

Figure 6. Communications - Select Advisees

4.2.3.3 All Committees. This function allows faculty or Graduate Coordinator to send email to all project or thesis committee members of his / her advisees.

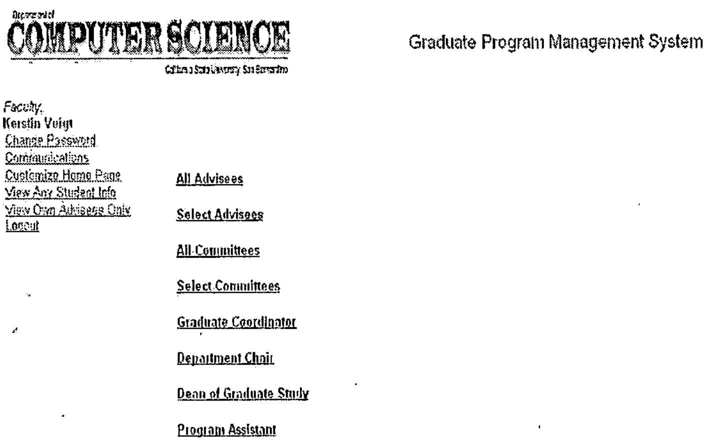
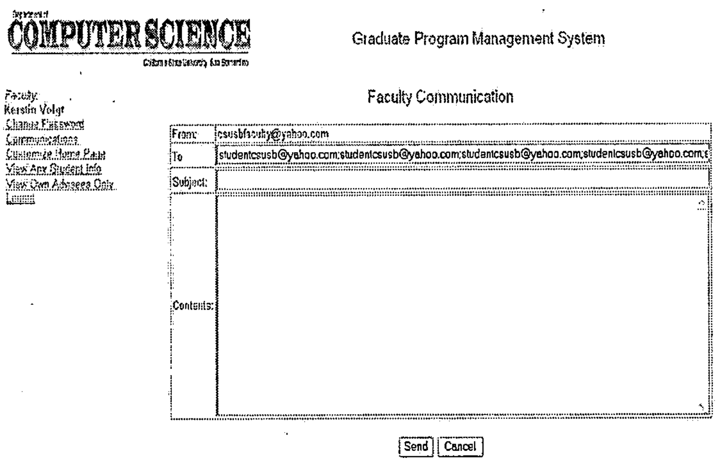
User Input: • Click on the "All Committees" hyperlink	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty, Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field is automatically filled with email addresses of pertinent advisees; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication From: csusbfaculty@yahoo.com To: studentcsusb@yahoo.com;studentcsusb@yahoo.com;studentcsusb@yahoo.com;studentcsusb@yahoo.com; Subject: Contents:

Figure 7. Communications - All Committees

4.2.3.4 Select Committees. This function allows faculty or the Graduate Coordinator to send email to certain committee members selected from a list.

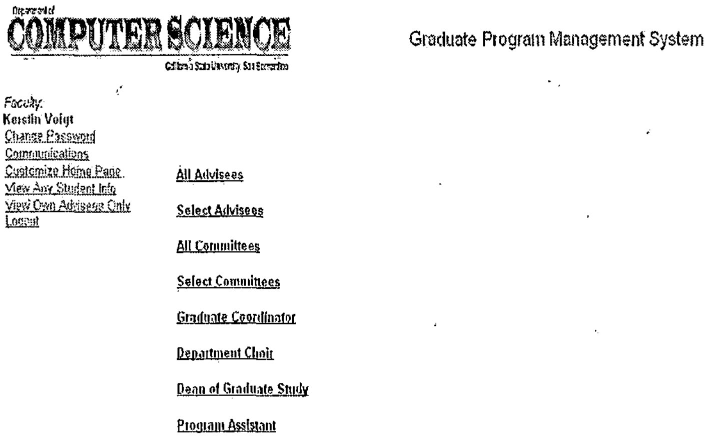
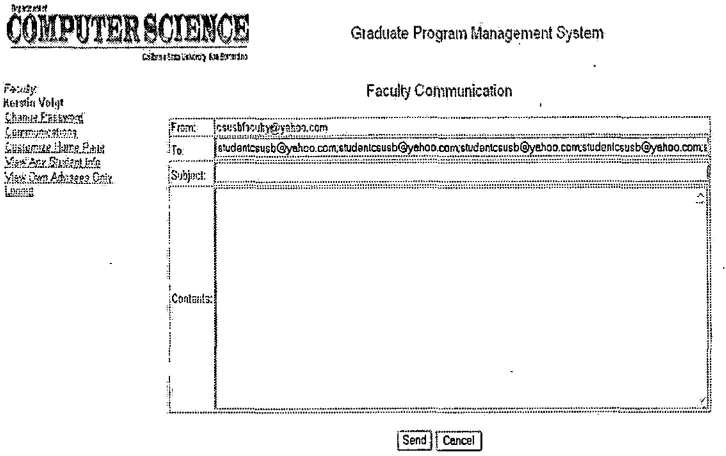
User Input: - Click on the "Select Committees" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: - A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field presents a list of advisees that the sender needs to select from; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication From: csusbfaculty@yahoo.com To: studentcsusb@yahoo.com;studentcsusb@yahoo.com;studentcsusb@yahoo.com;studentcsusb@yahoo.com;s Subject: Contents:

Figure 8. Communications - Select Committees

4.2.3.5 Graduate Coordinator. This function permits faculty members to send email to the Graduate Coordinator.

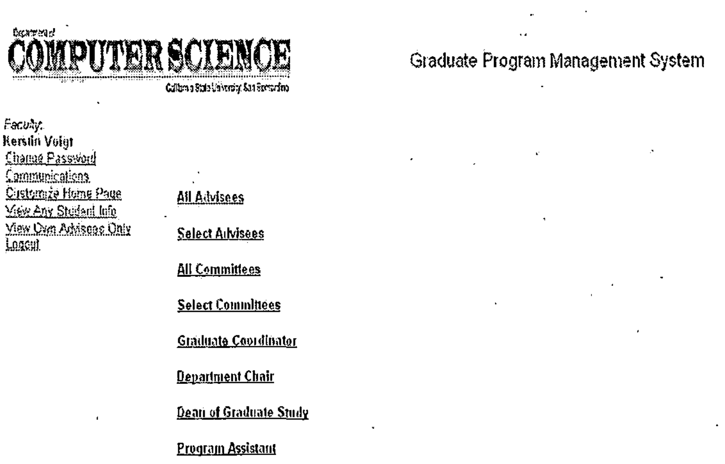
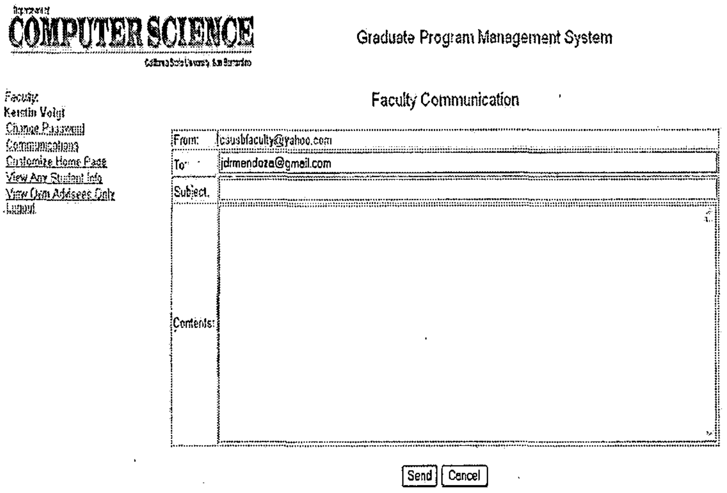
User Input: • Click on the "Graduate Coordinator" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty) email address; TO field is automatically filled with email address of the Graduate Coordinator; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication From: csusbfaculty@yahoo.com To: jdmendoza@gmail.com Subject: Contents:

Figure 9. Communications – Graduate Coordinator

4.2.3.6 Department Chair. This function allows the faculty or Graduate Coordinator to send email to the Department Chair.

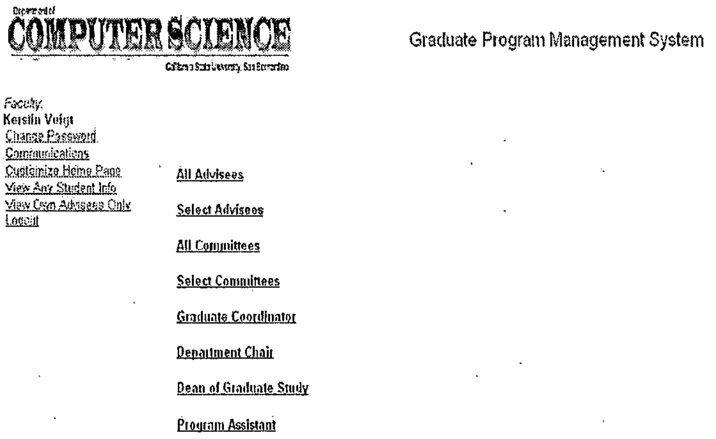
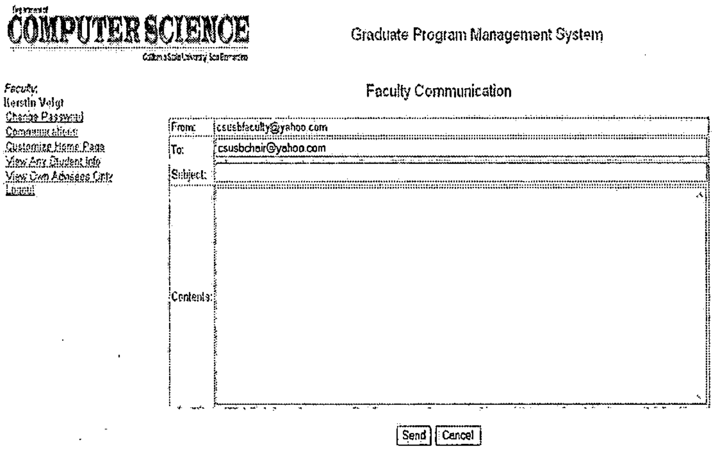
User Input: • Click on the "Department of Chair" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty, Graduate Coordinator) email address; TO field is automatically filled with email address of the Department Chair; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication From: csusbfaculty@yahoo.com To: csusbchair@yahoo.com Subject: Contents:

Figure 10. Communications - Department of Chair

4.2.3.8 Dean of Graduate Studies. This function allows the faculty or Graduate Coordinator to send email to the Dean of the Graduate Studies.

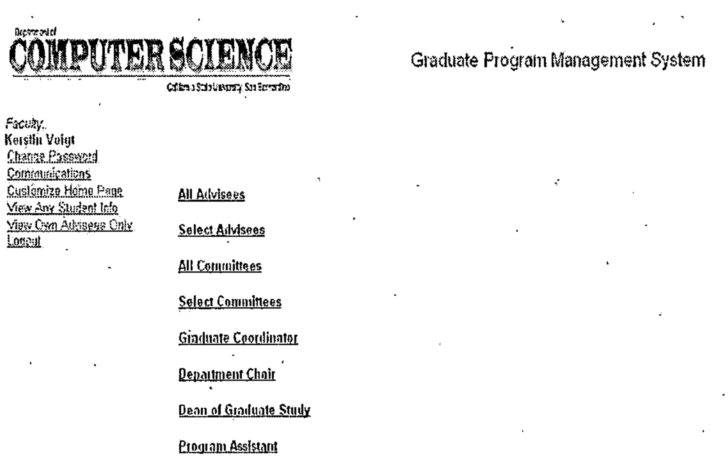
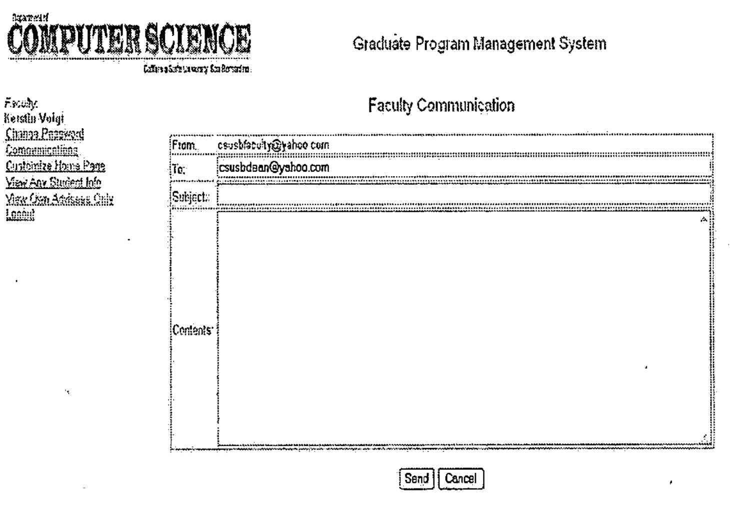
User Input: • Click on the "Dean of Graduate Studies" hyperlink	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty, Graduate Coordinator) email address; TO field is automatically filled with email address of the Dean of the Graduate Studies; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication From: csusbfaculty@yahoo.com To: csusbdean@yahoo.com Subject: Contents:

Figure 11. Communications - Dean of Graduate Studies

4.2.3.9 Program Assistant. This function allows the faculty or Graduate Coordinator to send email to the Program Assistant.

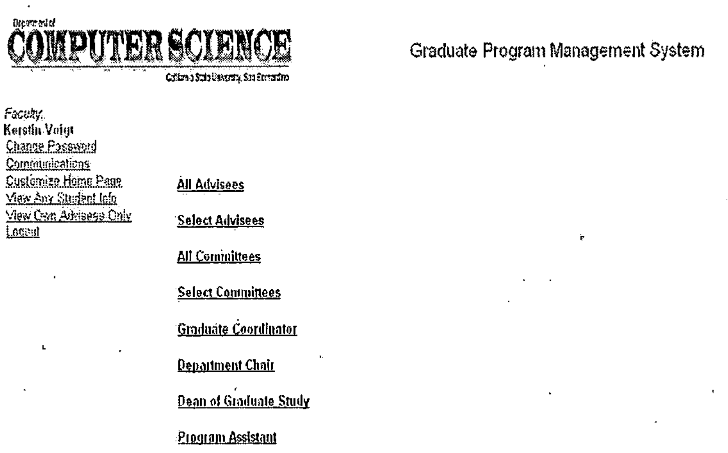
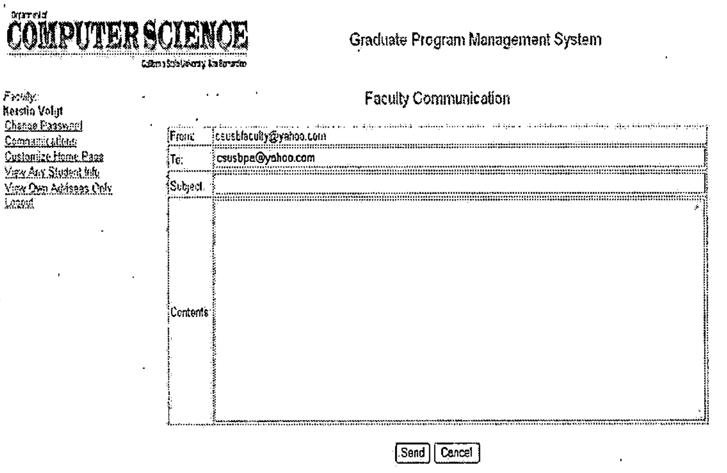
User Input: • Click on the "Program Assistant" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout All Advisees Select Advisees All Committees Select Committees Graduate Coordinator Department Chair Dean of Graduate Study Program Assistant
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty, Graduate Coordinator) email address; TO field is automatically filled with email address of the Program Assistant; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Faculty Communication From: csusbfaculty@yahoo.com To: csusbpa@yahoo.com Subject: Contents:

Figure 12. Communications - Program Assistant

4.2.4 Faculty / Graduate Coordinator / Program Assistant / Student: Change Home Page

This function allows a user to change his/her home page as often as she or he wishes.

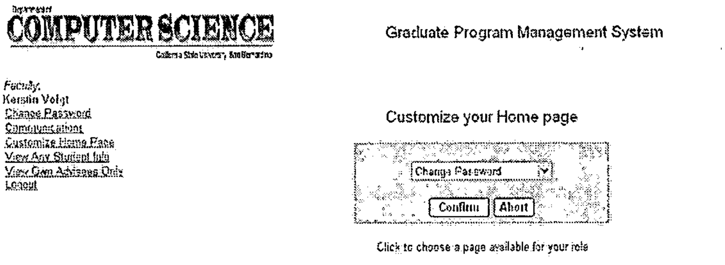
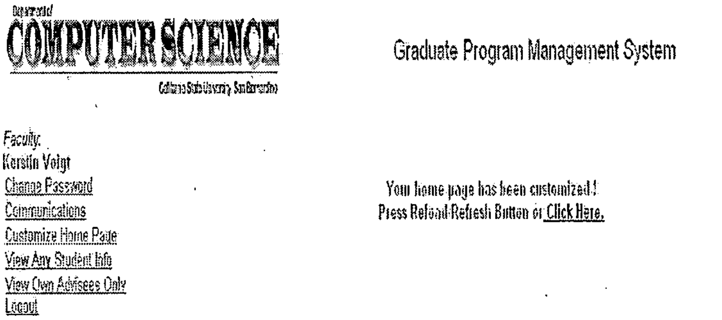
User Input: - Choose one of the pages (Change Password, Communications, Customize Home Page, View Any Student Info, and View Own Advisees Only) from the drop-down menu - Click the "Confirm" button	 Department of COMPUTER SCIENCE California State University, San Bernardino Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Change Password Confirm Abort Graduate Program Management System Customize your Home page Click to choose a page available for your role
Output: - When the user clicks on reload/refresh button in the browser or clicks on the "Click Here" hyper link, the system automatically refreshes the screen to the new home page	 Department of COMPUTER SCIENCE California State University, San Bernardino Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Advisees Only Logout Graduate Program Management System Your home page has been customized.! Press Reload/Refresh Button or Click Here.

Figure 13. Change Home Page

4.2.5 Faculty / Graduate Coordinator / Program Assistant: View Any Student Info

This function allows the faculty, Graduate Coordinator, or Program Assistant to view any student information.

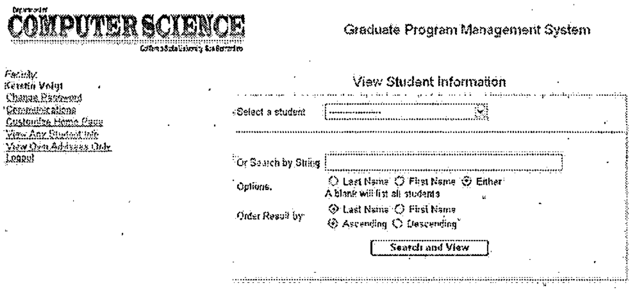
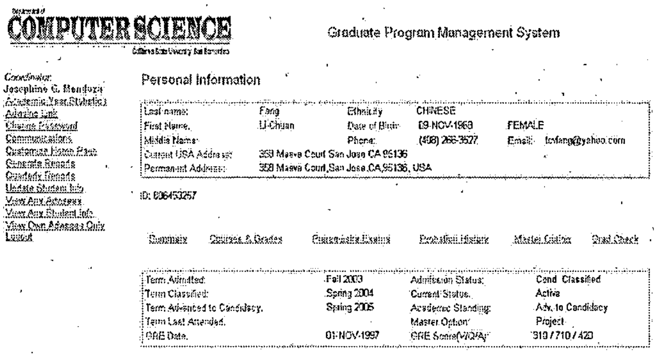
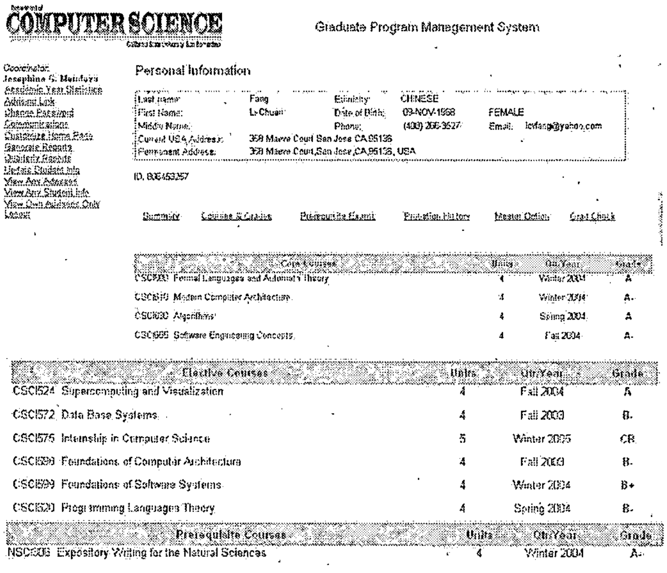
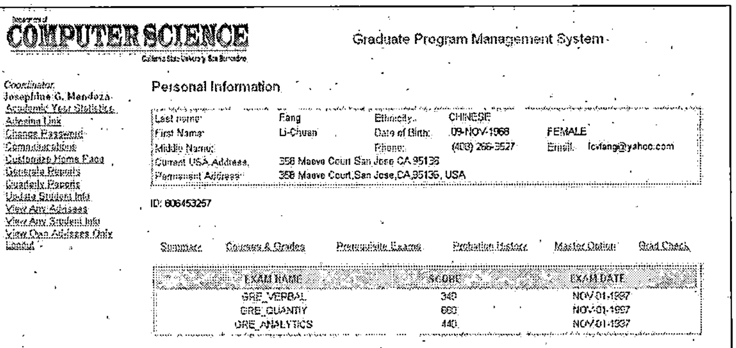
User Input: • Choose the student name in the drop-down menu Or • Type in the student's last name and click on the "Last Name" radio button Or • Type in the student's first name and click on the "First Name" radio button to initiate the search string then click on the "Search and View" button	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Faculty: Kerstin Voigt Change Password Communications Customize Home Page View Any Student Info View Own Address Only Logout View Student Information Select a student ---------- Or Search by String Options. ○ Last Name ○ First Name ● Either A blank will list all students Order Result by ● Last Name ○ First Name ● Ascending ○ Descending Search and View
Output: • On the top - Student's personal information is displayed • On the bottom - a summary of the student's academic inform 1. Click on "Course & Grades" A screen displays the core courses, elective courses and prerequisite courses the student has taken and the grades earned	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Coordinator: Josephine G. Mendoza Academic Year Statistics Advising Link Change Password Communications Customize Home Page Generate Reports Quarterly Reports Update Student Info View Any Advisees View Any Student Info View Own Address Only Logout Personal Information Last name: Fang Ethnicity CHINESE First Name. Li-Chuan Date of Birth 09-NOV-1968 FEMALE Middle Name: Phone: (408) 266-3527 Email: lcfang@yahoo.com Current USA Address: 358 Maeve Court San Jose CA 95136 Permanent Address: 358 Maeve Court,San Jose,CA,95136, USA ID: 006453257 Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check Term Admitted: Fall 2003 Admission Status: Cond Classified Term Classified: Spring 2004 Current Status. Active Term Advanced to Candidacy. Spring 2005 Academic Standing: Adv. to Candidacy Term Last Attended. Master Option: Project GRE Date. 01-NOV-1997 GRE Score(V/Q/A): 310 / 710 / 420  Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Coordinator: Josephine G. Mendoza Academic Year Statistics Advisors Link Change Password Communications Customize Home Page Generate Reports Quarterly Reports Update Student Info View Any Advisees View Any Student Info View Own Address Only Logout Personal Information Last name Fang Ethnicity CHINESE First Name: Li-Chuan Date of Birth: 09-NOV-1968 FEMALE Middle Name: Phone: (408) 266-3527 Email: lcfang@yahoo.com Current USA Address: 358 Maeve Court San Jose CA 95136 Permanent Address: 358 Maeve Court,San Jose,CA,95136, USA ID. 006453257 Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check Core Courses Units Qtr/Year Grade CSCI600 Formal Languages and Automata Theory 4 Winter 2004 A CSCI610 Modern Computer Architecture 4 Winter 2004 A- CSCI630 Algorithms 4 Spring 2004 A CSCI655 Software Engineering Concepts 4 Fall 2004 A- Elective Courses Units Qtr/Year Grade CSCI524 Supercomputing and Visualization 4 Fall 2004 A CSCI572 Data Base Systems 4 Fall 2003 B- CSCI575 Internship in Computer Science 5 Winter 2005 CR CSCI598 Foundations of Computer Architecture 4 Fall 2003 B- CSCI599 Foundations of Software Systems 4 Winter 2004 B+ CSCI620 Programming Languages Theory 4 Spring 2004 B- Prerequisite Courses Units Qtr/Year Grade NSCI306 Expository Writing for the Natural Sciences 4 Winter 2004 A-

Figure 14. View Any Student Information (Part A)

2. Click on "Prerequisite Exams" A screen displays the prerequisite exams (such as GRE, TOEFL, and WREE) the student has taken and the scores earned



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View Any Student Info
View Own Advisees Only
Logout

Personal Information

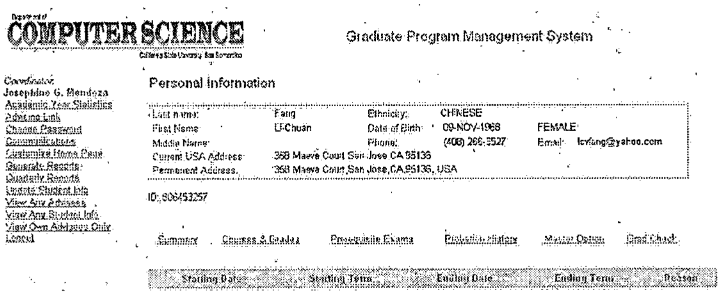
Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

ID: 806453257

Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check

EXAM NAME	SCORE	EXAM DATE
GRE_VERBAL	340	NOV-01-1997
GRE_QUANTITY	660	NOV-01-1997
GRE_ANALYTICS	440	NOV-01-1997

3. Click on "Probation History" A screen displays the student's probation history (starting date, starting term, ending date, ending term, and reason for being on probation)



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Personal Information

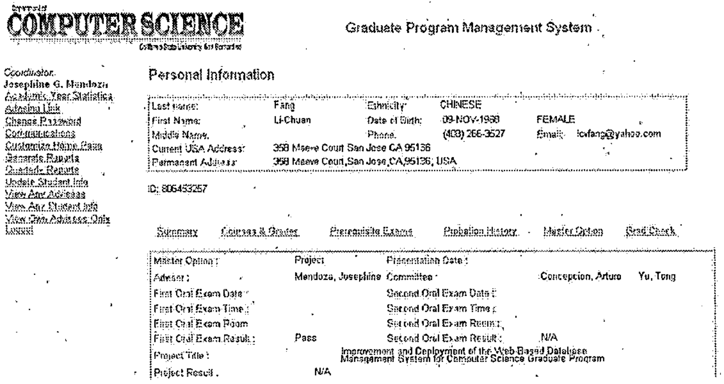
Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

ID: 806453257

Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check

Starting Date	Starting Term	Ending Date	Ending Term	Reason

4. Click on "Master Option" A screen displays the student's master option information



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Personal Information

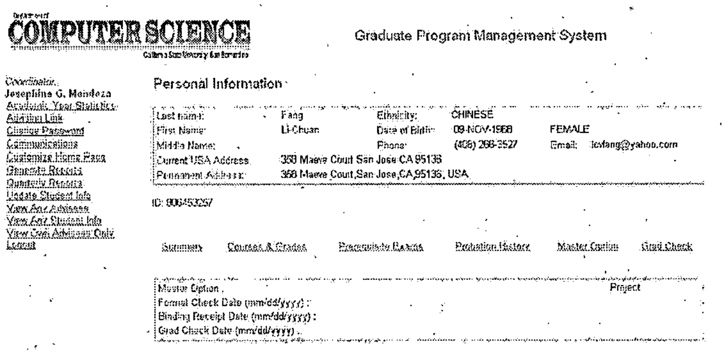
Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

ID: 806453257

Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check

Master Option :	Project	Presentation Date :		
Advisor :	Mendoza, Josephine	Committee :	Concepcion, Arturo	Yu, Tong
First Oral Exam Date :		Second Oral Exam Date :		
First Oral Exam Time :		Second Oral Exam Time :		
First Oral Exam Room		Second Oral Exam Room :		
First Oral Exam Result :	Pass	Second Oral Exam Result :	N/A	
Project Title :	Improvement and Deployment of the Web Based Database Management System for Computer Science Graduate Program			
Project Result :	N/A			

5. Click on "Grad Check" A screen displays the student's grad check information



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Personal Information

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First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

ID: 806453257

Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check

Master Option :	Project
Format Check Date (mm/dd/yyyy) :	
Binding Receipt Date (mm/dd/yyyy) :	
Grad Check Date (mm/dd/yyyy) :	

Figure 15. View Any Student Information (Part B)

4.2.6 Faculty / Graduate Coordinator: View Own Advisees Only

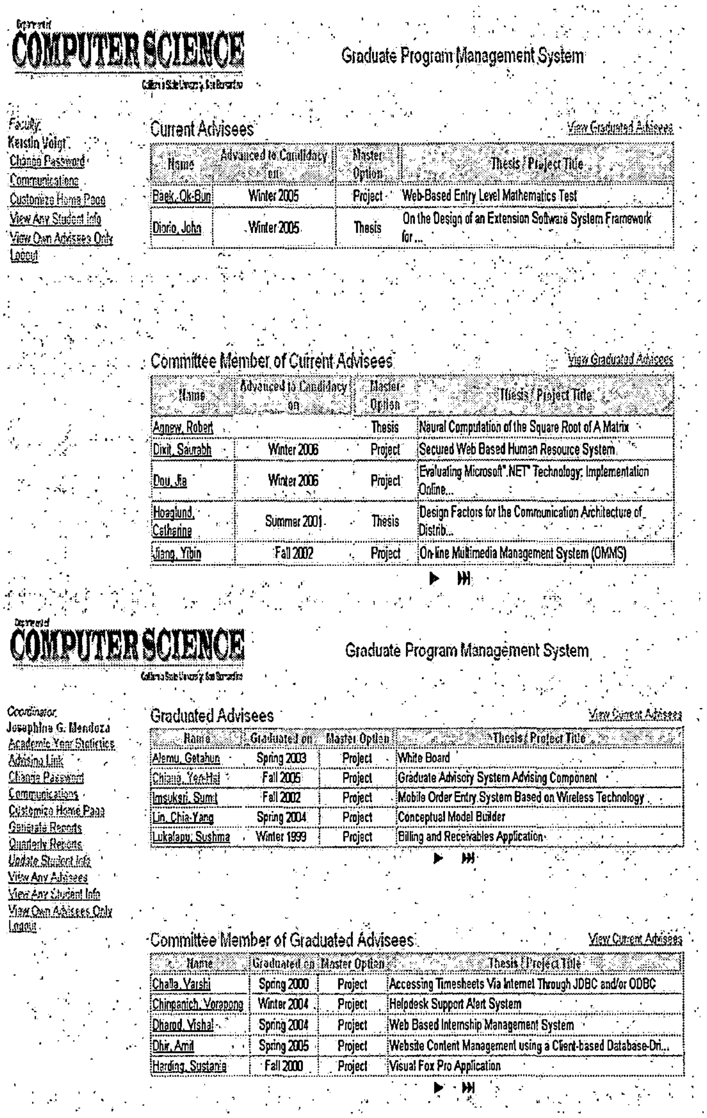
This function allows the faculty or Graduate Coordinator to view information about own advisees only.

User Input:

- None

Output:

- On the top - The information (name, term advanced to candidacy, master option, and project/thesis title) about current advisees is displayed
- Click on "View Graduated Advisees" on the top A screen displays information for this faculty's advisees who have already graduated
- Click on "View Graduated Advisees" on the top A screen with the information about graduated advisees (such as name, term advanced to candidacy, master option, and project/thesis title)
- On the bottom - The information (name, term advanced to candidacy, master option, and project/thesis title) about current advisees where the faculty is a committee member
- Click on "View Graduated Advisees" on the bottom A screen displays information about advisees who have graduated and where the faculty is a committee member



Current Advisees

Name	Advanced to Candidacy on	Master Option	Thesis / Project Title
Baek, Ok-Bun	Winter 2005	Project	Web-Based Entry Level Mathematics Test
Diorio, John	Winter 2005	Thesis	On the Design of an Extension Software System Framework for ...

Committee Member of Current Advisees

Name	Advanced to Candidacy on	Master Option	Thesis / Project Title
Agnew, Robert		Thesis	Neural Computation of the Square Root of A Matrix
Dixit, Saurabh	Winter 2006	Project	Secured Web Based Human Resource System
Dou, Jia	Winter 2006	Project	Evaluating Microsoft".NET" Technology: Implementation Online...
Hoaglund, Catherine	Summer 2001	Thesis	Design Factors for the Communication Architecture of Distrib...
Jiang, Yibin	Fall 2002	Project	On-line Multimedia Management System (OMMS)

Graduated Advisees

Name	Graduated on	Master Option	Thesis / Project Title
Alemu, Getahun	Spring 2003	Project	White Board
Chiang, Yen-Hsi	Fall 2005	Project	Graduate Advisory System Advising Component
Imsuksri, Sumit	Fall 2002	Project	Mobile Order Entry System Based on Wireless Technology
Lin, Chia-Yang	Spring 2004	Project	Conceptual Model Builder
Lukalapu, Sushma	Winter 1999	Project	Billing and Receivables Application

Committee Member of Graduated Advisees

Name	Graduated on	Master Option	Thesis / Project Title
Challa, Varshi	Spring 2000	Project	Accessing Timesheets Via Internet Through JDBC and/or ODBC
Chinpanich, Vorapong	Winter 2004	Project	Helpdesk Support Alert System
Dharod, Vishal	Spring 2004	Project	Web Based Internship Management System
Dhir, Amit	Spring 2005	Project	Website Content Management using a Client-based Database-Dri...
Harding, Sustania	Fall 2000	Project	Visual Fox Pro Application

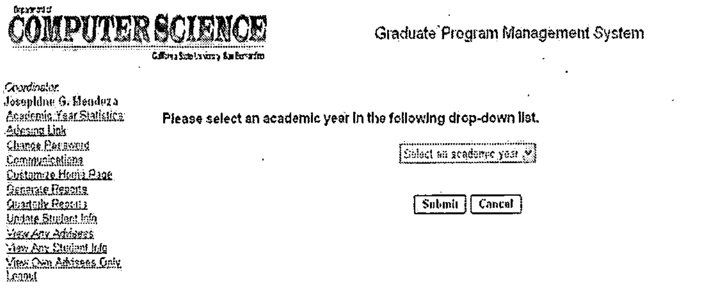
Figure 16. View Own Advisees Only

4.2.7 Graduate Coordinator: Academic Year Statistics

This function allows the Graduate Coordinator to view statistics on students with respect to admission, and academic standing (classified, advanced to candidacy, on probation, dismissed, and graduated).

User Input:

- Choose the academic year from the drop-down list
- Click the "Submit" button



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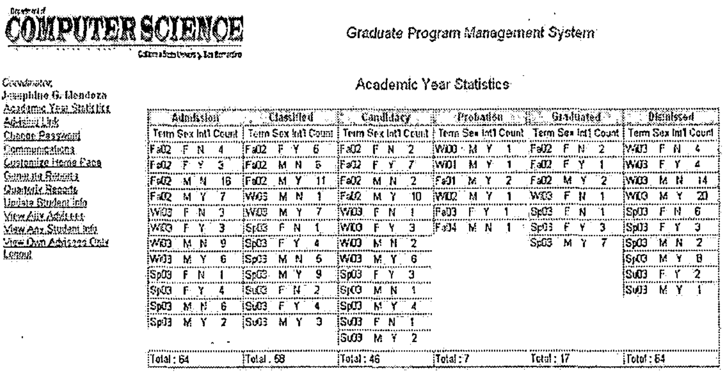
Please select an academic year in the following drop-down list.

Output:

- The statistical report - showing the number of students admitted, classified, advanced to candidacy, on probation, graduated and dismissed The total is further broken down by gender and whether the student is an international student or not



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Academic Year Statistics

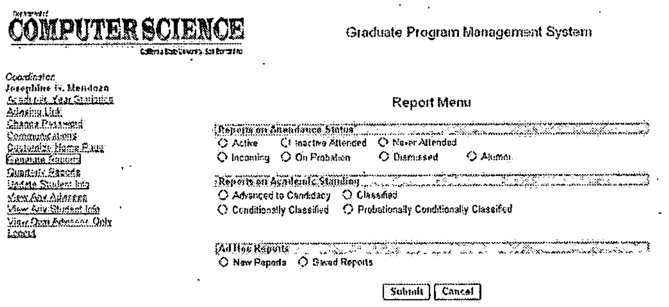
Admission				Classified				Candidacy				Probation				Graduated				Dismissed			
Term	Sex	Int'l	Count	Term	Sex	Int'l	Count	Term	Sex	Int'l	Count	Term	Sex	Int'l	Count	Term	Sex	Int'l	Count	Term	Sex	Int'l	Count
Fa02	F	N	4	Fa02	F	Y	6	Fa02	F	N	2	Wi00	M	Y	1	Fa02	F	N	2	Wi03	F	N	4
Fa02	F	Y	3	Fa02	M	N	5	Fa02	F	Y	7	Wi01	M	Y	1	Fa02	F	Y	1	Wi03	F	Y	4
Fa02	M	N	16	Fa02	M	Y	11	Fa02	M	N	2	Fa01	M	Y	2	Fa02	M	Y	2	Wi03	M	N	14
Fa02	M	Y	7	Wi03	M	N	1	Fa02	M	Y	10	Wi02	M	Y	1	Wi03	F	N	1	Wi03	M	Y	20
Wi03	F	N	3	Wi03	M	Y	7	Wi03	F	N	1	Fa03	F	Y	1	Sp03	F	N	1	Sp03	F	N	6
Wi03	F	Y	3	Sp03	F	N	1	Wi03	F	Y	3	Fa04	M	N	1	Sp03	F	Y	3	Sp03	F	Y	3
Wi03	M	N	9	Sp03	F	Y	4	Wi03	M	N	2					Sp03	M	Y	7	Sp03	M	N	2
Wi03	M	Y	6	Sp03	M	N	5	Wi03	M	Y	6									Sp03	M	Y	8
Sp03	F	N	1	Sp03	M	Y	9	Sp03	F	Y	3									Su03	F	Y	2
Sp03	F	Y	4	Su03	F	N	2	Sp03	M	N	1									Su03	M	Y	1
Sp03	M	N	6	Su03	F	Y	4	Sp03	M	Y	4												
Sp03	M	Y	2	Su03	M	Y	3	Su03	F	N	1												
								Su03	M	Y	2												
Total : 64				Total : 68				Total : 46				Total : 7				Total : 17				Total : 64			

Figure 17. Academic Year Statistics

4.2.8 Graduate Coordinator: Generate Reports - Pre-Defined Reports

This function allows the Graduate Coordinator to generate pre-defined reports. A pre-defined report is a report that must be produced on a regular basis, at least once a quarter.

<table>
<tr>
<td>User Input:

- For "Reports on Attendance Status" Check on one of the radio buttons in (Active, Inactive Attended, Never Attended, Incoming, On Probation, Dismissed, and Alumni)
- For "Reports on Academic Standing" Check on one of the radio buttons (Advanced to Candidacy, Classified, Conditionally Classified, and Probationally Conditionally Classified)
- Click the "Submit" button
</td>
<td>


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Report Menu

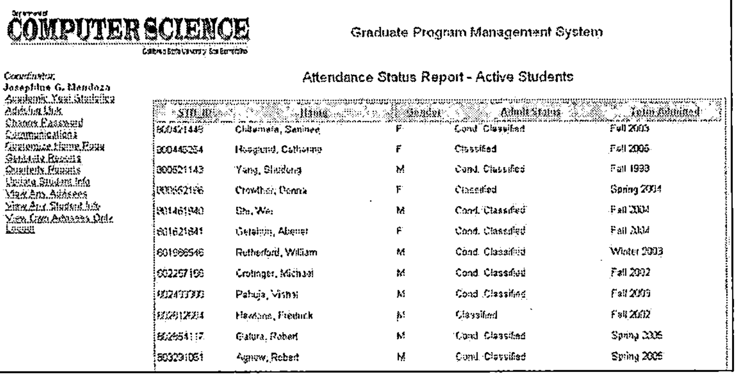
Reports on Attendance Status
○ Active ○ Inactive Attended ○ Never Attended
○ Incoming ○ On Probation ○ Dismissed ○ Alumni

Reports on Academic Standing
○ Advanced to Candidacy ○ Classified
○ Conditionally Classified ○ Probationally Conditionally Classified

Ad Hoc Reports
○ New Reports ○ Saved Reports

[Submit] [Cancel]
</td>
</tr>
<tr>
<td>Output:
Reports on Attendance Status -

- displays the student id, name, gender, admit status, and term admitted in ascending student id order; to
- change the sort field for display click on any column title

1. Active
</td>
<td>


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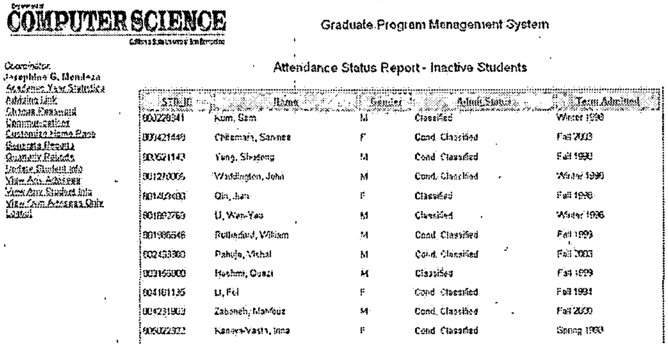
Attendance Status Report - Active Students

<table>
<tr><th>STU_ID</th><th>Name</th><th>Gender</th><th>Admit Status</th><th>Term Admitted</th></tr>
<tr><td>800421449</td><td>Chitamela, Saninee</td><td>F</td><td>Cond. Classified</td><td>Fall 2005</td></tr>
<tr><td>800445254</td><td>Hoaglund, Catherine</td><td>F</td><td>Classified</td><td>Fall 2005</td></tr>
<tr><td>800521143</td><td>Yang, Shudong</td><td>M</td><td>Cond. Classified</td><td>Fall 1993</td></tr>
<tr><td>800662196</td><td>Crowther, Donna</td><td>F</td><td>Classified</td><td>Spring 2004</td></tr>
<tr><td>801461940</td><td>Shi, Wei</td><td>M</td><td>Cond. Classified</td><td>Fall 2004</td></tr>
<tr><td>801621841</td><td>Getahun, Abener</td><td>F</td><td>Cond. Classified</td><td>Fall 2004</td></tr>
<tr><td>801966546</td><td>Rutherford, William</td><td>M</td><td>Cond. Classified</td><td>Winter 2003</td></tr>
<tr><td>802257169</td><td>Grotinger, Michael</td><td>M</td><td>Cond. Classified</td><td>Fall 2002</td></tr>
<tr><td>802433330</td><td>Pahuja, Vishal</td><td>M</td><td>Cond. Classified</td><td>Fall 2003</td></tr>
<tr><td>802612824</td><td>Hawkins, Fredrick</td><td>M</td><td>Classified</td><td>Fall 2002</td></tr>
<tr><td>802654117</td><td>Gatura, Robert</td><td>M</td><td>Cond. Classified</td><td>Spring 2005</td></tr>
<tr><td>803231061</td><td>Agnew, Robert</td><td>M</td><td>Cond. Classified</td><td>Spring 2005</td></tr>
</table>
</td>
</tr>
</table>

Figure 18. Generate Reports - Pre-Defined Reports (Part A)

2. Inactive



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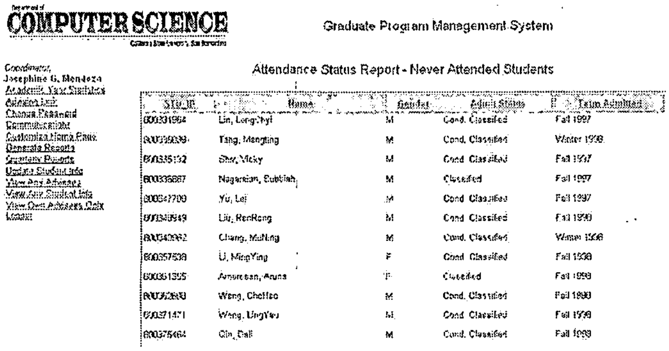
Attendance Status Report - Inactive Students

STD_ID	Name	Gender	Admit Status	Term Admitted
000228341	Kum, Sam	M	Classified	Winter 1998
003421449	Chitsmain, Sannee	F	Cond. Classified	Fall 2003
003521143	Yang, Shedong	M	Cond. Classified	Fall 1998
001270006	Waddington, John	M	Cond. Classified	Winter 1998
001403403	Qin, Jian	F	Classified	Fall 1998
001892769	Li, Wan-Yao	M	Classified	Winter 1998
001986546	Rutherford, William	M	Cond. Classified	Fall 1999
002453300	Pahuja, Vishal	M	Cond. Classified	Fall 2003
003156000	Hashmi, Quazi	M	Classified	Fall 1999
004101135	Li, Fei	F	Cond. Classified	Fall 1994
004231903	Zabaneh, Mahfouz	M	Cond. Classified	Fall 2000
005022322	Kanaya-Vastu, Inna	F	Cond. Classified	Spring 1999

3. Never Attended



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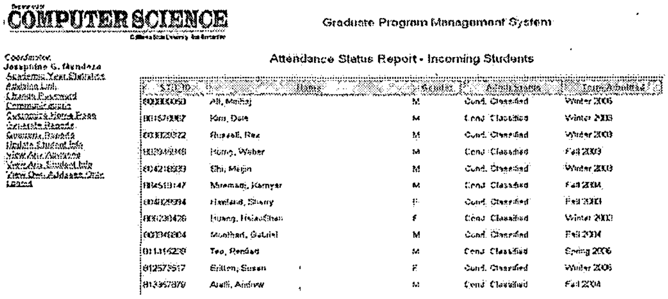
Attendance Status Report - Never Attended Students

STD_ID	Name	Gender	Admit Status	Term Admitted
000331964	Lin, LongChyi	M	Cond. Classified	Fall 1997
000339039	Tang, Mengting	M	Cond. Classified	Winter 1998
000335132	Shy, Vicky	M	Cond. Classified	Fall 1997
000336687	Nagarajan, Subbiah	M	Classified	Fall 1997
000347709	Yu, Lei	M	Cond. Classified	Fall 1997
000349949	Liu, RenRong	M	Cond. Classified	Fall 1998
000349962	Chang, MeiLing	M	Cond. Classified	Winter 1998
000357538	Li, MingYing	F	Cond. Classified	Fall 1998
000361355	Amaresan, Aruna	F	Classified	Fall 1998
000362630	Wang, CheHao	M	Cond. Classified	Fall 1998
000371471	Wang, LingYau	M	Cond. Classified	Fall 1998
000375464	Qin, Dali	M	Cond. Classified	Fall 1998

4. Incoming



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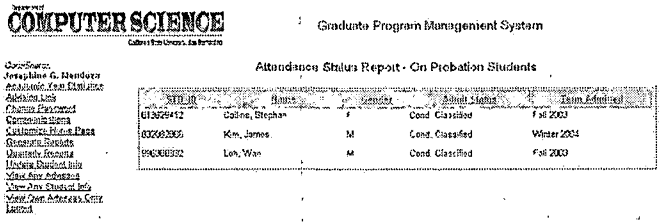
Attendance Status Report - Incoming Students

STD_ID	Name	Gender	Admit Status	Term Admitted
000000050	Ali, Mehraj	M	Cond. Classified	Winter 2005
001570067	Kim, Dale	M	Cond. Classified	Winter 2003
001720772	Russell, Rex	M	Cond. Classified	Winter 2003
002949348	Horng, Weber	M	Cond. Classified	Fall 2003
004218939	Shi, Meijin	M	Cond. Classified	Winter 2003
004519147	Miremadi, Kamyar	M	Cond. Classified	Fall 2004
004829934	Haviland, Sherry	F	Cond. Classified	Fall 2003
006230426	Huang, HsiaoShan	F	Cond. Classified	Winter 2003
007348804	Monthard, Gabriel	M	Cond. Classified	Fall 2004
011316229	Teo, Renfied	M	Cond. Classified	Spring 2006
012573517	Britten, Susan	F	Cond. Classified	Winter 2006
013357879	Asali, Andrew	M	Cond. Classified	Fall 2004

5. On Probation



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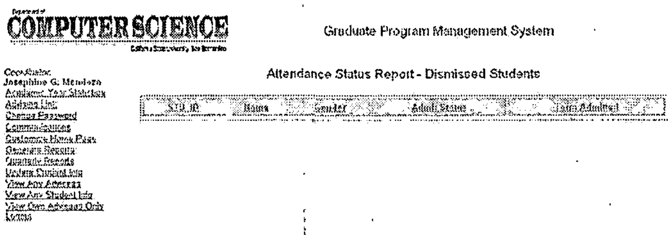
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Attendance Status Report - On Probation Students

STD_ID	Name	Gender	Admit Status	Term Admitted
013629412	Collins, Stephan	F	Cond. Classified	Fall 2003
002682305	Kim, James	M	Cond. Classified	Winter 2004
996366332	Loh, Wan	M	Cond. Classified	Fall 2003

6. Dismissed



COMPUTER SCIENCE

Graduate Program Management System

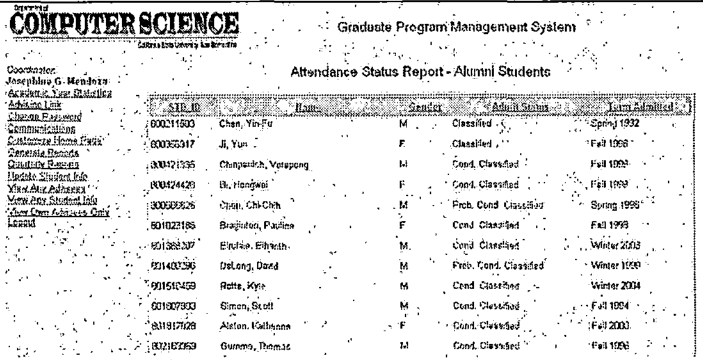
Coordinator, Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Attendance Status Report - Dismissed Students

STD_ID	Name	Gender	Admit Status	Term Admitted

Figure 19. Generate Reports - Pre-Defined Reports (Part B)

7. Alumni



COMPUTER SCIENCE

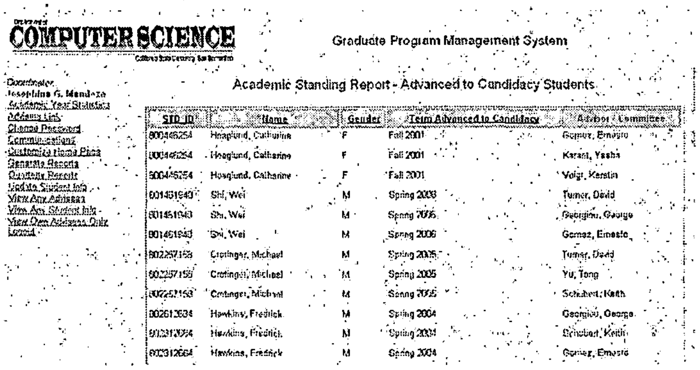
Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Attendance Status Report - Alumni Students

STD ID	Name	Gender	Admit Status	Term Admitted
600211503	Chen, Yin-Fu	M	Classified	Spring 1992
600365317	Ji, Yun	F	Classified	Fall 1998
600421535	Chinpanich, Vorapong	M	Cond. Classified	Fall 1999
600424420	Bi, Hongwei	F	Cond. Classified	Fall 1999
600503826	Chen, Chi-Chih	M	Prob. Cond. Classified	Spring 1998
601023185	Brajinton, Pauline	F	Cond. Classified	Fall 1998
601368307	Birdsie, Elizabeth	M	Cond. Classified	Winter 2003
601400296	DeLong, David	M	Prob. Cond. Classified	Winter 1999
601510459	Retts, Kyle	M	Cond. Classified	Winter 2004
601607300	Simon, Scott	M	Cond. Classified	Fall 1994
601917028	Alston, Katherine	F	Cond. Classified	Fall 2000
602162059	Gummo, Thomas	M	Cond. Classified	Fall 1996

- Reports on Academic Standing
  1. Advanced to Candidacy – displays the student id, name, gender, term advanced to candidacy, advisor, and committee members in ascending student id order; to change the sort field for display click on any column title that is underlined
  2. Classified Status – displays the student id, name, gender, term classified, term admitted and term status in ascending student id order; to change the sort field for display click on any column title that is underlined
  3. Conditionally Classified Status – displays the student id, name, gender, term classified, term admitted and admit status in ascending student id order; to change the sort field for display click on any column title that is underlined



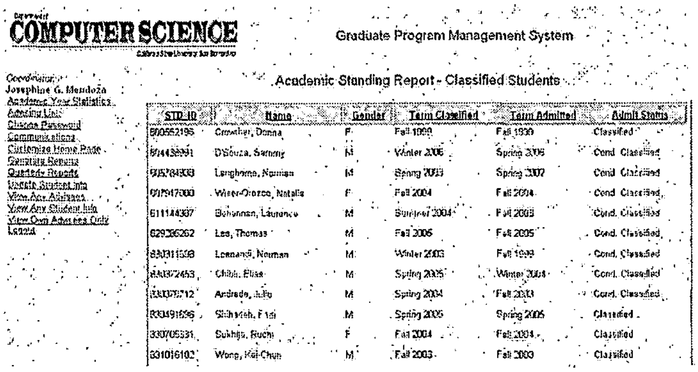
COMPUTER SCIENCE

Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advisee List
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Academic Standing Report - Advanced to Candidacy Students

STD ID	Name	Gender	Term Advanced to Candidacy	Advisor / Committee
600446254	Hoaglund, Catharine	F	Fall 2001	Gomez, Ernesto
600446254	Hoaglund, Catharine	F	Fall 2001	Karant, Yasha
600446254	Hoaglund, Catharine	F	Fall 2001	Voigt, Kerstin
601451943	Shi, Wei	M	Spring 2006	Turner, David
601451943	Shi, Wei	M	Spring 2006	Georgiou, George
601451943	Shi, Wei	M	Spring 2006	Gomez, Ernesto
602257153	Crotinger, Michael	M	Spring 2005	Turner, David
602257153	Crotinger, Michael	M	Spring 2005	Yu, Tong
602257153	Crotinger, Michael	M	Spring 2005	Schubert, Keith
602312634	Hawkins, Fredrick	M	Spring 2004	Georgiou, George
602312634	Hawkins, Fredrick	M	Spring 2004	Schubert, Keith
602312634	Hawkins, Fredrick	M	Spring 2004	Gomez, Ernesto



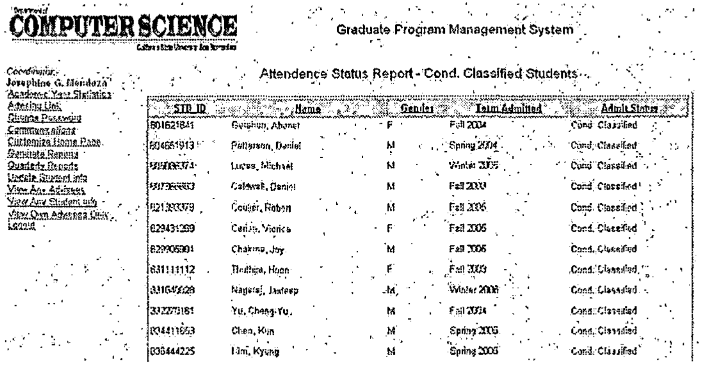
COMPUTER SCIENCE

Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Academic Standing Report - Classified Students

STD ID	Name	Gender	Term Classified	Term Admitted	Admit Status
600552195	Crowther, Donna	F	Fall 1999	Fall 1999	Classified
604438991	D'Souza, Sammy	M	Winter 2006	Spring 2005	Cond. Classified
605784308	Langhorne, Norman	M	Spring 2003	Spring 2002	Cond. Classified
607917000	Wiser-Orozco, Natalie	F	Fall 2004	Fall 2004	Cond. Classified
611144387	Bohannan, Laurence	M	Summer 2004	Fall 2003	Cond. Classified
629366262	Lee, Thomas	M	Fall 2006	Fall 2005	Cond. Classified
630311538	Leonardi, Norman	M	Winter 2003	Fall 1999	Cond. Classified
630372453	Chibli, Elias	M	Spring 2005	Winter 2004	Cond. Classified
630375712	Andrade, Julio	M	Spring 2004	Fall 2003	Cond. Classified
630491596	Shihadeh, Fadi	M	Spring 2005	Spring 2005	Classified
630705531	Sukhija, Ruchi	F	Fall 2004	Fall 2004	Classified
631016102	Wong, Kai-Chun	M	Fall 2003	Fall 2003	Classified



COMPUTER SCIENCE

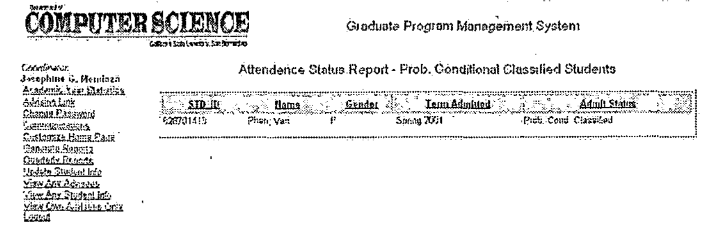
Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Attendence Status Report - Cond. Classified Students

STD ID	Name	Gender	Term Admitted	Admit Status
601621841	Gebrehiwot, Abenet	F	Fall 2004	Cond. Classified
604661913	Patterson, Daniel	M	Spring 2004	Cond. Classified
605106374	Lucas, Michael	M	Winter 2005	Cond. Classified
607366603	Calewalt, Daniel	M	Fall 2003	Cond. Classified
621303379	Coulter, Robert	M	Fall 2005	Cond. Classified
629431269	Cerino, Viorica	F	Fall 2005	Cond. Classified
629905901	Chakma, Joy	M	Fall 2005	Cond. Classified
631111112	Truthiga, Hoon	F	Fall 2003	Cond. Classified
631649028	Nagaraj, Jasdeep	M	Winter 2006	Cond. Classified
632270181	Yu, Cheng-Yu	M	Fall 2004	Cond. Classified
634411653	Chen, Kun	M	Spring 2005	Cond. Classified
636444225	Kim, Kyung	M	Spring 2005	Cond. Classified

Figure 20. Generate Reports – Pre-Defined Reports (Part C)

4. Probationally Conditionally Classified Status – displays the student id, name, gender, term classified, term admitted and admit status in ascending student id order; to change the sort field for display click on any column title that is underlined	

COMPUTER SCIENCE

Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Graduate Reports
Update Student Info
View Any Advisee
View Any Student Info
View Own Advisee Only
Logout

Attendence Status Report - Prob. Conditional Classified Students

STD ID	Name	Gender	Term Admitted	Admit Status
626701415	Phan, Van	F	Spring 2001	Prob. Cond Classified

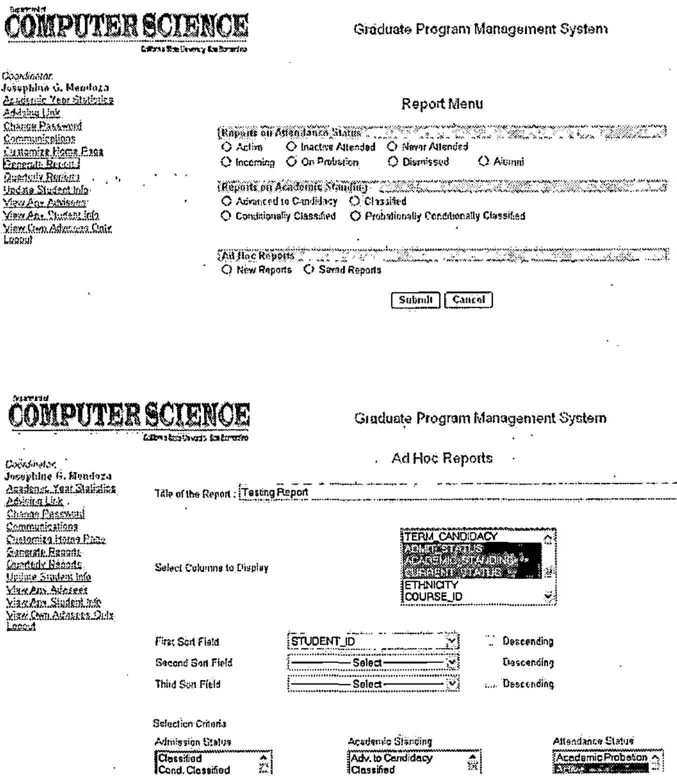
Figure 21. Generate Reports – Pre-Defined Reports (Part D)

4.2.9 Graduate Coordinator: Generate Reports – Ad Hoc Reports

This function allows the Graduate Coordinator to generate an ad hoc report. An ad hoc report is a formatted output created as needed and usually produced by an after-the-fact reporting system designed for the purpose. Once an ad hoc report is created it can be saved and recalled for later use.

User Input:
New Reports -

1. Check on the radio button New Reports in the "Ad Hoc Reports" section to create a new ad hoc report.
2. Click the "Submit" button.
3. Fill in the title of the report.
4. From the drop-down list, select the fields to be displayed in the report
5. Select which of the display fields will be used to sort the report. By the default, sort is in ascending order. If descending order is desired, then check the descending box field.



Title of the Report : Testing Report

Select Columns to Display: TERM_CANDIDACY, ADMIT_STATUS, ACADEMIC_STANDING, CURRENT_STATUS, ETHNICITY, COURSE_ID

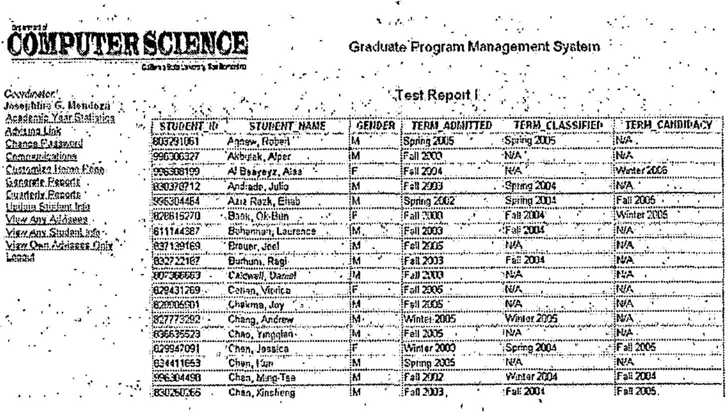
First Sort Field: STUDENT_ID □ Descending
Second Sort Field: Select □ Descending
Third Sort Field: Select □ Descending

Selection Criteria
Admission Status: Classified, Cond. Classified
Academic Standing: Adv. to Candidacy, Classified
Attendance Status: Academic Probation

Figure 22. Generate Reports - Ad Hoc Reports (Input)

Output:

- A page displays the student id, student name, gender, and the terms when the student is admitted, classified and advanced to candidacy



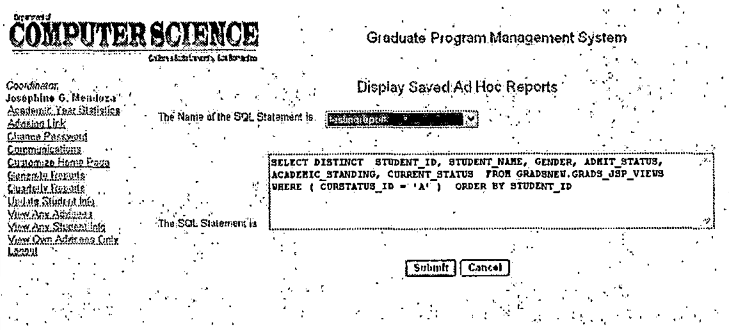
Test Report I

STUDENT_ID	STUDENT_NAME	GENDER	TERM_ADMITTED	TERM_CLASSIFIED	TERM_CANDIDACY
803291061	Agnew, Robert	M	Spring 2005	Spring 2005	N/A
996306327	Akbulak, Alper	M	Fall 2003	N/A	N/A
996308199	Al Baayeyz, Alaa	F	Fall 2004	N/A	Winter 2006
830370712	Andrade, Julio	M	Fall 2003	Spring 2004	N/A
996304464	Aziz Rezk, Ehab	M	Spring 2002	Spring 2004	Fall 2005
828615270	Baek, Ok-Bun	F	Fall 2000	Fall 2004	Winter 2005
611144387	Bohannan, Laurence	M	Fall 2003	Fall 2004	N/A
837139169	Brauer, Joel	M	Fall 2005	N/A	N/A
832722187	Burhum, Ragi	M	Fall 2003	Fall 2004	N/A
807366663	Caldwell, Daniel	M	Fall 2003	N/A	N/A
629431269	Cerian, Viorica	F	Fall 2005	N/A	N/A
829906901	Chakma, Joy	M	Fall 2005	N/A	N/A
827773292	Chang, Andrew	M	Winter 2005	Winter 2005	N/A
836635523	Chao, Yingqian	M	Fall 2005	N/A	N/A
829947091	Chen, Jessica	F	Winter 2003	Spring 2004	Fall 2005
834411653	Chen, Kun	M	Spring 2005	N/A	N/A
996304498	Chen, Ming-Tse	M	Fall 2002	Winter 2004	Fall 2004
830260266	Chen, Xincheng	M	Fall 2003	Fall 2004	Fall 2005

Saved Reports -

1. Choose the name of the report from the drop-down list. The SQL statement that pertains to the saved report is displayed.
2. Click the "Submit" button Output:

- A page displays an ad hoc report

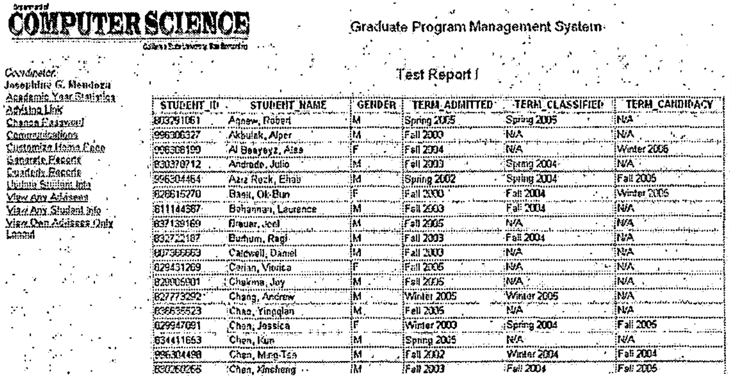


Display Saved Ad Hoc Reports

The Name of the SQL Statement is [illegible]

The SQL Statement is

```
SELECT DISTINCT  STUDENT_ID, STUDENT_NAME, GENDER, ADMIT_STATUS,
ACADEMIC_STANDING, CURRENT_STATUS  FROM GRADSNEW.GRADS_JSP_VIEWS
WHERE ( CURSTATUS_ID = 'A' )  ORDER BY STUDENT_ID
```



Test Report I

STUDENT_ID	STUDENT_NAME	GENDER	TERM_ADMITTED	TERM_CLASSIFIED	TERM_CANDIDACY
803291061	Agnew, Robert	M	Spring 2005	Spring 2005	N/A
996306327	Akbulak, Alper	M	Fall 2003	N/A	N/A
996308199	Al Baayeyz, Alaa	F	Fall 2004	N/A	Winter 2006
830370712	Andrade, Julio	M	Fall 2003	Spring 2004	N/A
996304464	Aziz Rezk, Ehab	M	Spring 2002	Spring 2004	Fall 2005
828615270	Baek, Ok-Bun	F	Fall 2000	Fall 2004	Winter 2005
611144387	Bohannan, Laurence	M	Fall 2003	Fall 2004	N/A
837139169	Brauer, Joel	M	Fall 2005	N/A	N/A
832722187	Burhum, Ragi	M	Fall 2003	Fall 2004	N/A
807366663	Caldwell, Daniel	M	Fall 2003	N/A	N/A
629431269	Cerian, Viorica	F	Fall 2005	N/A	N/A
829906901	Chakma, Joy	M	Fall 2005	N/A	N/A
827773292	Chang, Andrew	M	Winter 2005	Winter 2005	N/A
836635523	Chao, Yingqian	M	Fall 2005	N/A	N/A
829947091	Chen, Jessica	F	Winter 2003	Spring 2004	Fall 2005
834411653	Chen, Kun	M	Spring 2005	N/A	N/A
996304498	Chen, Ming-Tse	M	Fall 2002	Winter 2004	Fall 2004
830260266	Chen, Xincheng	M	Fall 2003	Fall 2004	Fall 2005

Figure 23. Generate Reports - Ad Hoc Reports (Output)

4.2.10 Graduate Coordinator: Quarterly Reports

This function allows the Graduate Coordinator to generate the following quarterly reports - Students with C- grade in CSCI courses; Students with GPA below 3.0;

Students who are off the probation List; Students who are Preliminary Advanced to Candidacy; Students who have taken less than max 5 units for CSCI690, less than max 9 units for CSCI699; and Students who should be in continuous enrollment.

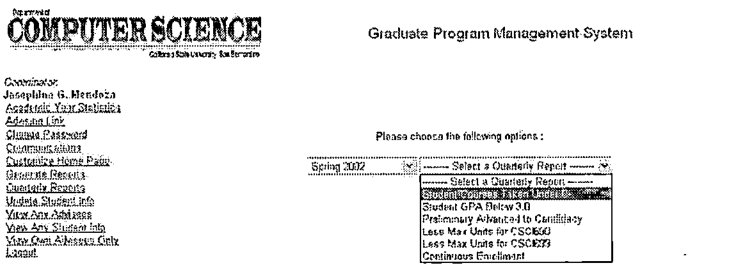
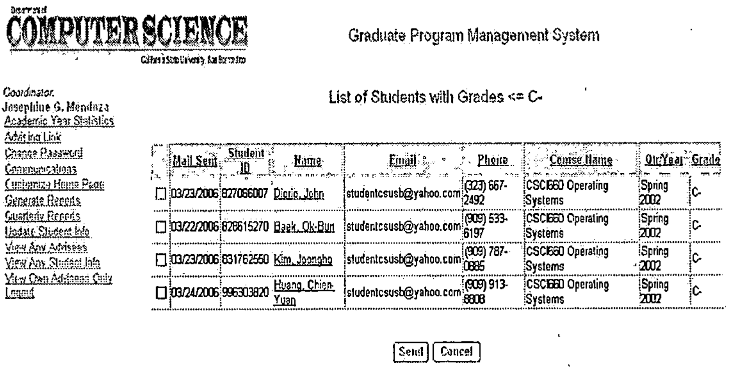
User Input: 1. Choose the term from the left-hand side drop-down list 2. Choose the quarterly report name from the right -hand side drop-down list	
Output: 3. A page displays the student id, name, email address, telephone number, course name and quarter/year when a C- was earned.	

Figure 24. Quarterly Reports

Department of COMPUTER SCIENCE
California State University, San Bernardino

Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

Please choose the following options :

Spring 2002 ------ Select a Quarterly Report ------

------ Select a Quarterly Report ------
Student Courses Taken Under C-
Student GPA Below 3.0
Preliminary Advanced to Candidacy
Less Max Units for CSCI690
Less Max Units for CSCI699
Continuous Enrollment

Department of COMPUTER SCIENCE
California State University, San Bernardino

Graduate Program Management System

Coordinator:
Josephine G. Mendoza
Academic Year Statistics
Advising Link
Change Password
Communications
Customize Home Page
Generate Reports
Quarterly Reports
Update Student Info
View Any Advisees
View Any Student Info
View Own Advisees Only
Logout

List of Students with Grades <= C-

	Mail Sent	Student ID	Name	Email	Phone	Course Name	Qtr/Year	Grade
□	03/23/2006	827086007	Diorio, John	studentcsusb@yahoo.com	(323) 667-2492	CSCI660 Operating Systems	Spring 2002	C-
□	03/22/2006	828615270	Baek, Ok-Bun	studentcsusb@yahoo.com	(909) 533-6197	CSCI660 Operating Systems	Spring 2002	C-
□	03/23/2006	831762550	Kim, Joongho	studentcsusb@yahoo.com	(909) 787-0885	CSCI660 Operating Systems	Spring 2002	C-
□	03/24/2006	996303820	Huang, Chien-Yuan	studentcsusb@yahoo.com	(909) 913-8808	CSCI660 Operating Systems	Spring 2002	C-

4.2.11 Graduate Coordinator / Program Assistant: View Any Advisee

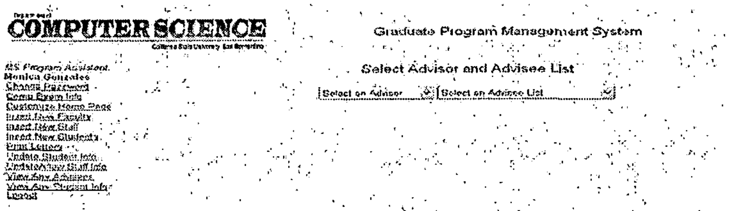
This function allows the Graduate Coordinator to view information concerning any advisee under any specific faculty advisor.

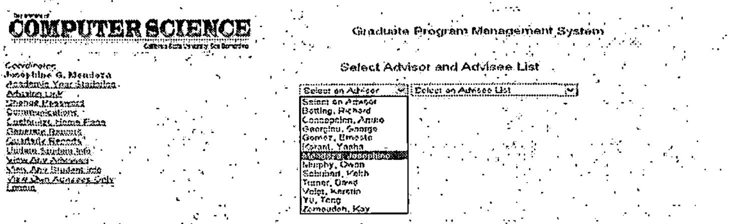
<table>
<tr>
<td>

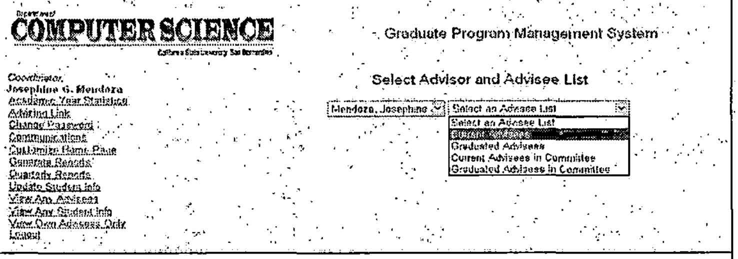
User Input:

1. Choose the advisor's name from the left-hand side drop-down list
2. Choose the advisee from the right -hand side drop-down list (current advisees, graduated advisees, current advisees in committee, graduated advisees in committee)

</td>
<td>



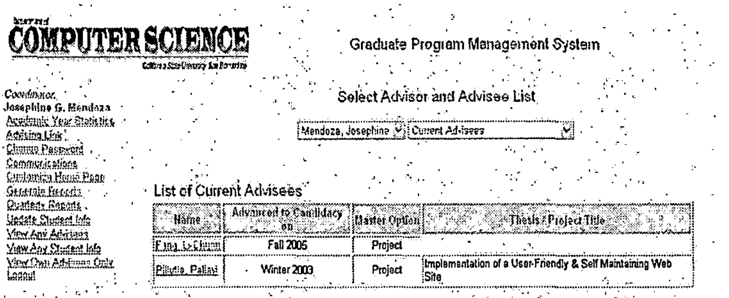




</td>
</tr>
<tr>
<td>

Output:
A page lists the current advisees providing student's name, quarter/year advanced to candidacy, master option and the title of the project or thesis

</td>
<td>



List of Current Advisees

Name	Advanced to Candidacy on	Master Option	Thesis / Project Title
Fang, Li-Chuan	Fall 2005	Project	
Pillutla, Pallavi	Winter 2003	Project	Implementation of a User-Friendly & Self Maintaining Web Site

</td>
</tr>
</table>

Figure 25. View Any Advisee

4.2.12 Graduate Coordinator / Program Assistant: Update Student Info

This function allows the Graduate Coordinator or Program Assistant to update a student's information.

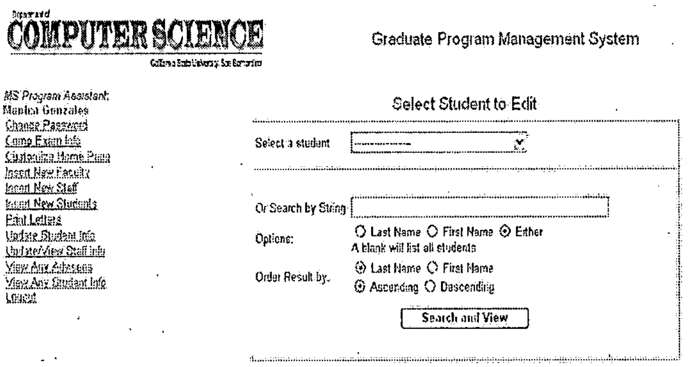
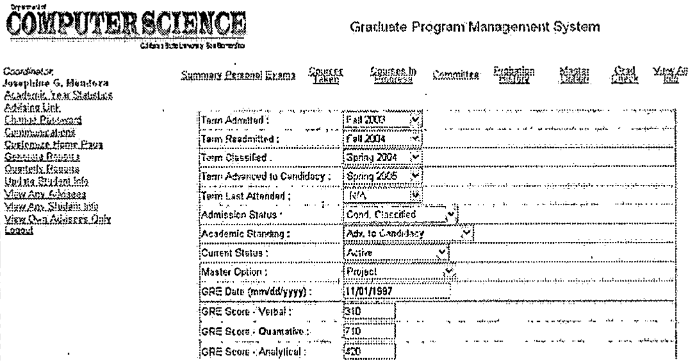
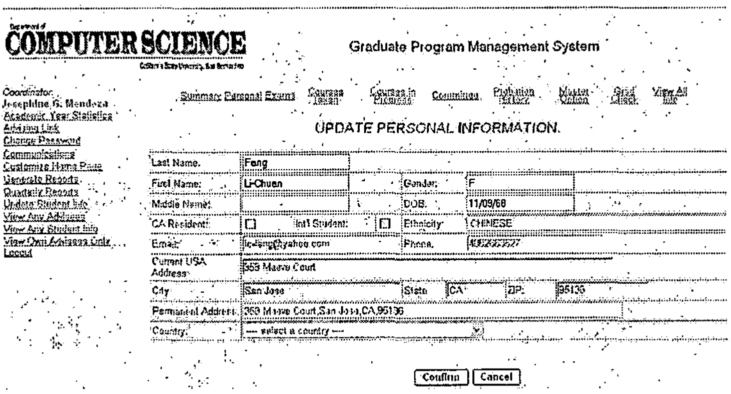
User Input: 1. Choose the student's name from the drop-down list Or Type in the student's last name and click on the "Last Name" radio button Or Type in the student's first name and click on the "First Name" radio button to initiate the search string 2. Click on the "Search and View" button	 Department of COMPUTER SCIENCE California State University, San Bernardino MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout Search and ViewGraduate Program Management System Select Student to Edit Select a student ------------ Or Search by String Options: ○ Last Name ○ First Name ● Either A blank will list all students Order Result by. ● Last Name ○ First Name ● Ascending ○ Descending
Output: Click "Summary" To update student's term admitted, term re-admitted, term classified, term advanced to candidacy, term last attended, admission status, academic standing, current status, master option, date and scores for GRE (Verbal, Quantitative, Analytical)	 Department of COMPUTER SCIENCE California State University, San Bernardino Coordinator: Josephine G. Mendoza Academic Year Statistics Advising Link Change Password Communications Customize Home Page Generate Reports Quarterly Reports Update Student Info View Any Advisees View Any Student Info View Own Advisees Only Logout Summary Personal Exams Courses Taken Courses In Progress Committee Probation History Master Status Grad Check View All InfoGraduate Program Management System Term Admitted : Fall 2003 Term Readmitted : Fall 2004 Term Classified . Spring 2004 Term Advanced to Candidacy : Spring 2005 Term Last Attended : N/A Admission Status : Cond. Classified Academic Standing : Adv. to Candidacy Current Status : Active Master Option : Project GRE Date (mm/dd/yyyy) : 11/01/1997 GRE Score - Verbal : 310 GRE Score - Quantative : 710 GRE Score - Analytical : 420

Figure 26. Update Student Information (Part A)

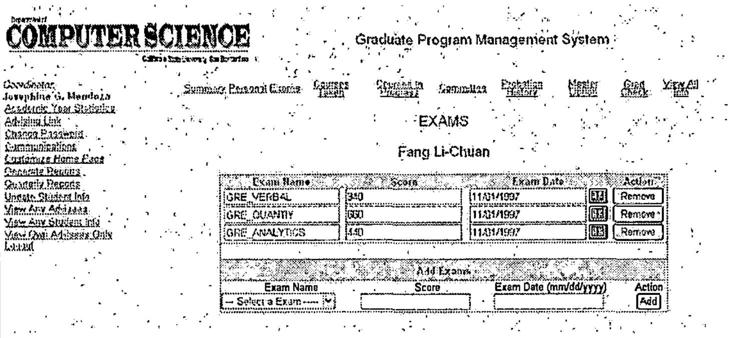
Click on "Personal"
To update student's personal information such as current USA address, phone number and email address



UPDATE PERSONAL INFORMATION.

Last Name.	Feng		
First Name:	Li-Chuen	Gender:	F
Middle Name:		DOB:	11/09/68
CA Resident: □	Int'l Student: □	Ethnicity	CHINESE
Email:	lc-feng@yahoo.com	Phone.	4052222527
Current USA Address	553 Maeve Court		
City	San Jose	State CA	ZIP: 95136
Permanent Address:	350 Maeve Court,San Jose,CA,95136		
Country:	--- select a country ---		

Click on "Exams"
To update student's score and date taken for GRE, TOEFL and WREE exams



EXAMS

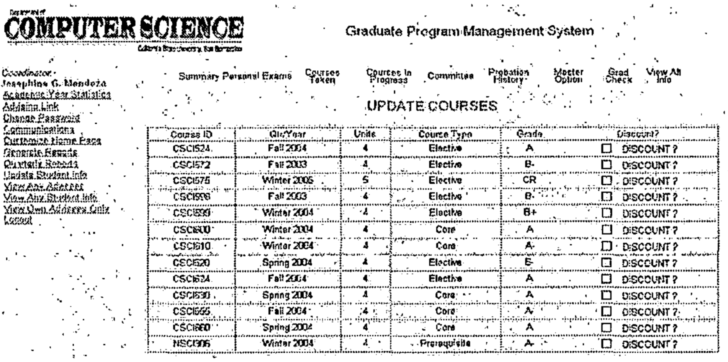
Fang Li-Chuan

Exam Name	Score	Exam Date	Action
GRE_VERBAL	340	11/01/1997	Remove
GRE_QUANTIY	600	11/01/1997	Remove
GRE_ANALYTICS	440	11/01/1997	Remove

Add Exams

Exam Name	Score	Exam Date (mm/dd/yyyy)	Action
-- Select a Exam ----			Add

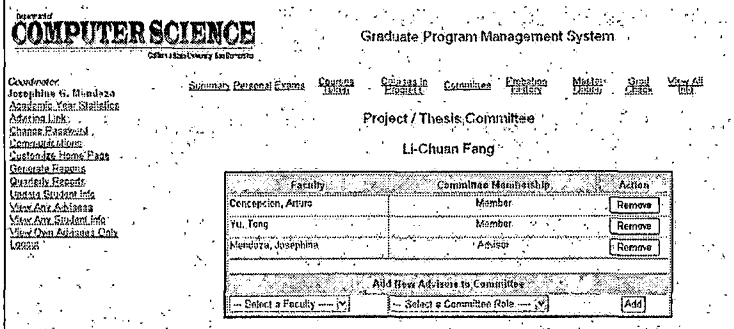
Click on "Courses Taken"
The only thing that can be updated is if this course needs to be discounted since the student received an unsatisfactory score in the first attempt. Check the "Discount" box if this course has been approved by Dean of Graduate Studies for a discount.



UPDATE COURSES

Course ID	Qtr/Year	Units	Course Type	Grade	Discount?
CSCI524	Fall 2004	4	Elective	A	□ DISCOUNT ?
CSCI572	Fall 2003	4	Elective	B-	□ DISCOUNT ?
CSCI575	Winter 2005	5	Elective	CR	□ DISCOUNT ?
CSCI598	Fall 2003	4	Elective	B-	□ DISCOUNT ?
CSCI599	Winter 2004	4	Elective	B+	□ DISCOUNT ?
CSCI600	Winter 2004	4	Core	A	□ DISCOUNT ?
CSCI610	Winter 2004	4	Core	A-	□ DISCOUNT ?
CSCI620	Spring 2004	4	Elective	B-	□ DISCOUNT ?
CSCI624	Fall 2004	4	Elective	A	□ DISCOUNT ?
CSCI630	Spring 2004	4	Core	A	□ DISCOUNT ?
CSCI655	Fall 2004	4	Core	A-	□ DISCOUNT ?
CSCI660	Spring 2004	4	Core	A	□ DISCOUNT ?
NSCI606	Winter 2004	4	Prerequisite	A-	□ DISCOUNT ?

Click on "Committee"
To update the student's advisor and committee members



Project / Thesis Committee

Li-Chuan Fang

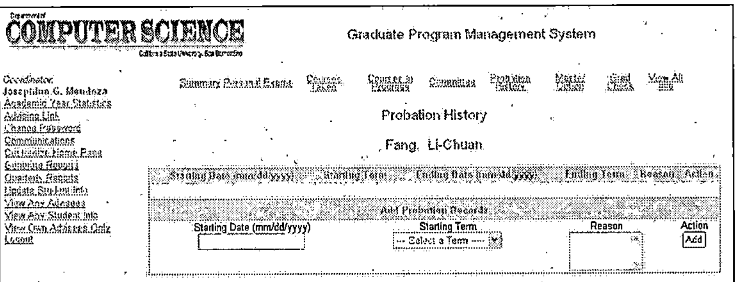
Faculty	Committee Membership	Action
Concepcion, Arturo	Member	Remove
Yu, Tong	Member	Remove
Mendoza, Josephina	Advisor	Remove

Add New Advisors to Committee

-- Select a Faculty ----	-- Select a Committee Role ----	Add

Figure 27. Update Student Information (Part B)

Click on "Probation History"
To update student's probation history such as starting date, starting term, ending date, ending term and reason why the student was put on probation



Probation History

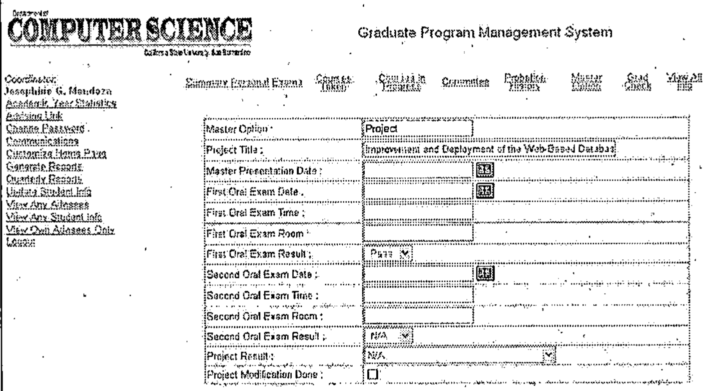
Fang, Li-Chuan

Starting Date (mm/dd/yyyy)	Starting Term	Ending Date (mm/dd/yyyy)	Ending Term	Reason	Action

Add Probation Records

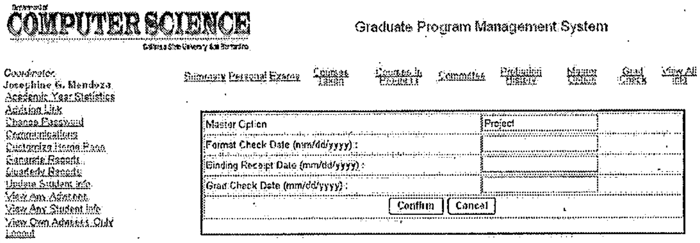
Starting Date (mm/dd/yyyy)	Starting Term	Reason	Action
	--- Select a Term ---		Add

Click on "Master Option"
To update student's master option information



Master Option :	Project
Project Title :	Improvement and Deployment of the Web-Based Databas
Master Presentation Date :	
First Oral Exam Date :	
First Oral Exam Time :	
First Oral Exam Room :	
First Oral Exam Result :	Pass
Second Oral Exam Date :	
Second Oral Exam Time :	
Second Oral Exam Room :	
Second Oral Exam Result :	N/A
Project Result :	N/A
Project Modification Done :	□

Click on "Grad Check"
To update the date the student submitted for format check, date of binding receipt, and date when grad check was filed



Master Option	Project
Format Check Date (mm/dd/yyyy) :	
Binding Receipt Date (mm/dd/yyyy) :	
Grad Check Date (mm/dd/yyyy) :	

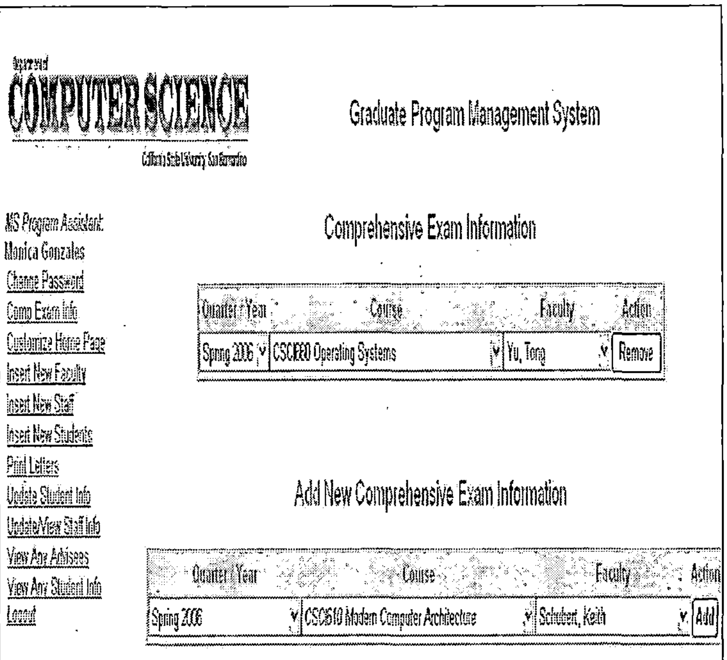
Figure 28. Update Student Information (Part C)

4.2.13 Program Assistant: Comp Exam Info

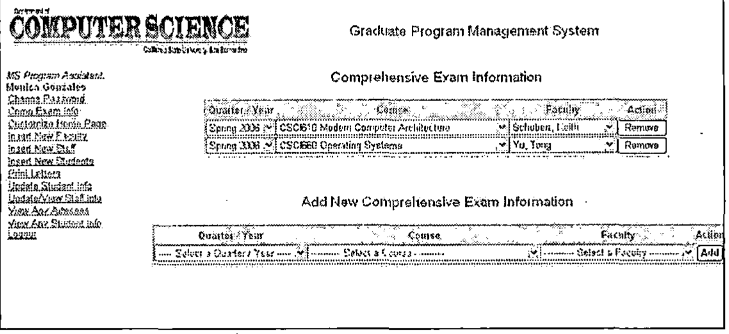
This function allows the Program Assistant to insert or update information on the comprehensive examination: quarter/year it is given, the faculty designated to make the exam for each of the core courses (CSCI600, CSCI610, CSCI 630, CSCI655 and CSCI660).

<table>
<tr>
<td>User Input:
To add the new information -
1. Choose the term, course name, and faculty name from the lower drop-down lists
2. Click the "Add" button

To update the existing information -
Choose the term, course name and faculty name from the upper drop-down lists

To delete the existing information -
Click the "Remove" button</td>
<td>
Department of
COMPUTER SCIENCE
California State University, San Bernardino
Graduate Program Management System

MS Program Assistant:
Monica Gonzales
Change Password
Comp Exam Info
Customize Home Page
Insert New Faculty
Insert New Staff
Insert New Students
Print Letters
Update Student Info
Update/View Staff Info
View Any Advisees
View Any Student Info
Logout

Comprehensive Exam Information
<table>
<tr><th>Quarter / Year</th><th>Course</th><th>Faculty</th><th>Action</th></tr>
<tr><td>Spring 2006</td><td>CSCI660 Operating Systems</td><td>Yu, Tong</td><td>Remove</td></tr>
</table>
Add New Comprehensive Exam Information
<table>
<tr><th>Quarter / Year</th><th>Course</th><th>Faculty</th><th>Action</th></tr>
<tr><td>Spring 2006</td><td>CSCI610 Modern Computer Architecture</td><td>Schubert, Keith</td><td>Add</td></tr>
</table>
</td>
</tr>
<tr>
<td>Output:
Displays the comprehensive examination for the quarter/year indicated</td>
<td>
Department of
COMPUTER SCIENCE
California State University, San Bernardino
Graduate Program Management System

MS Program Assistant:
Monica Gonzales
Change Password
Comp Exam Info
Customize Home Page
Insert New Faculty
Insert New Staff
Insert New Students
Print Letters
Update Student Info
Update/View Staff Info
View Any Advisees
View Any Student Info
Logout

Comprehensive Exam Information
<table>
<tr><th>Quarter / Year</th><th>Course</th><th>Faculty</th><th>Action</th></tr>
<tr><td>Spring 2006</td><td>CSCI610 Modern Computer Architecture</td><td>Schubert, Keith</td><td>Remove</td></tr>
<tr><td>Spring 2006</td><td>CSCI660 Operating Systems</td><td>Yu, Tong</td><td>Remove</td></tr>
</table>
Add New Comprehensive Exam Information
<table>
<tr><th>Quarter / Year</th><th>Course</th><th>Faculty</th><th>Action</th></tr>
<tr><td>---- Select a Quarter / Year ----</td><td>-------- Select a Course --------</td><td>-------- Select a Faculty --------</td><td>Add</td></tr>
</table>
</td>
</tr>
</table>

Figure 29. Comprehensive Exam Information

4.2.14 Program Assistant: Insert New Faculty

This function allows the Program Assistant to insert information on new faculty who have been hired or for persons who are not from CSUSB but who will be the student's advisor or will be in the student's committee.

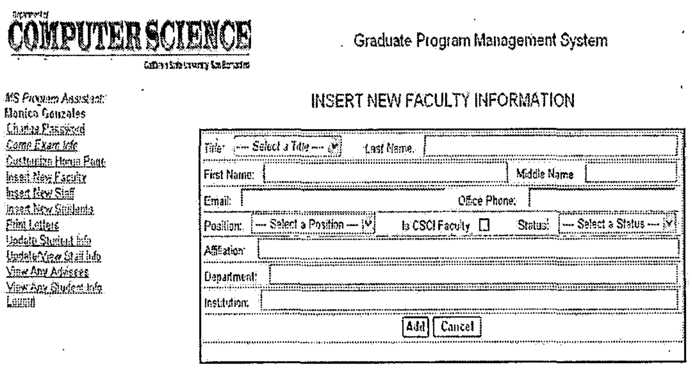
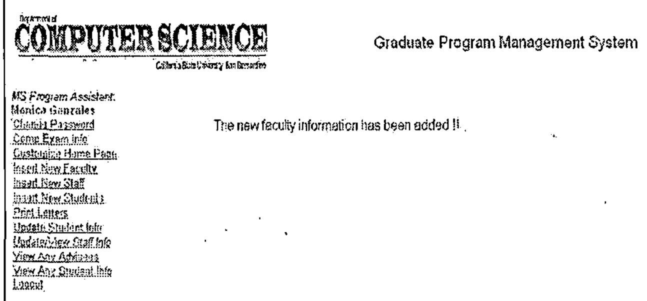
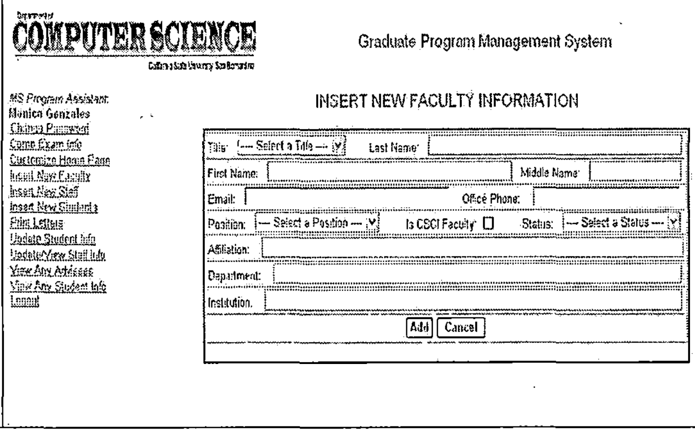
User Input: 1. Enter the new faculty's title, last name, first name, middle name, email, office phone, position, and status If the individual is a CSCI faculty member, place a check mark next to the box asking whether the person "is CSCI faculty". If not, type in the new faculty affiliation, department and institution. This is required for persons who will be in student's committee 2. Click the "Add" or "Cancel" button	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout INSERT NEW FACULTY INFORMATION Title: -- Select a Title -- Last Name: First Name: Middle Name Email: Office Phone: Position: -- Select a Position -- Is CSCI Faculty □ Status: -- Select a Status -- Affiliation: Department: Institution: Add Cancel
Output: Add - A screen with the successful message Cancel - Return to the previous page	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info LogoutThe new faculty information has been added !!  Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout INSERT NEW FACULTY INFORMATION Title: -- Select a Title -- Last Name: First Name: Middle Name: Email: Office Phone: Position: -- Select a Position -- Is CSCI Faculty □ Status: -- Select a Status -- Affiliation: Department: Institution: Add Cancel

Figure 30. Insert New Faculty

4.2.15 Program Assistant: Insert New Staff

This function allows the Program Assistant to insert information on a staff person who has been hired.

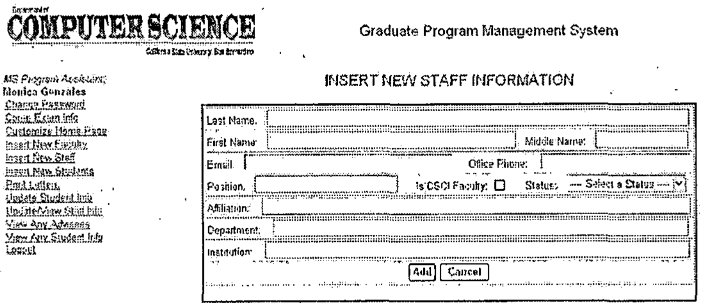
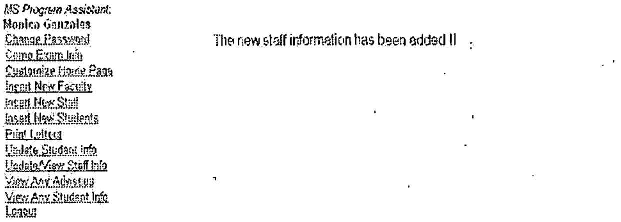
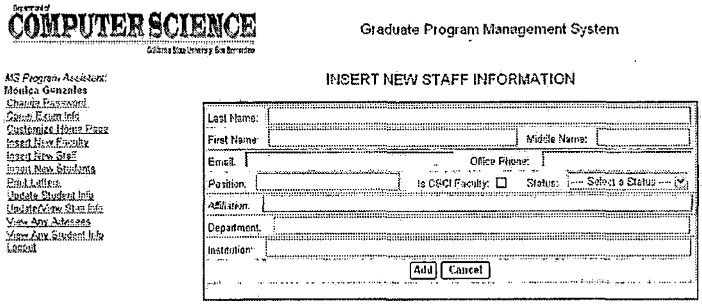
User Input: 1. Enter the last name, first name, middle name, email, office phone, position, status of the staff person hired 2. Click the "Add" or "Cancel" button	 COMPUTER SCIENCE Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout INSERT NEW STAFF INFORMATION Last Name: First Name Middle Name: Email Office Phone: Position Is CSCI Faculty: □ Status: --- Select a Status --- Affiliation: Department: Institution: Add Cancel
Output: Add - A screen with a successful message Cancel - Return the previous page	 MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout The new staff information has been added !!  COMPUTER SCIENCE Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout INSERT NEW STAFF INFORMATION Last Name: First Name Middle Name: Email Office Phone: Position Is CSCI Faculty: □ Status: --- Select a Status --- Affiliation: Department: Institution: Add Cancel

Figure 31. Insert New Staff

4.2.16 Program Assistant: Print Letters

This function allows the Program Assistant to print the letters that need to be sent to the students.

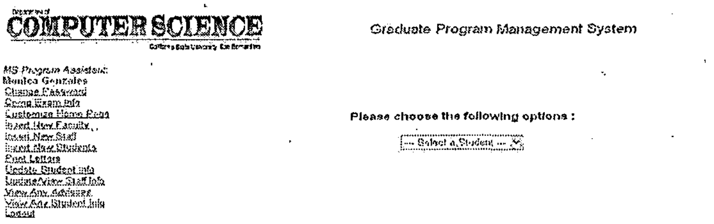
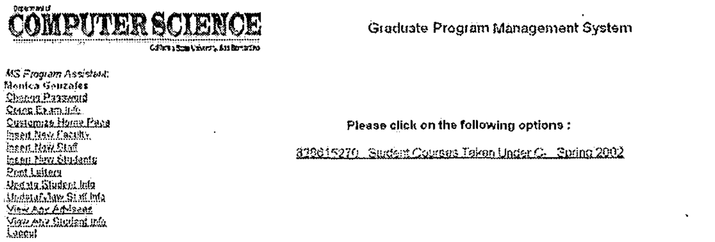
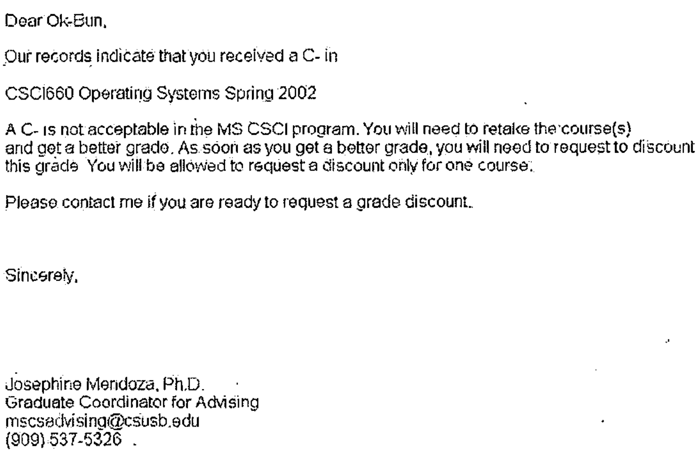
User Input: 1. Choose the student's name from the drop-down list 2. Click on the hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout Graduate Program Management System Please choose the following options : --- Select a Student ---  Department of COMPUTER SCIENCE California State University, San Bernardino MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout Graduate Program Management System Please click on the following options : 339615270 Student Courses Taken Under C- Spring 2002
Output: 3. A pop-up page displaying the content of the letter from the clicked hyper link. The Program Assistant must make sure that a department letter head is on the printer paper bin.	 Dear Ok-Bun, Our records indicate that you received a C- in CSCI660 Operating Systems Spring 2002 A C- is not acceptable in the MS CSCI program. You will need to retake the course(s) and get a better grade. As soon as you get a better grade, you will need to request to discount this grade You will be allowed to request a discount only for one course. Please contact me if you are ready to request a grade discount. Sincerely, Josephine Mendoza, Ph.D. Graduate Coordinator for Advising mscsadvising@csusb.edu (909) 537-5326

Figure 32. Print Letters

4.2.17 Program Assistant: Update/View Staff Info

This function allows the Program Assistant to update or view faculty or staff information.

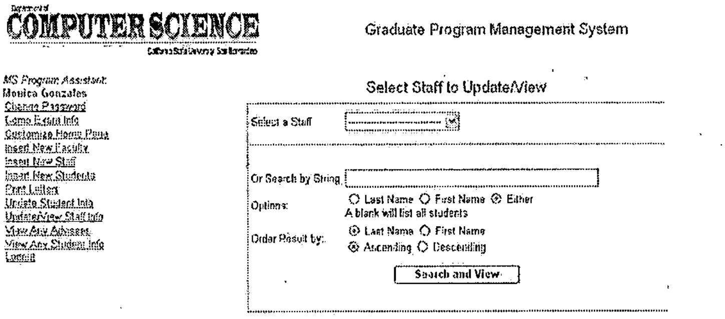
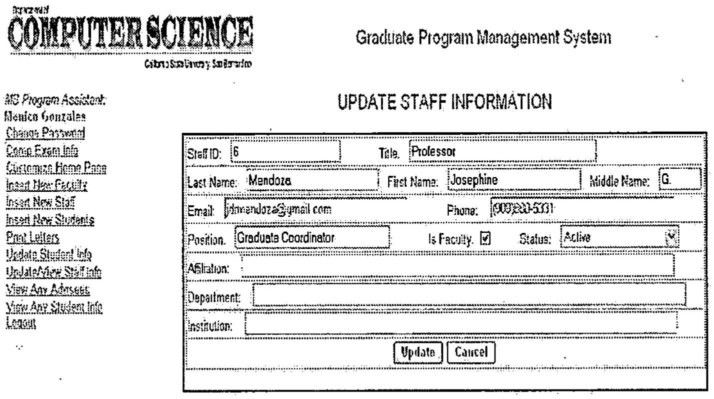
User Input: 1. Choose the faculty or staff member's name from the drop-down list Or Type in the faculty or staff member's last name and click on the "Last Name" radio button Or Type in the faculty or staff member's first name and click on the "First Name" radio button to initiate the search string 2. Click on the "Search and View" button	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout Select Staff to Update/View Select a Staff Or Search by String Options: ○ Last Name ○ First Name ● Either A blank will list all students Order Result by: ● Last Name ○ First Name ● Ascending ○ Descending Search and View
Output: 3. A page displays the information on the faculty or staff	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System MS Program Assistant: Monica Gonzales Change Password Comp Exam Info Customize Home Page Insert New Faculty Insert New Staff Insert New Students Print Letters Update Student Info Update/View Staff Info View Any Advisees View Any Student Info Logout UPDATE STAFF INFORMATION Staff ID: 6 Title. Professor Last Name: Mendoza First Name: Josephine Middle Name: G. Email: jdmendoza@ymail com Phone: (909)880-5331 Position. Graduate Coordinator Is Faculty. ☑ Status: Active Affiliation: Department: Institution: Update Cancel

Figure 33. Update/View Staff Information

4.2.18 Student: Communications

This module allows the student to email different groups. The functionality for each of the particular groups will be provided in detail in the following sections.

4.2.18.1 All Committee Members. This function allows the student to send emails to his or her committee members.

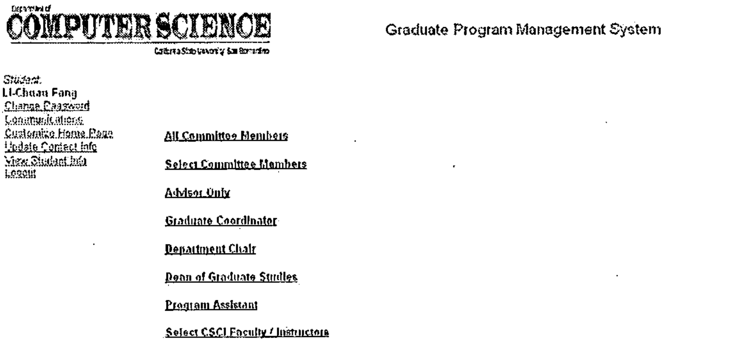
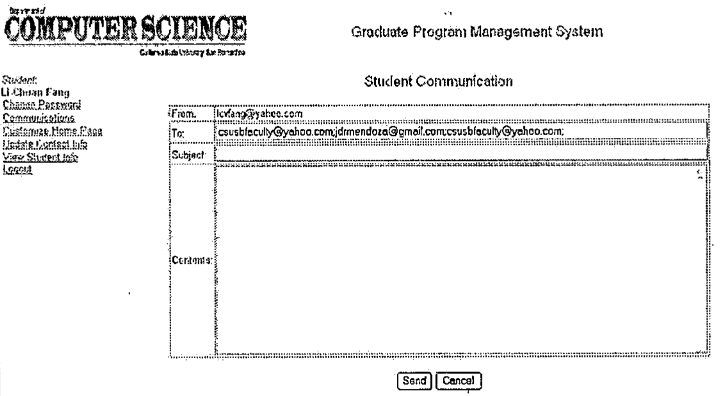
User Input: • Click on the "All Committee Members" hyperlink	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: • A pop-up page where FROM field is automatically filled with the sender's (student) email address; TO field is automatically filled with email addresses of pertinent committee members; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout Send CancelStudent Communication From: lcfang@yahoo.com To: csusbfaculty@yahoo.com;jdmendoza@gmail.com;csusbfaculty@yahoo.com; Subject: Contents:

Figure 34. Communications - All Committee Members

4.2.18.2 Select Committee Members. This function allows the student to send email to certain committee members selected from the list.

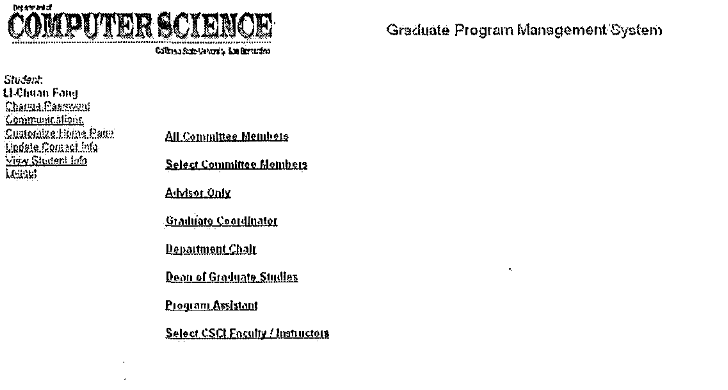
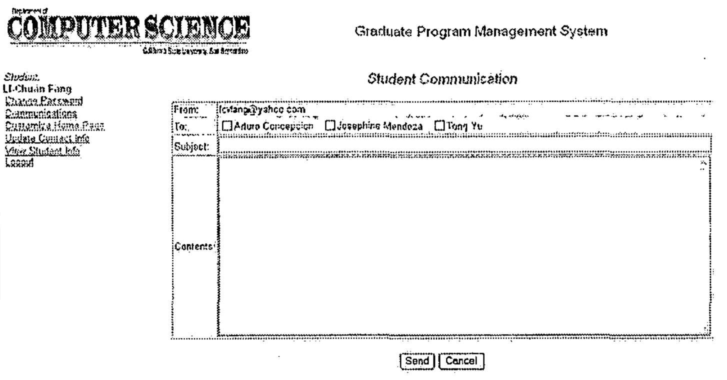
User Input: • Click on the "Select Committee Members" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: • A pop-up page where FROM field is automatically filled with the sender's (student) email address; TO field presents a list of committee member that the sender needs to select from; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout Student Communication From: lcfang@yahoo.com To: □ Arturo Concepcion □ Josephine Mendoza □ Tong Yu Subject: Contents:

Figure 35. Communications - Select Committee Members

4.2.18.3 Advisor Only. This function allows the student to send an email to his or her advisor.

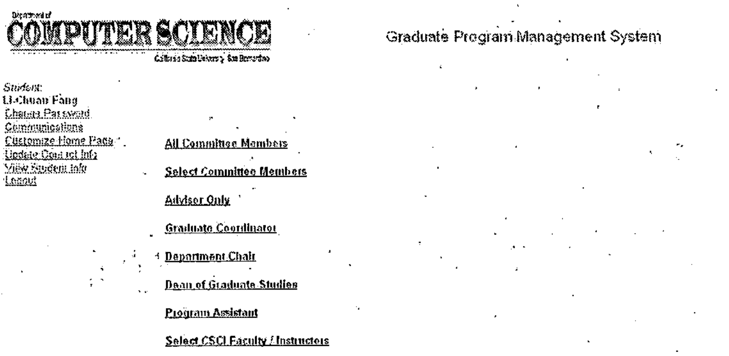
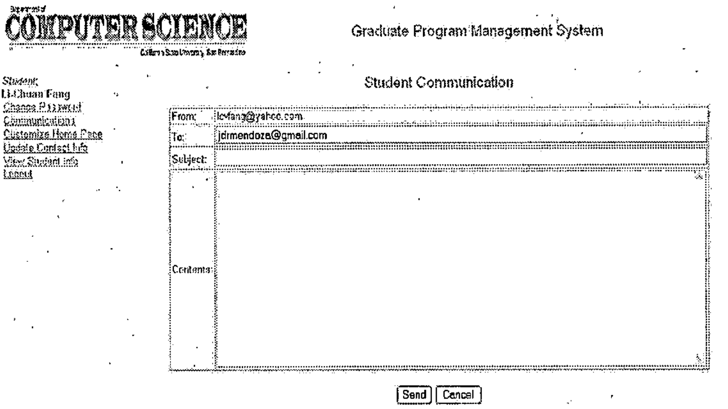
User Input: - Click on the "Advisor Only" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: - A pop-up page where FROM field is automatically filled with the sender's (student) email address; TO field is automatically filled with the email address of the advisor; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout Student Communication From: lcvfang@yahoo.com To: jdrmendoza@gmail.com Subject: Contents: Send Cancel

Figure 36. Communications - Advisor Only

4.2.18.4 Graduate Coordinator. This function allows the student to send an email to the Graduate Coordinator.

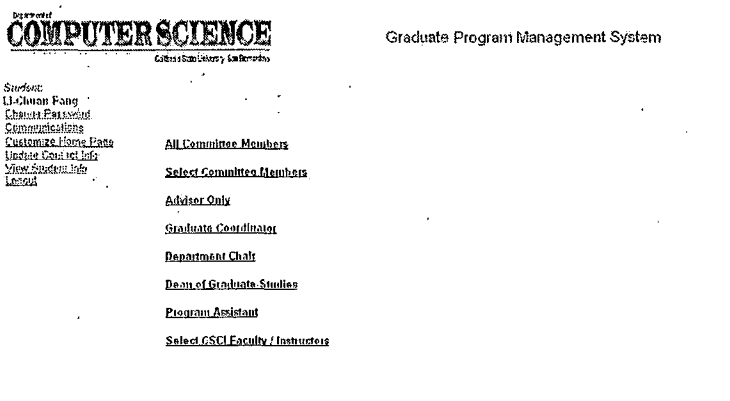
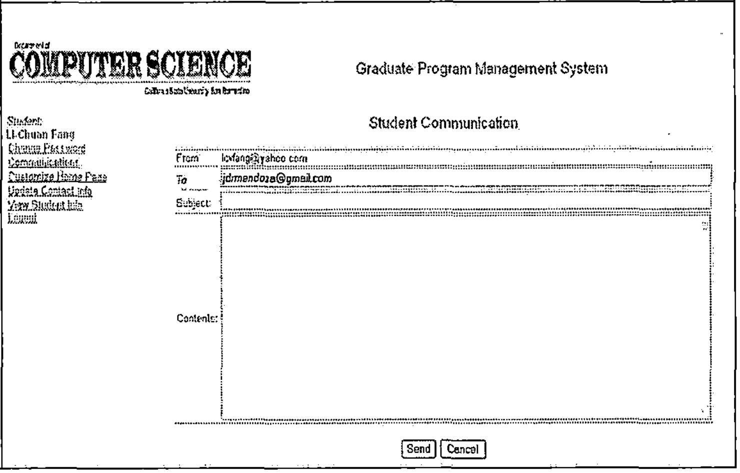
User Input: • Click on the "Graduate Coordinator" hyperlink	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: • A pop-up page where FROM field is automatically filled with the sender's (student) email address; TO field is automatically filled with email address of the Graduate Coordinator; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University San Bernardino Graduate Program Management System Student Communication Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout From lcfang@yahoo.com To jdmendoza@gmail.com Subject: Contents: Send Cancel

Figure 37. Communications - Graduate Coordinator

4.2.18.5 Department Chair. This function allows the student to send an email to the Department Chair.

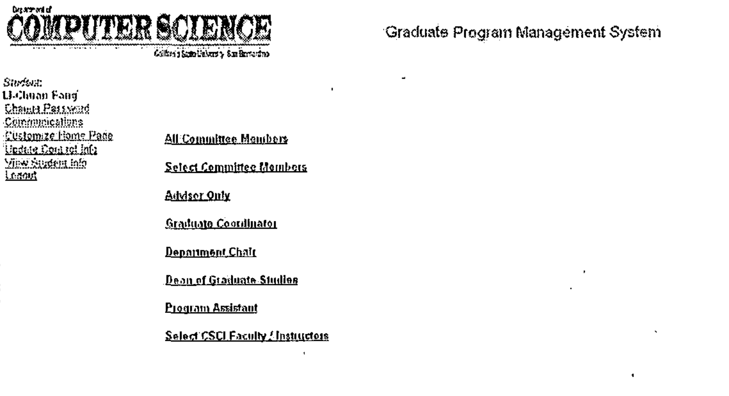
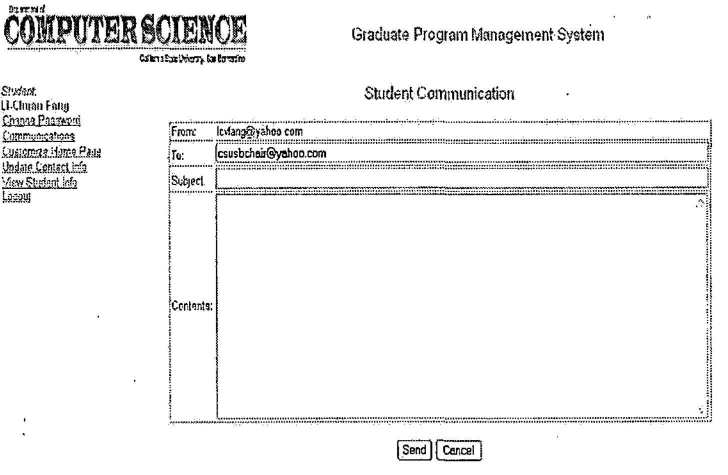
User Input: • Click on the "Department Chair" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instuctors
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field is automatically filled with email address of the Department Chair; SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout Student Communication From: lcfang@yahoo com To: csusbchair@yahoo.com Subject Contents:

Figure 38. Communications - Department Chair

4.2.18.6 Dean of Graduate Studies. This function allows the student to send an email to the Dean of Graduate Studies.

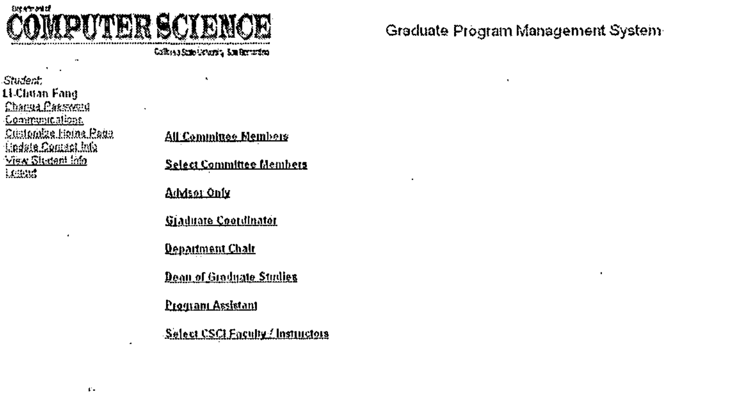
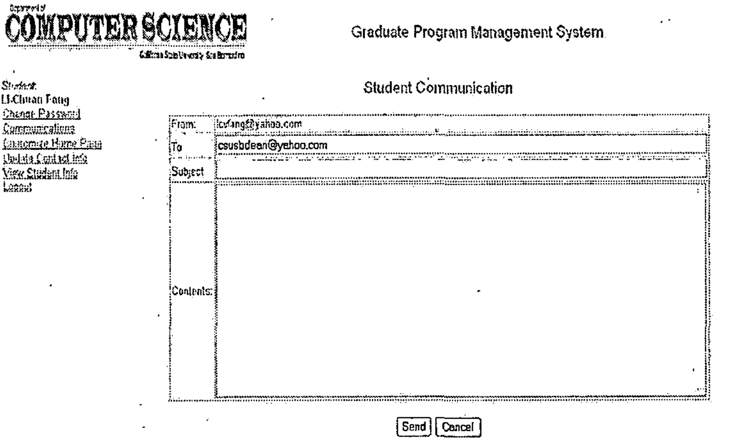
User Input: • Click on the "Dean of Graduate Studies" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: • A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field is automatically filled with email address of the Dean of Graduate Studies; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout Send Cancel Student Communication From: lcfang@yahoo.com To csusbdean@yahoo.com Subject Contents:

Figure 39. Communications - Dean of Graduate Studies

4.2.18.7 Program Assistant. This function allows the student to send an email to the Program Assistant.

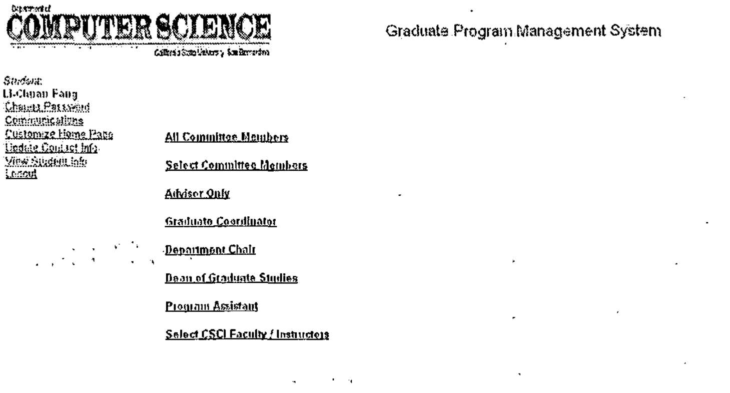
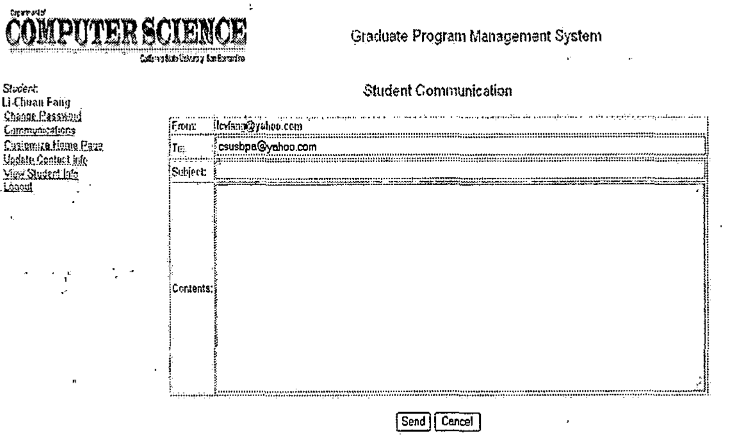
User Input: - Click on the "Program Assistant" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: - A pop-up page where FROM field is automatically filled with the sender's (faculty or graduate coordinator) email address; TO field is automatically filled with email address of the Program Assistant; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout Student Communication From: lcvfang@yahoo.com To: csusbpa@yahoo.com Subject: Contents:

Figure 40. Communications - Program Assistant

4.2.18.8 Select CSCI Faculty / Instructors. This function allows the student to send emails to selected CSCI faculty or instructors.

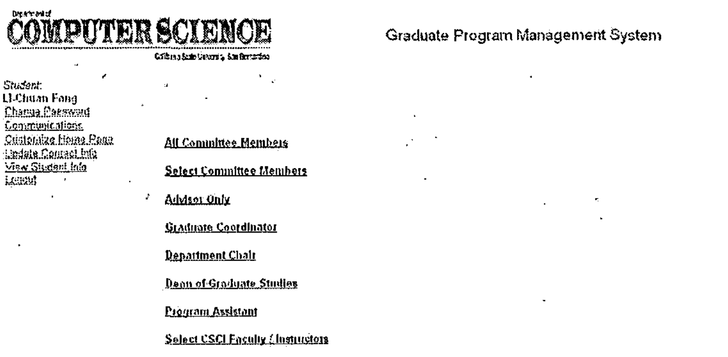
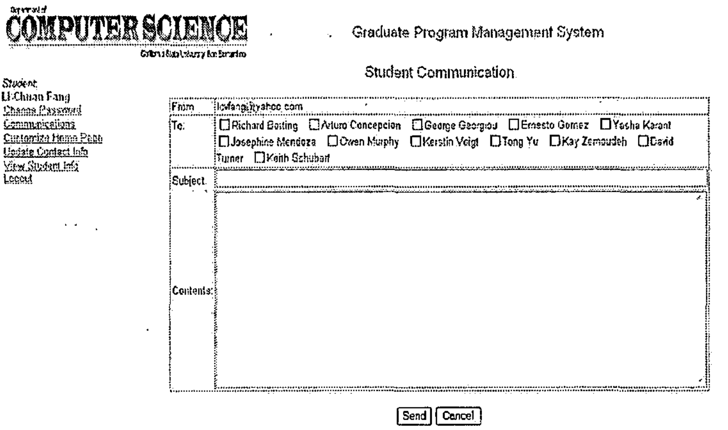
User Input: • Click on the "Select CSCI Faculty / Instructors" hyperlink	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout All Committee Members Select Committee Members Advisor Only Graduate Coordinator Department Chair Dean of Graduate Studies Program Assistant Select CSCI Faculty / Instructors
Output: • A pop-up page where FROM field is automatically filled with the sender's (student) email address; TO field presents a list of CSCI faculty that the sender needs to select from; and SUBJECT and CONTENTS fields will be filled out by the sender	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student Communication Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout From: lcvfang@yahoo.com To: □Richard Botting □Arturo Concepcion □George Georgiou □Ernesto Gomez □Yasha Karant □Josephine Mendoza □Owen Murphy □Kerstin Voigt □Tong Yu □Kay Zemoudeh □David Turner □Keith Schubert Subject: Contents: Send Cancel

Figure 41. Communications - Select Computer Science Faculty

4.2.19 Update Contact Info

This function permits students to update their email address, telephone numbers, or current address.

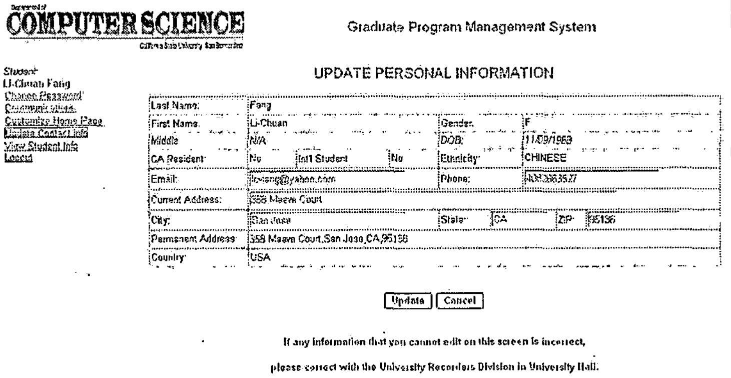
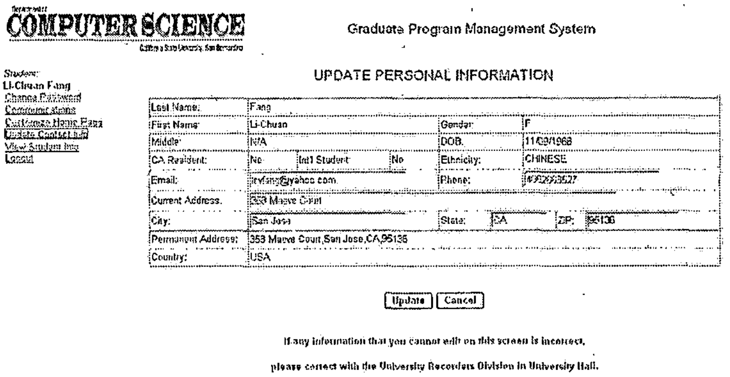
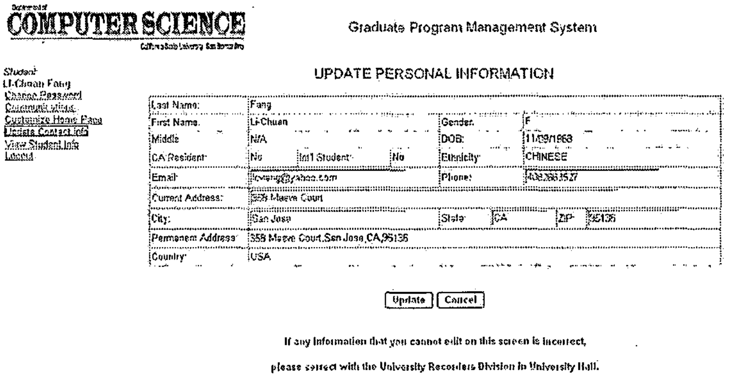
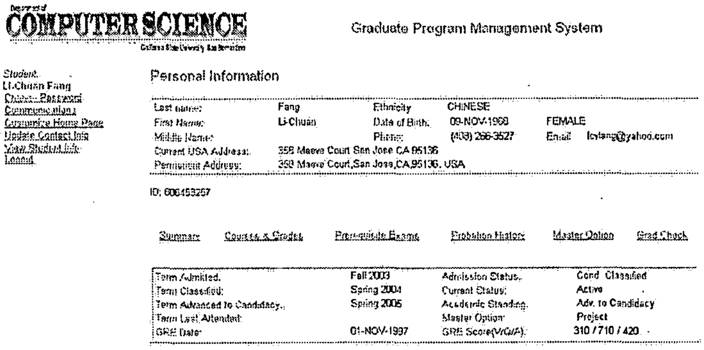
User Input: 1. Enter the email address, phone number, current address, city, state, zip 2. Click the "Update" or "Cancel" button	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout UPDATE PERSONAL INFORMATION Last Name: Fang First Name: Li-Chuan Gender: F Middle: N/A DOB: 11/09/1968 CA Resident: No Int'l Student: No Ethnicity: CHINESE Email: [illegible]@yahoo.com Phone: [illegible] Current Address: 358 Maeve Court City: San Jose State: CA ZIP: 95136 Permanent Address: 358 Maeve Court,San Jose,CA,95136 Country: USA Update Cancel If any information that you cannot edit on this screen is incorrect, please correct with the University Recorders Division in University Hall.
Output: A page displaying the personal information Update - A screen displays the updated personal information Cancel - A screen displays the old personal information	 Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout UPDATE PERSONAL INFORMATION Last Name: Fang First Name: Li-Chuan Gender: F Middle: N/A DOB: 11/09/1968 CA Resident: No Int'l Student: No Ethnicity: CHINESE Email: lcvfang@yahoo.com Phone: [illegible] Current Address: 353 Maeve Court City: San Jose State: CA ZIP: 95136 Permanent Address: 353 Maeve Court,San Jose,CA,95136 Country: USA Update Cancel If any information that you cannot edit on this screen is incorrect, please correct with the University Recorders Division in University Hall.  Department of COMPUTER SCIENCE California State University, San Bernardino Graduate Program Management System Student: Li-Chuan Fang Change Password Communications Customize Home Page Update Contact Info View Student Info Logout UPDATE PERSONAL INFORMATION Last Name: Fang First Name: Li-Chuan Gender: F Middle: N/A DOB: 11/09/1968 CA Resident: No Int'l Student: No Ethnicity: CHINESE Email: [illegible]@yahoo.com Phone: [illegible] Current Address: 358 Maeve Court City: San Jose State: CA ZIP: 95136 Permanent Address: 358 Maeve Court,San Jose,CA,95136 Country: USA Update Cancel If any information that you cannot edit on this screen is incorrect, please correct with the University Recorders Division in University Hall.

Figure 42. Update Contact Information

4.2.20 View Student Info

This function allows the student to view his or her personal and academic information.

User Input:
None
Output:
On the top -
Student's personal information, such as last name, first name, middle name, date of birth, ethnicity, phone number, email, current address, and permanent address
On the bottom -
Student's academic Information
Click on "Summary" A screen with a student's term admitted, term classified, term advanced to candidacy, term last attended, admission status, current status, academic standing, master option, GRE date and score



Graduate Program Management System

Student:
Li-Chuan Fang
Change Password
Communications
Customize Home Page
Update Contact Info
View Student Info
Logout

Personal Information

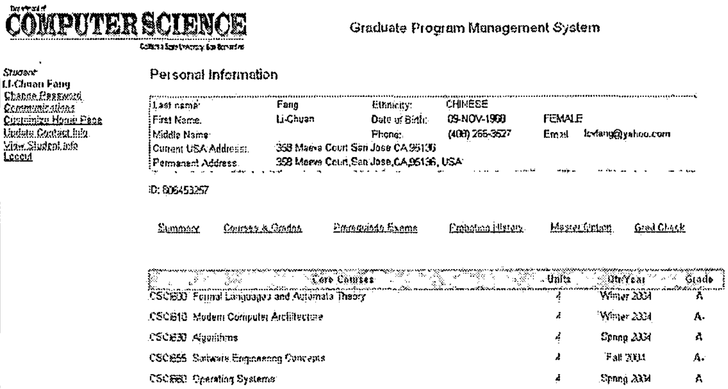
Last name:	Fang	Ethnicity	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email	lcyfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

ID: 606453257

Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check

Term Admitted.	Fall 2003	Admission Status.	Cond Classified
Term Classified:	Spring 2004	Current Status:	Active
Term Advanced to Candidacy.	Spring 2005	Academic Standing.	Adv. to Candidacy
Term Last Attended:		Master Option:	Project
GRE Date:	01-NOV-1997	GRE Score(V/Q/A):	310 / 710 / 420

Click on "Course & Grades"
A screen with the courses (including core course, elective courses and prerequisite courses) which the student has taken and the grade which the student has earned



Graduate Program Management System

Student:
Li-Chuan Fang
Change Password
Communications
Customize Home Page
Update Contact Info
View Student Info
Logout

Personal Information

Last name:	Fang	Ethnicity:	CHINESE		
First Name.	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 265-3527	Email	lcyfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address.	358 Maeve Court,San Jose,CA,95136, USA				

ID: 606453257

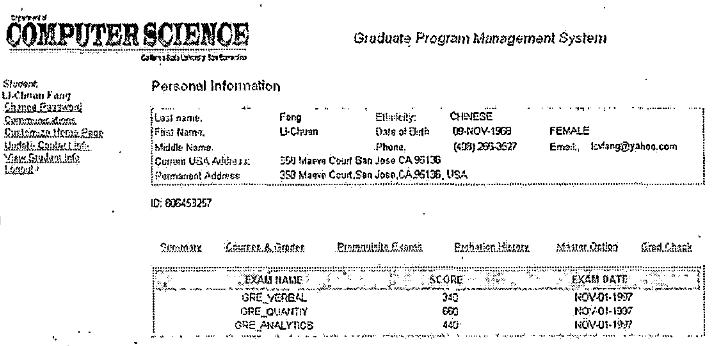
Summary Courses & Grades Prerequisite Exams Probation History Master Option Grad Check

Core Courses	Units	Qtr/Year	Grade
CSC600 Formal Languages and Automata Theory	4	Winter 2004	A
CSC610 Modern Computer Architecture	4	Winter 2004	A-
CSC630 Algorithms	4	Spring 2004	A
CSC655 Software Engineering Concepts	4	Fall 2004	A-
CSC660 Operating Systems	4	Spring 2004	A

Figure 43. View Student Information (Part A)

Click on "Prerequisite Exams"

A screen with the prerequisite exams (such as GRE, TOEFL, and WREE) which the student has taken and the scores that he/she earned



Department of COMPUTER SCIENCE California State University San Bernardino

Graduate Program Management System

Student:
Li-Chuan Fang
Change Password
Communications
Customize Home Page
Update Contact Info
View Student Info
Logout

Personal Information

Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

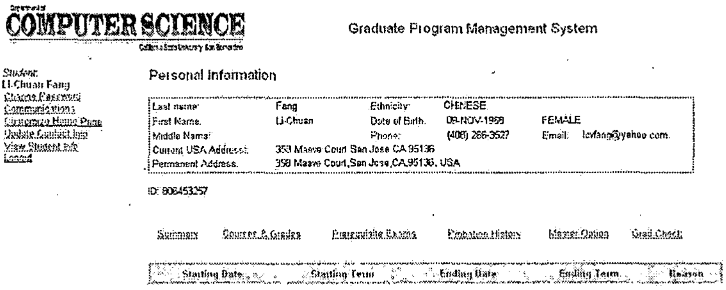
ID: 806453257

Summary   Courses & Grades   Prerequisite Exams   Probation History   Master Option   Grad Check

EXAM NAME	SCORE	EXAM DATE
GRE_VERBAL	340	NOV-01-1997
GRE_QUANTITY	660	NOV-01-1997
GRE_ANALYTICS	440	NOV-01-1997

Click on "Probation History"

A screen with the student's probation history (staring date, starting time, ending date, ending term, and probation reason)



Department of COMPUTER SCIENCE California State University San Bernardino

Graduate Program Management System

Student:
Li-Chuan Fang
Change Password
Communications
Customize Home Page
Update Contact Info
View Student Info
Logout

Personal Information

Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

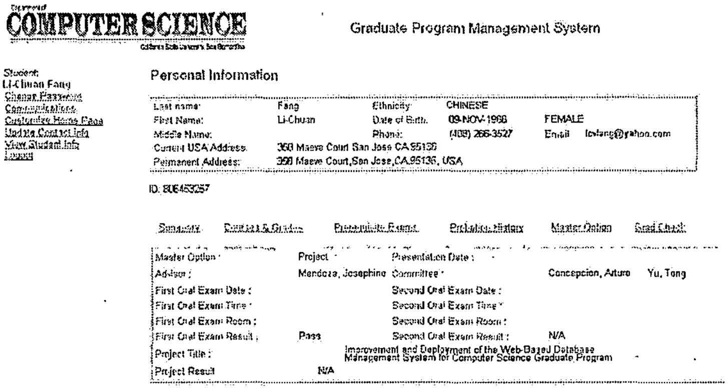
ID: 806453257

Summary   Courses & Grades   Prerequisite Exams   Probation History   Master Option   Grad Check

Starting Date	Starting Term	Ending Date	Ending Term	Reason

Click on "Master Option"

A screen with the student's master option information



Department of COMPUTER SCIENCE California State University San Bernardino

Graduate Program Management System

Student:
Li-Chuan Fang
Change Password
Communications
Customize Home Page
Update Contact Info
View Student Info
Logout

Personal Information

Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

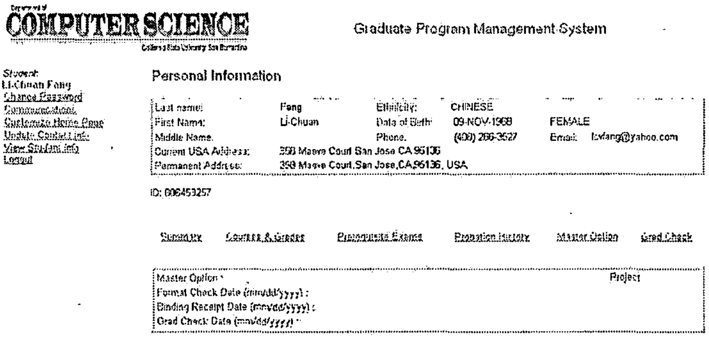
ID: 806453257

Summary   Courses & Grades   Prerequisite Exams   Probation History   Master Option   Grad Check

Master Option :	Project	Presentation Date :			
Advisor :	Mendoza, Josephine	Committee :		Concepcion, Arturo	Yu, Tong
First Oral Exam Date :		Second Oral Exam Date :			
First Oral Exam Time :		Second Oral Exam Time :			
First Oral Exam Room :		Second Oral Exam Room :			
First Oral Exam Result :	Pass	Second Oral Exam Result :	N/A		
Project Title :	Improvement and Deployment of the Web-Based Database Management System for Computer Science Graduate Program				
Project Result	N/A				

Click on "Grad Check"

A screen with the student's graduate checking information (such as date of format check, date of binding receipt, and date of grad check)



Department of COMPUTER SCIENCE California State University San Bernardino

Graduate Program Management System

Student:
Li-Chuan Fang
Change Password
Communications
Customize Home Page
Update Contact Info
View Student Info
Logout

Personal Information

Last name:	Fang	Ethnicity:	CHINESE		
First Name:	Li-Chuan	Date of Birth:	09-NOV-1968	FEMALE	
Middle Name:		Phone:	(408) 266-3527	Email:	lcvfang@yahoo.com
Current USA Address:	358 Maeve Court San Jose CA 95136				
Permanent Address:	358 Maeve Court,San Jose,CA,95136, USA				

ID: 806453257

Summary   Courses & Grades   Prerequisite Exams   Probation History   Master Option   Grad Check

Master Option :	Project
Format Check Date (mm/dd/yyyy) :	
Binding Receipt Date (mm/dd/yyyy) :	
Grad Check Date (mm/dd/yyyy) :	

Figure 44. View Student Information (Part B)

CHAPTER FIVE

CONCLUSIONS

5.1 Project Accomplishments

This project, the Web-Based Database System for the Computer Science Graduate Program, has been designed and implemented by correcting the deficiencies found in Graduate Database Management System developed by Dung Vu and added new functionalities to address the changes in the Computer Science graduate program policies and California State University, San Bernardino requirements. Appropriate data structures and up-to-date technologies have been incorporated in this project: vector, SQL language, JavaServer Pages, Java Bean, a relational database model, and XML technology.

The application of the Oracle technology in storing as well as in re-constructing SQL queries helps facilitates reporting, useful in functions such as the generation of ad-hoc reports. The database management system developed and deployed in this project has been made robust, reliable and protected from potential breaches by the incorporation of security techniques: password enforcement, encrypted passwords, transmission encryption with SSL (https), placement of the database within a private network and behind a firewall, use of authentication and authorization functions. Execution privilege of a function no longer relies upon hard-coding or fixed roles; instead, a vector data structure is used at program run time for authorization verification.

The use of modules makes the system flexible, easy to maintain and accommodate changes and new requirements with minimal programming workaround. New framework architecture complements system functions simply by registering new functions and assigning these to appropriate roles. The use of Java and JSP has made the system portable to multiple operating systems.

Most of the processing for this system has been automated. The system can monitor pre-determined and designated events like monitoring of GPA and status update through the use of SQL triggers and procedures.

This system can now be accessed 24 x 7 by not only the Graduate Coordinator and Program Assistant but by Computer Science faculty and graduate students. Graduate students can check their status in the program and communicate with their advisor and committee members, Graduate Coordinator, Program Assistant, other faculty, department chair and the dean of Graduate Studies without knowing the email addresses. The interfacing with SIS+ has removed the manual input of student course grades by the Program Assistant.

5.2 Future Directions

There are features which could be added to the database system, but which, due to the scope of my master project, have not been implemented. These nice-to-have modules are listed below.

5.2.1 Centralized Management of Documents

The system will allow graduate students to upload their project or thesis documents, thus permitting the sharing of such documents with faculty, PA, and GCA utilizing a centralized database. The system can readily manage system-generated documents. While this functionality provides for ready access by administrative users, this centralization of the document management system also serves as an electronic secondary archive for student documents.

5.2.2 Appointment Maker

The system will enable the scheduling of appointments for students to meet with specific faculty members; in particular their advisor and committee members as well as the Graduate Coordinator for Advising.

5.2.3 Announcement

Announcements intended for faculty, students, and specific special interest groups will be facilitated by a posting system.

5.2.4 Frames versus Table Format

Currently, my project uses frames within the web page structure rather than tables. Both formats possess certain advantages and disadvantages, and an analysis of these aspects can help modify the next version.

Frames allow access to data without the need for scrolling up or down in order to view functions on the left side of the relevant screens. However, frames do limit the potential size of the user interface due to screen size. In contrast, table use does not have screen size limitation. However, users must utilize scrolling up and down to view needed functions. It is my belief that tables represent a better choice, as screen size is enhanced even though some scrolling is necessary. Improved size represents a more central consideration, as scrolling can be easily accomplished.

APPENDIX A

DATA DICTIONARY

A.1 Look-Up Tables

1. ACADSTANDING. Define academic standing of students -- probation, conditionally classified, classified, or advanced to candidacy.

STANDING_ID [VARCHAR2 (10), PK]: Academic standing code

STANDING [VARCHAR2 (30)]: Description of academic standing code -- probation, conditionally classified, classified, or advanced to candidacy.

DEF_STANDING [VARCHAR2 (500)]: Definition of academic standing.

2. ADMITSTATUS. Define admission status of students -- classified, conditionally classified, probation classified, or probation conditionally classified.

ADMIT_ID [VARCHAR2 (10), PK]: Admission status code

ADMIT_STATUS [VARCHAR2 (30)]: Description of admission status code -- classified, conditionally classified, probation classified, or probation conditionally classified.

DEF_ADMIT_STATUS [VARCHAR2 (500)]: Definition of admission status.

3. COUNTRIES. Define countries where international students come from.

COUNTRY_ID [CHAR (4), PK]: SIS+ country Code.

COUNTRY [VARCHAR2 (50)]: SIS+ country name, which represent international students' countries.

4. COURSES. Define courses taught in the graduate program including recommended, prerequisite, elective and core courses.

COURSE_ ID [VARCHAR2 (15), PK]: Course identification number

COURSE_NAME [VARCHAR2 (50)]: Course name.

COURSETYPE [CHAR (1), FK]: Course type code (for core, elective, prerequisite, recommend, and other course), has referential integrity constraint with COURSETYPES table.

UNITS [CHAR (1)]: Course units.

DESCRIPTION [VARCHAR2 (1024)]: Course Description.

GROUPID [CHAR (1)]: Course group ID.

QTR_OFFER [VARCHAR2 (4)]: Course offer quarter. F for Fall, W for Winter, S for Spring, and X for Summer.

IS_GRADE_STORE [CHAR (1)]: A (Y-N) flag field to indicate whether it is a course which grade will be stored in departmental database.

IS_MS [CHAR (1)]: A (Y-N) flag field to indicate whether it is a course which will be scheduled in study plan.

5. COURSETYPES. Define courses taught in the graduate program including prerequisite, core, elective, recommend and all other courses.

COURSETYPE_ID [CHAR (1), PK]: Course type code to define course type -- P for Prerequisite course, C for Core course, E for Elective course, R for recommend course, O for all others.

COURSETYPE [VARCHAR2 (15)]: Description of course type -- Prerequisite course, Core course, Elective course, Recommend course, and other course.

6. CURRENTSTATUS. Defines current status of students -- Active, Incoming, Graduated, Inactive Attended, On Leave, Dismissed, Never Attended, Academic Probation, Withdraw.

CUR_STATUS_ID [VARCHAR2 (10), PK]: Current status code.

CUR_STATUS [VARCHAR2 (30)]: Description of current status of student -- Active, Incoming, Graduated, Inactive Attended, On Leave, Dismissed, Never Attended, Academic Probation, Withdraw.

DEF_CUR_STATUS [VARCHAR2 (500)]: Definition of current status of student.

7. CY_CORE. Store core courses requirement for each academic catalog year.

YR_CATALOG [VARCHAR2 (4), PK]: Academic catalog year, a composite primary key.

COURSE_ID [VARCHAR2 (4), PK, FK]: Course identification (ID) number, a composite primary key has referential integrity constraint with COURSES table.

8. CY_PREQ. Store perquisite courses requirement for each academic catalog year.

YR_CATALOG [VARCHAR2 (4), PK]: Academic catalog year, a composite primary key.

COURSE_ID [VARCHAR2 (4), PK, FK]: Course identification (ID) number, a composite primary key has referential integrity constraint with COURSES table.

IS_ALL_REQ [VARCHAR2 (1)]: A (Y-N) flag field to indicate whether it is a prerequisite course which all students are required to take.

IS_COUNT [VARCHAR2 (1)]: A (Y-N) flag field to indicate the units of this course whether can be counted into graduate units.

9. ETHNICSORGN. Define ethnic origin of a student.

ETHNICITY_ID [VARCHAR2 (10), PK]: A code representing the racial or ethnic background of the individual. The individual is to be included in the ethnic group to which he or she appears to belong, is regarded by the community as belonging or categorized him or herself as belonging.

ETHNICITY [VARCHAR2 (60)]: Ethnic origin group.

ETHNIC_DEFINITION[VARCHAR2 (250)]: Ethnic code associated definition and description.

10. EXAMINFO. Store information and rules regarding each specific type of exam, such as WREE, TOEFL, GRE.

EXAM_NAME [VARCHAR2 (10), PK]: Exam name

DESCRIPTION [VARCHAR2 (1000)]: EXAM description

PASS_SCORE [VARCHAR2 (1000)]: Passing Score and rules.

11. GRADES. Define grades and corresponding scores.

GRADE_ID [VARCHAR2 (3), PK]: A code representing the grade assigned to the student for this course.

SCORES [NUMBER (3,1)]: Grade ID corresponding scores.

GRADEID_DEFINITION [VARCHAR2 (30)]: Grade ID definition.

12. GRAD_UNITS_REQ. Store graduate units' requirement for each academic catalog year.

YR_CATALOG [VARCHAR2 (4), PK]: Academic catalog year.

TOTAL_U_REQ [NUMBER (2)]: Academic catalog year.

TOTAL_500_ALLOWED [NUMBER (2)]: Maximum counted units of 500-leve courses.

13. PREQ_CONSTRAIN. Store prerequisite constraints on prerequisite course

CONSTRAIN_SEQ [VARCHAR2 (5)]: Sequence number, generated by selecting SEQUENCE PREQCONSTRAIN_SEQ, start with 10000 and increment by 10.

COURSE_ID [VARCHAR2 (15), PK, FK]: Course identification number which a composite primary key has referential integrity constraint with COURSES table.

PREQ_COURSEID [VARCHAR2 (15), PK, FK]: prerequisite constraint course identification number which a composite primary key has referential integrity constraint with COURSES table.

14. QUARTER. Defines quarters (fall, winter, spring, summer) when courses are taken. In semester system there are only fall and spring values.

QUARTER_ID [CHAR (1), PK]: Last digit of term code -- 1 for Winter, 2 for Spring, 3 for Summer, 4 for Fall.

QUARTER [VARCHAR2 (10)]: Winter, Spring, Summer, and Fall.

15. ROLES. Define roles of users. Currently the system has five roles: Student, Faculty, Coordinator, MS Program Assistant, Administrator and System.

ROLE_ID [CHAR (1), PK]: ID to define user's role.

ROLE [VARCHAR2 (30)]: Student, Faculty, Coordinator, MS Program Assistant, Administrator and System.

16. SIS_AA651_EXIT_ACTION. SIS+ Extract – store the action which brought about the termination of this matriculation. This field defaults to the Exit Action defined on the Exit Action Table for either degree or non-degree programs.

EXIT_ACTION_ID [VARCHAR2 (10), PK]: SIS+ exit action code.

EXIT_ACTION [VARCHAR2 (80)]: Description of SIS+ exit action code.

DEF_EXIT_ACTION [VARCHAR2 (500)]: Definition of SIS+ exit action code.

17. SIS_EXTRACT_LAYOUT. Store record layouts for SIS+ extract segments data layout.

18. SIS_RT047_ATTEND_STAT. SIS+ Extract -- student classification code and description.

CLASSIFICATION_ID [VARCHAR2 (10), PK]: SIS+ classification code

CLASSIFICATION [VARCHAR2 (80)]: Description of SIS+ classification code.

DEF_CLASSIFICATION [VARCHAR2 (500)]: Definition of SIS+ classification code.

19. SIS_RT080_ACAD_ACTION. SIS+ Extract -- Any academic action that has been taken on this student.

ACAD_ACTION_ID [VARCHAR2 (10), PK]: SIS+ academic action code.

UNOFFICIAL_TRANSLAT [VARCHAR2 (80)]: Description of SIS+ academic action code on UNOFFICIAL TRANSCRIPT TRANSLATION.

DEF_UNOFFICIAL_TRANSLAT [VARCHAR2 (500)]: Definition of SIS+ academic action code on UNOFFICIAL TRANSCRIPT TRANSLATION.

OFFICIAL_TRANSLAT [VARCHAR2 (80)]: Description of SIS+ academic action code on OFFICIAL TRANSCRIPT TRANSLATION.

DEF_OFFICIAL_TRANSLAT [VARCHAR2 (500)]: Definition of SIS+ academic action code on OFFICIAL TRANSCRIPT TRANSLATION.

20. SIS_RT14C_CLASSIFICATION. SIS+ Extract -- student classification code and description.

CLASSIFICATION_ID [VARCHAR2 (10), PK]: SIS+ classification code.

CLASSIFICATION [VARCHAR2 (80)]: Description of SIS+ classification code.

DEF_CLASSIFICATION [VARCHAR2 (500)]: Definition of SIS+ classification code.

21. SIS_RT310_GRADE_TYPE. SIS+ Extract -- The type of grading method selected by the student for this course or assigned by the registrar's staff to handle special grading considerations. These values are institution-related.

GRADE [VARCHAR2 (10), PK]: SIS+ code of grading method type.

TYPE [VARCHAR2 (80)]: Description of type of grading method.

DEF_GRADE [VARCHAR2 (200)]: Definition of SIS+ type of grading method.

22. SIS_RT312_GRADE_RULE SIS+ Extract -- The Grade Rule applicable to this SPE. If a course section has a Grade Rule, this field will be initialized from the course section at the time of registration; otherwise the Grade Rule for the student academic program will be used.

GRADE [VARCHAR2 (10)]: SIS+ grad rule code.

RULE [VARCHAR2 (30)]: Description of SIS+ grad rule.

23. SIS_RT345_CLASS. SIS+ Extract -- The values reflect the student's status in the section. Active requests, attempts, permits, authorizations and drops are included. All activity will be retained in the audit trail. No permanent record (transcript) notation will be made of drops unless they occur during the withdrawal grade period. Based on the date in the calendar table, a course dropped after the deadline for withdrawal grades will be changed to enrolled with a grade of W.

STATUS_ID [VARCHAR2 (10)]: SIS+ class enrollment status code.

REASON [VARCHAR2 (30)]: Description of SIS+ class enrollment status code.

24. TERMS. Define 3 digits SIS+ term code in 'YYQ' format which represents year and quarter.

TERMCODE [VARCHAR2 (5), PK]: Term code, first two digits represent year and last digit represents quarter: 1-Winter, 2-Spring, 3-Summer, 4-Fall.

DESCRIPTION [VARCHAR2 (20)]: Description of term code

25. YR_LOOKUP. Store 4 digits year value for application drop-down list reference.

YR [CHAR (4), PK]: Academic catalog year

A.2 Data Tables

26. ADHOCLOG. Stores the SQL statements which the user creates in the ad hoc reports

USER_ID [VARCHAR2(10)]: Identification number to verify the authorized user

SQLNAME [VARCHAR2(25)]: Name of SQL statement which the user creates in the ad hoc reports

SQLSTRING [VARCHAR2(1000)]: SQL statement which the user creates

27. ADV_COMMENT. Store advising comment on each course of Advancement to Candidacy Graduate Approved Program of Study Form.

COMMENT_SEQ [VARCHAR2 (10), PK]: Sequence number, generated by selecting SEQUENCE ADVCOMMENT_SEQ, start with 10000 and increment by 1.

STD_ID [CHAR (9), FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table.

COURSE_ID [VARCHAR2 (15), FK]: Course identification (ID) number, has referential integrity constraint with COURSES table.

STAFF_ID [CHAR (9), FK]: Staff Identification Number which has referential integrity constraint with STAFF table.

COMMENT_DATE [DATE, NOT NULL]: Comment's insertion date.

COMMENTS [VARCHAR2 (500)]: Content of comment

28. ADV_NOTE. Store advising notes/comment of Graduate Advising Sheet. Each student has as many records as his/her advisor has written.

STD_ID [CHAR (9), FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table.

STAFF_ID [CHAR (9), FK]: Staff Identification Number which has referential integrity constraint with STAFF table.

QTR_ADV [CHAR (1)]: Quarter of advising note made.

YR_ADV [VARCHAR2 (4)]: Year of advising note made.

NOTE_DATE [DATE]: Note's insertion date.

NOTE [VARCHAR2 (500)]: Content of note/comment

29. COMEXAM. Store master comprehensive exam track information.

STD_ID [CHAR (9), PK, FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

COM_DATE [DATE]: Comprehensive exam date

IS_COM_PASS [CHAR (1)]: Y if pass; N if fails. Data value derives from total score.

TOTALSCORE [NUMBER (5,2)]: Comprehensive exam total score. Data value derives from summing up each subject score.

CS600 [NUMBER (5,2)]: CSCI 600 exam score.

Q600_FAC [CHAR (9)]: Staff-ID of faculty, who provides CSCI 600 exam questions which has referential integrity constraint with STAFF table

CS610 [NUMBER (5,2)]: CSCI 610 exam score.

Q610_FAC [CHAR (9)]: Staff-ID of faculty, who provides CSCI 610 exam questions which has referential integrity constraint with STAFF table

CS630 [NUMBER (5,2)]: CSCI 630 exam score.

Q630_FAC [CHAR (9)]: Staff-ID of faculty, who provides CSCI 630 exam question which has referential integrity constraint with STAFF table

CS655 [NUMBER (5,2)]: CSCI 655 exam score.

Q655_FAC [CHAR (9)]: Staff-ID of faculty, who provides CSCI 655 exam questions which has referential integrity constraint with STAFF table

CS660 [NUMBER (5,2)]: CSCI 660 exam score.

Q660_FAC [CHAR (9)]: Staff-ID of faculty, who provides CSCI 660 exam questions which has referential integrity constraint with STAFF table

ACTIONS [VARCHAR2 (2000)]: Note if not-pass in exams (fail)

30. COMMITTEE. Store student's advisor or graduate committee members. Each record represents a faculty member for a student. Thus, if a student has one advisor and two committee members, he or she will have a total of three records.

STD_ID [CHAR (9), PK, FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

STAFF_ID [CHAR (9), PK, FK] Staff-ID of the student's faculty which has referential integrity constraint with STAFF table

(STD_ID, STAFF_ID) constitutes the primary key of the table

ISADVISOR [CHAR (1)]: Y if the faculty is the advisor, blank or N if the faculty is a committee member.

30. COMPEXAMFACULTY. Stores all information for the comprehensive exam

QTRYR [VARCHAR2(5)]: Quarter / year of the comprehensive exam

COURSE [VARCHAR2(15)]: Name of the core course

FACULTY [CHAR(9)]: Faculty name who made the exam questions

COMPEXAM_ID [NUMBER(5)]: Identification number of the comprehensive exam

31. DISMISS. Tracks a student's dismissal history

STD_ID [VARCHAR2(10)]: Identification number of the student

DISMISS_TERM [VARCHAR2(5)]: Quarter / year when the student is dismissed

DISMISS_REASON [VARCHAR2(1000)]: Reason for dismissal

32. EXAM. Store graduate student's exam associated information.

EXAM_IDSEQ [VARCHAR2 (10), PK]: Sequence number, generated by selecting SEQUENCE EXAM_SEQ, start with 10000 and increment by 1.

STD_ID [CHAR (9), FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

EXAM_NAME [DATE]: Exam name – WREE, TOEFL

SCORE [NUMBER (5,2)]: Exam score

EXAM_DATE [DATE]: Exam date

33. FUNCTIONS. Defines all registered functions to assign to roles and to users

FUNCTION_ID	[NUMBER(3)]: Identification number of the function
FUNCTION	[VARCHAR2(40)]: Name of the function
FUNCTIONPAGE	[VARCHAR2(30)]: JSP page of the function
PRIVILEGE_CODE	[VARCHAR2(10)]: Execution privilege token of the function

34. GRADSTUDENTS. This is a main table to store student information. Using the relational model most fields are foreign keys with referential integrity constraint with lookup tables. This dramatically reduces the record size and input errors when foreign key fields must satisfy referential integrity constraints.

STD_ID	[CHAR (9)]: Student Identification Number
LAST	[VARCHAR2 (30)]: Student last name
FIRST	[VARCHAR2 (30)]: Student first name
MIDDLE	[VARCHAR2 (15)]: Student middle name
DOB	[DATE]: Date of birth
GENDER	[CHAR (1)]: Gender – F for female, M for male
ETHNICITY_ID	[VARCHAR2 (10), FK]: SIS+ ethnicity code which has referential integrity constraint with ETHNICSORGN table
SIS_EMAIL	[VARCHAR2 (45)]: E-mail address extracted from SIS+
EMAIL	[VARCHAR2 (45)]: E-mail address which input or updated by department or students themselves
SIS_PHONE	[VARCHAR2 (13)]: Phone number extracted from SIS+
PHONE	[VARCHAR2 (13)]: Phone number which input or updated by department or students themselves
INTNAL	[CHAR (1)]: Y if the student is an international student
IS_CA_RES	[CHAR (1)]: Y if the student is a California resident
IS_BS_CSUSB	[CHAR (1)]: Y if the student obtained a BS degree from CSUSB
IS_CS	[CHAR (1)]: Y if the student's undergraduate major is computer science
NATIONALITY	[CHAR (4)]: SIS + country code which has referential integrity constraint on COUNTRIES table

RES_ADDRS [VARCHAR2 (100)]: Street address where the student is residing

CITY [VARCHAR2 (20)]: City

STATE [CHAR (2)]: State abbreviation

ZIP [VARCHAR2 (9)]: Zip code

COUNTRY [VARCHAR2 (50)]: Country name

PERM_ADDRS [VARCHAR2 (200)]: Whole address extracted from SIS+

ADMIT_TERM [VARCHAR2 (5)]: Term code which represents admitted quarter and year

ADMIT_STATUS [VARCHAR2 (10), FK]: Admission status which has referential integrity constraint with ACADSTANDING table

ACAD_STAND [VARCHAR2 (10), FK]: Academic standing status which has referential integrity constraint with ACADSTANDING table

CUR_STATUS [VARCHAR2 (10), FK]: Current Status which has referential integrity constraint with CURRENTSTATUS table

CUR_START [VARCHAR2 (5)]: Term code which represents the year and quarter the current status started

CUR_END [VARCHAR2 (5)]: Term code which represents the year and quarter when current status will end

TERM_LASTATD [VARCHAR2 (5)]: Term code which represents the last year and quarter attended

CLASSIFIED_TERM [VARCHAR (5)]: Term code which represents classified quarter and year

CANDIDACY_TERM [VARCHAR (5)]: Term code which represents the year and quarters that student is advanced to candidacy

TOEFL_WAIVED [CHAR (1)]: Y if the TOEFL test requirement has been waived

GRE_VERB [NUMBER (5,2)]: GRE verbal score

GRE_QUANT [NUMBER (5,2)]: GRE quantitative score

GRE_ANAL [NUMBER (5,2)]: GRE analytical score

GRE_DATE [DATE]: Date GRE was taken

MASTER_OPTION [CHAR (1)]: Type of graduation track option – P for project, T thesis, C for comprehensive exam.

EXIT_ACTION_ID [VARCHAR2 (10)]: SIS+ action code which brought about the termination of this matriculation. This field defaults to the Exit Action defined on the Exit Action Table for either degree or non-degree.

NOTES [VARCHAR2 (1000)]: Notes / comments

35. INQ_STD. Store survey information of inquiring students who wish to pursue a MS in Computer Science at CSUSB.

EMAIL [VARCHAR2 (45)]: E-mail address

FNAME [VARCHAR2 (30)]: First name

LNAME [VARCHAR2 (30)]: Last name

ADDRS [VARCHAR2 (100)]: Street address where the inquiring is residing

CITY [VARCHAR2 (20)]: City name

STATE [VARCHAR2 (2)]: US state abbreviation

ZIP [VARCHAR2 (9)]: Zip code

GENDER [VARCHAR2 (1)]: Gender – F/M for female/male

BS_TYPE [VARCHAR2 (35)]: Baccalaureate degree

GRETAKE [VARCHAR2 (1)]: Y if the inquiring student already took the GRE.

GPAQUALIFY [VARCHAR2 (1)]: Y if the inquiring student's GPA is greater or equal to 3.0.

MSCSTRACK [VARCHAR2 (20)]: The available tracks that the CS department offers – project, theses, comprehensive exam.

WREETAKE [VARCHAR2 (1)]: Y if the inquiring student has taken WREE (Writing Requirement Exemption Exam).

CUMP_LANG [VARCHAR2 (10)]: The primary programming language that inquiring student learned from his/her introductory programming courses.

INTNAL [VARCHAR2 (1)]: Y if the inquiring student is an international student.

TRANS [VARCHAR2 (1)]: Y if the inquiring student is a transferring student.

QTR_START [CHAR (1)]: Quarter that inquiring student plans on beginning the program which has referential integrity constraint with QUARTER table.

YR_START [VARCHAR2 (4)]: Year that inquiring student plans on taking courses.

COURSE_PQ [VARCHAR2 (2)]: The number of courses that inquiring student plans on taking per quarter.

SURVEYDATE [DATE]: Survey date

COUNTRY [VARCHAR2 (50)]: Inquiring student's nationality.

36. JOBS. Defines pre-defined job for pre-defined tasks

JOB_ID [CHAR(5)]: Identification number of the job

JOB [VARCHAR2(20)]: Name of the job

JOB_SCRIPT [VARCHAR2(150)]: Description of the job

37. JOB_CTL_TB. Stores the system job information in the job scheduler

JOB_SEQ [VARCHAR2(10)]: Identification number of the system job schedule

RUN_DATE [DATE]: Date when the system job schedule is to be run

PROC_NAME [VARCHAR2(50)]: Name of the procedure for running the system job

COMMENTS [VARCHAR2(100)]: Comments about the system job schedule

39. LOGINTRACE. Tracks the user login information

USER_ID [VARCHAR2(50)]: Identification number of the authorized user

ISEXPIRED [CHAR(1)]: Flag to track if the user logins for the first-time

CHANGEPWORDDATE [DATE]: Date when password is changed

LASTLOGIN [VARCHAR2(20)]: Time of last-time login

40. MAJOR. Defines student's undergraduate education major

MAJOR_ID [VARCHAR2 (4), PK]: Undergraduate education major identification number

MAJOR_NAME [VARCHAR2 (30)]: Description of major

41. PREVEDUCATION. Defines student's undergraduate education information

STD_ID [CHAR (9), PK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

YEAR [VARCHAR2 (4)]: Undergraduate year

EDU_LEVEL [CHAR (1)]: Education Level

SCHOOL [VARCHAR2 (50)]: Undergraduate school

MAJOR_ID [VARCHAR2 (4), FK]: Undergraduate education major identification number which has referential integrity constraint with MAJOR table.

42. PROBATION. Store student's probation information

STD_ID [CHAR (9), PK, FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

PROB_START_TERM [VARCHAR2 (5)]: Probation starts term

PROB_END_TERM [VARCHAR2 (5)]: Probation ends term

PROB_REASON [VARCHAR2 (500)]: Store the reason for probation

43. PROJECT. Store master project track information.

STD_ID [CHAR (9), PK, FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

TITLE [VARCHAR2 (300)]: Project title

ORAL1_DATE [DATE]: First oral exam date

IS_ORAL1_PASS [CHAR (1)]: P if pass; F if fails

ORAL2_DATE [DATE]: Second oral exam date

IS_ORAL2_PASS [CHAR (1)]: P if pass; F if fails

CMTE_RECOM [VARCHAR2 (2000)]: Committee member's recommendation, if fail (F) in Oral exam

PRESENT_DATE [DATE]: Project presentation date

PJ_RATING [CHAR (1)]: P for no-modification, M for modification, F for poorly organized (fail) in document

DOC_REV_COMNT [VARCHAR2 (2000)]: Document revision comment

44. ROLEFUNCTIONS. Stores functions assigned to each user role

ROLE_ID [CHAR(1)]: Identification number of the role

FUNCTION_ID [NUMBER(3)]: Identification number of the function

45. SIS_CLASS_ATTEND.

46. STAFF. Stores staff information including faculty, staff or other employees, who are involved in the graduate program.

STAFF_ID [CHAR (9), PK]: Staff identification (ID) number

TITLE [VARCHAR2 (20)]: title – Professor, Associate Professor, Chair, President

LAST [VARCHAR2 (20)]: Last name

FIRST [VARCHAR2 (20)]: First name

MIDDLE [VARCHAR2 (15)]: Middle name

ISFACULTY [CHAR (1)]: Y if the staff member is faculty

EMAIL [VARCHAR2 (40)]: E-mail address

PHONE [VARCHAR2 (20)]: Telephone number including area code

POSITION [VARCHAR2 (40)]: MS program Assistant or Graduate Coordinator

47. STD_PREQ. Store evaluation result of students' required and waived prerequisite courses.

STD_ID [CHAR (9), PK]: Student Identification number, a composite primary key has referential integrity constraint with GRADSTUDENTS table.

COURSE_ID [VARCHAR2 (15), PK]: Course identification (ID) number, a composite primary key has referential integrity constraint with COURSES table.

(STD_ID, COURSE_ID) constitutes the primary key of the table

ISWAIVED [VARCHAR2 (1)]: Y if the prerequisite course is waived by advisor.

UPDATE_DATE [DATE]: Record's insertion or last updating date.

48. STD_RECOM. Store advisor's recommend courses for student.

STD_ID [CHAR (9), PK, FK]: Student Identification number, a composite primary key has referential integrity constraint with GRADSTUDENTS table.

COURSE_ID [VARCHAR2 (15), PK, FK]: Recommend Course ID, a composite primary key has referential integrity constraint with COURSES table.

(STD_ID, COURSE_ID) constitutes the primary key of the table

UPDATE_DATE [DATE]: Recommend course last update date.

49. STUDENTCOURSES. Stores courses taken by a student. Each student has as many records as courses he or she has taken.

STD_ID [CHAR (9), PK, FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

COURSE_ID [VARCHAR2 (15), PK, FK]: Course identification number which has referential integrity constraint with COURSES table

COURSE_TERM [VARCHAR2 (5), PK]: Term code which represents the course taken year and quarter

(STD_ID, COURSE_ID, COURSE_TERM) constitutes the primary key of the table

COURSETYPE [CHAR (1), FK]: Course type code (store core, elective, prerequisite course, recommend only), which has referential integrity constraint with COURSETYPES table

GRADE_ID [CHAR (3), FK]: Grade for the course taken, has referential integrity constraint with GRADES table

DISCOUNT_GRADE [CHAR (1)]: Y for discount grade which will not be counted into GPA & course taken

50. STUDENTEMAILLOG. Tracks all information for emails sent to students

STD_ID [VARCHAR2(10)]: Identification number of the student

SEND_DATE [DATE]: Date when email is sent to the student

ISSEND [CHAR(1)]: Flag that indicates if the email has been sent

COMMENTS [VARCHAR2(100)]: Content of the subject field of email

TERMCODE [VARCHAR2(5)]: Quarter when the email is sent

REPORTCODE [VARCHAR2(10)]: Name of the report for which email is to be generated

51. STUDENTMAILS. Stores the contents of the emails sent to students

STD_ID [VARCHAR2(10)]: Identification number of the student

TERM [VARCHAR2(5)]: Quarter / year when email is sent to the student

CATEGORY [VARCHAR2(100)]: Type of the email

CONTENT [BLOB]: Body of the email

52. TASKSCHEDULE. Defines frequencies for reported tasks

SCHEDULE_ID [CHAR(1)]: Identification number of the schedule

SCHEDULE [VARCHAR2(30)]: Name of the schedule

SCHEDULE_DAYS [NUMBER(3)]: Duration of the schedule

53. TASKSTATUS. Defines status of a task (denied, completed, failed, not yet evaluated, and uncompleted)

STATUS_ID [CHAR(1)]: Identification number of the status

STATUS [VARCHAR2(30)]: Description of the status

54. TASKMANUAL. Defines all pre-defined tasks

TASK_CODE [CHAR(3)]: Identification number of the task

TASK_ACTION [VARCHAR2(50)]: Brief description of the task

GUIDE [VARCHAR2(300)]: Guide to complete the task

55. TASKBOOK. Stores jobs in each pre-defined task

TASK_CODE [CHAR(3)]: Identification number of the task

JOB_ID [CHAR(5)]: Identification number of the job

JOB_ORDER [NUMBER(2)]: Sequence number of the job within the task

56. TASKREGSTR. Stores tasks assigned to each student, faculty, or staff member

TASK_ID [NUMBER(6)]: Identification number of the task

TASK_CODE [CHAR(3)]: Code of the task

TASK_OWNER [VARCHAR2(9)]: Identification number of the staff who assigns the task

TASK_ASSIGNEE [VARCHAR2(9)]: Identification number of the staff or student who needs to complete the task

DATE_ASSIGNED [DATE]: Date when the task is assigned

DATE_DUE [DATE]: Date when the task is expected to be completed

DATE_COMPLETE [DATE]: Date when the task is actually completed

DATE_EXPIRED [DATE]: Date when the task expires or is no longer valid

NOTES [VARCHAR2(100)]: Brief note about the task

STATUS [CHAR(1)]: Status of the task – completed, failed, denied, uncompleted

REPORT [VARCHAR2(100)]: Comment from the assignee about the task

COMMENTS [VARCHAR2(100)]: Comment from the assignor about the task

57. THESIS. Store master thesis track information.

STD_ID [CHAR (9), PK, FK]: Student Identification Number which has referential integrity constraint with GRADSTUDENTS table

TITLE [VARCHAR2 (300)]: Thesis title

PRESENT_DATE [DATE]: Thesis presentation date

THESIS_RATING [CHAR (1)]: P for no-modification, M for modification, F for poorly organized (fail) in document

DOC_REV_COMNT [VARCHAR2 (2000)]: Document revision comment

58. USERS. Store user account information for faculty, staff, and students.

USER_ID [VARCHAR2 (10), PK]: User identification number

PWORD [VARCHAR2 (15)]: Password for authentication

ROLE_ID [CHAR (1), FK]: User's role which has referential integrity constraint with ROLES table.

STAFF_STD_ID [CHAR (9)]: Staff identification number of staff or student identification number of Student

ISSTAFF [CHAR (1)]: S if the user is a staff member

FIRSTPAGE [NUMBER (3)]: User's customized home page

59. YEARS. Defines year range for an academic year

YEAR [VARCHAR2(15)]: Starting year and ending year for the academic year

A.3 Automation Processing Intermediate tables, process log tables, and Exception Handling Tables

60. COMMITTEE_EXCP. An exception handling log table of MS Access database migration stores failing insertion records on student's committee information.

STD_ID [CHAR (9)]: Student identification number

STAFF_ID [CHAR (9)]: Staff identification number of staff

61. GRE_EXCP. Exception handling log table to store fail loading records of student GRE exam taken information, which extracted from SIS+ for automation process procedure to insert new record or update existing record in GRADSTUDENTS table.

STD_ID [CHAR (9)]: Student Identification Number

GRE_VERB [NUMBER (5,2)]: GRE verbal score

GRE_QUANT [NUMBER (5,2)]: GRE quantitative score

GRE_ANAL [NUMBER (5,2)]: GRE analytical score

GRE_DATE [DATE]: Date GRE was taken

LOG_DATE [DATE]: Data fail loading

62. LOG_AUTOPROC. Log table which help to keep track automation process time log of stored procedures.

AUTOPROC_IDSEQ [VARCHAR2 (5)]:

PROCESS_START [TIMESTAMP]: Automation process start time log

PROCESS_END [TIMESTAMP]: Automation process finish time log

PROCESS_NAME [VARCHAR2 (30)]: Automation process name, it may be a stored procedure name, log, or data dump table name

63. LOG_CLASSCHANGE. Log table which help to keep track the changes in classification which update by stored procedure of automation process.

STD_ID [CHAR (9)]: Student Identification Number

CLASSIFICATION_ID [VARCHAR2 (10)]: Indicate the type of classification -- Classified or Adv. to Candidacy.

START_TERM [VARCHAR2 (10)]: Store the term begin with this classification

LOG_DATE	[DATE]: Modification date

64. LOG_COURSEGRADE. Log table which help to keep track any student course taken information change in STUDENTCOURSES table which insert or update by stored procedure of automation process.

STD_ID	[CHAR (9)]: Student Identification Number
COURSE_ID	[VARCHAR2 (15)]: Course Identification Number
TERM	[VARCHAR2 (5)]: Course taken term
ACTION	[CHAR (1)]: Insert or update
OLD_GRADE	[CHAR (2)]: Old letter grade, if any
NEW_GRADE	[CHAR (2)]: New letter grade, if any
LOG_DATE	[DATE]: Data modification date

65. LOG_NEWSTD. Log table which help to keep track any new student record which has been insert into GRADSTUDENTS table by automation process procedure.

NEW_STDID	[CHAR (9)]: Student Identification Number
LOG_DATE	[DATE]: New student record (data) insertion date

66. LOG_STATUSCHANGE. Log table which help to keep track any student status change in GRADSTUDENTS table which update by stored procedure of automation process.

STD_ID	[CHAR (9)]: Student Identification Number
STATUS_TYPE	[VARCHAR2 (10)]: Indicate which type (field) of status has been modified -- ADMIT/ACAD/CUR
OLD_STATUS	[VARCHAR2 (10)]: Store old status data value
NEW_STATUS	[VARCHAR2 (10)]: Store new status data value
LOG_DATE	[DATE]: Data modification date

67. MASTEROPTION_EXCP. An exception handling log table stores failed migration records of student's PROJECT, THESIS information.

STD_ID	[CHAR (9)]: Student Identification Number
MASTER_OPTION	[VARCHAR2 (3)]: Type of graduation track option – P for project, T thesis, C for comprehensive exam.
TITLE	[VARCHAR2 (200)]: Student's project or thesis title.
PRESENT_DATE	[DATE]: Student's project or thesis presentation date.

COMMENTS	[VARCHAR2 (1000)]: Document or presentation comments.
LOG_DATE	[DATE]: Data fail loading date

68. NUKELOG_CTLTB. Store PLSQL automation associated update logs keep days.

LOGNAME	[VARCHAR2 (30), PK]: Log name
KEEPDAY	[VARCHAR2 (5)]: Days log keeps

69. PROB_EXCP. An exception handling log table stores failed migration records of student's probation information.

STD_ID	[CHAR (9)]: Student Identification Number
PROB_START_TERM	[VARCHAR2 (10)]: Probation starts term
PROB_END_TERM	[VARCHAR2 (10)]: Probation ends term
LOG_DATE	[DATE]: Data fail loading date

70. SIS_EXTRACT. Intermediate table stores information extracted from SIS+ for automation process procedure to insert or update existing record in GRADSTUDENTS, STUDENTCOURSES, and EXAM tables.

IDENTIFIER	[VARCHAR2 (3)]: SIS+ extracted BIO data segment identifier
STD_ID	[VARCHAR2 (9)]: Student Identification Number
COL3	[VARCHAR2 (50)]: Generic column
COL4	[VARCHAR2 (50)]: Generic column
COL5	[VARCHAR2 (50)]: Generic column
COL6	[VARCHAR2 (50)]: Generic column
COL7	[VARCHAR2 (50)]: Generic column
COL8	[VARCHAR2 (50)]: Generic column
COL9	[VARCHAR2 (50)]: Generic column
COL10	[VARCHAR2 (50)]: Generic column
COL11	[VARCHAR2 (50)]: Generic column
COL12	[VARCHAR2 (50)]: Generic column
COL13	[VARCHAR2 (50)]: Generic column
COL14	[VARCHAR2 (50)]: Generic column

COL15	[VARCHAR2 (50)]: Generic column
COL16	[VARCHAR2 (10)]: Generic column
COL17	[VARCHAR2 (10)]: Generic column
COL18	[VARCHAR2 (10)]: Generic column
COL19	[VARCHAR2 (10)]: Generic column
COL20	[VARCHAR2 (10)]: Generic column
COL21	[VARCHAR2 (10)]: Generic column
COL22	[VARCHAR2 (10)]: Generic column
COL22	[VARCHAR2 (10)]: Generic column

71. STDCOURSES_EXCP. Exception handling log table stores fail loading records of student course taken information.

STD_ID	[CHAR (9)]: Student Identification Number
COURSE_ID	[VARCHAR2 (15)]: Course Identification Number
COURSE_TERM	[VARCHAR2 (15)]: Course taken term
GRADE_ID	[VARCHAR2 (15)]: Letter grade
UNITS	[VARCHAR2 (15)]: Course units
LOG_DATE	[DATE]: Data fail loading date

72. STDCOURSES_NOSTORE. A log table stores student's non-stored course taken information.

STD_ID	[CHAR (9)]: Student Identification Number
COURSE_ID	[VARCHAR2 (15)]: Course Identification Number
COURSE_TERM	[VARCHAR2 (15)]: Course taken term
GRADE_ID	[VARCHAR2 (15)]: Letter grade
UNITS	[VARCHAR2 (15)]: Course units
LOG_DATE	[DATE]: Data loading date

73. STDINFO_EXCP. An exception handling log table stores fail loading records of graduate student information which extracted from SIS+ for automation process procedure to insert new student record or update existing record in GRADSTUDENTS table.

STD_ID	[CHAR (9)]: Student Identification Number

LAST	[VARCHAR2 (30)]: Student last name
FIRST	[VARCHAR2 (30)]: Student first name
MIDDLE	[VARCHAR2 (15)]: Student middle name
DOB	[DATE]: Date of birth
GENDER	[CHAR (1)]: Gender – F for female, M for male
ETHNICITY	[VARCHAR2 (10)]: Ethnicity code
SIS_EMAIL	[VARCHAR2 (30)]: E-mail address
SIS_PHONE	[VARCHAR2 (13)]: Phone number
INTNAL	[CHAR (1)]: Y if the student is an international student
CA_RES	[CHAR (1)]: Y if the student is a California resident
IS_BS_CSUSB	[CHAR (1)]: Y if the student obtained a BS degree from CSUSB
PERM_ADDRS	[VARCHAR2 (200)]: Address extracted from SIS+, includes street address, city, state, zip
COUNTRY	[VARCHAR2 (50)]: Country, part of PERM_ADDRS
ADMIT_TERM	[VARCHAR2 (5)]: Student admits term

74. STDPREQ_EXCP. An exception handling log table stores fail insertion of new student' prerequisite requirement information.

STD_ID	[CHAR (9)]: Student Identification Number
COURSE_ID	[VARCHAR2 (15)]: Course Identification Number
LOG_DATE	[DATE]: Data fail loading date

75. TOEFL_EXCP. An exception handling log table stores fail loading records of international student TOEFL exam taken information, which extracted from SIS+ for automation process procedure to insert new record or update existing record in EXAM table.

STD_ID	[CHAR (9)]: Student Identification Number
TOEFL_SCORES	[NUMBER (5,2)]: TOEFL exam score
TOEFL_DATE	[DATE]: TOEFL exam date
LOG_DATE	[DATE]: Data fail loading date

76. VISIT_LOG. Store application visitor's activity information

VISIT_SEQ [VARCHAR2 (8)]: A sequence number which generates from VISITLOG_SEQ to distinct each row

VISIT_DATETIME [DATE]: Visitor's visiting date and time

VISITOR_IP [VARCHAR (15)]: Visitor's IP address

PAGE_NAME [VARCHAR2 (100)]: Visited page (file) name

77. USER_LOG. Store application usage information

LOGIN_SEQ [VARCHAR2 (8)]: A sequence number which generates from USERLOG_SEQ to distinct each row

USERNAME [VARCHAR2 (10)]: User's login username

LOGIN_DATETIME [DATE]: User's login date and time

LOGIN_IP [VARCHAR (15)]: user's IP address

IS_SUCCESS [VARCHAR (1)]: A flag to indicate user's login process whether success

APPENDIX B

APPLICATION PROGRAM FILES

B.1 Login

Function Name	LOGIN

Associate File	login.jsp;
	loginProcess.jsp;

Include File	checkSecurePage.jsp;
	noCache.jsp;

B.2 Forget Password

Function Name	FORGET PASSWORD

Associate File	forgetPWD.jsp;
	forgetPWDProcess.jsp;
	forgetPWDConfirm.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.3 Logout

Function Name	LOGOUT
Associate File	bye.jsp;

Include File	noCache.jsp;
	/Connections/gradConnectBean.jsp;

B.4 Graduate Coordinator/Faculty/Program Assistant/Student: Change Password

Function Name	CHANGE PASSWORD

Associate File	changeIDPassword.jsp;
	changeIDPasswordError.htm;
	changeIDPasswordError2.htm;
	changeIDPasswordDone.htm;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.5 Graduate Coordinator/Faculty/Program Assistant/Student: Customize Home Page

Function Name	CUSTOMIZE HOME PAGE

Associate File	custFirstPage.jsp;
	custFirstPageAbort.jsp;
	custFirstPageDone.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.6 Graduate Coordinator/Faculty/Program Assistant: View Any Student Information

Function Name	VIEW ANY STUDENT INFO

Associate File	viewStudentInfo.jsp;
	viewDetail.jsp;
	viewStudentList.jsp;
	viewDetailPersonal1.jsp;
	viewDetailAdmission.jsp;
	viewDetailMenu.jsp;
	viewDetailCourses.jsp;
	viewDetailTOEFL.jsp;
	viewDetailProbation.jsp;
	viewDetailMasterOption.jsp;
	viewDetailGradCheck.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.7 Graduate Coordinator/Faculty: View Own Advisees

Function Name	VIEW OWN ADVISEES ONLY
Associate File	viewAdvisees.jsp viewAdviseesTopCurrent.jsp viewAdviseesBotCurrent.jsp viewAdviseesTopGraduated.jsp viewAdviseesBotGraduated.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.8 Graduate Coordinator/Program Assistant: View Any Advisees

Function Name	VIEW ANY ADVISEES
Associate File	viewAnyAdvisees.jsp viewAnyAdviseesTop.jsp viewAnyAdviseesBot.jsp viewAnyAdviseesCurrentBody.jsp viewAnyAdviseesGraduatedBody.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.9 Graduate Coordinator/Faculty: Communications

Function Name	COMMUNICATIONS
Associate File	facultyCommunication.jsp facultyCommunication1.jsp facultyCommunication2.jsp facultyCommunicationMail1.jsp facultyCommunicationMail2.jsp facultyCommunicationMail3.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.10 Graduate Coordinator/Program Assistant: Update Student Information

Function Name	UNDATE STUDENT INFO
Associate File	updateStudentInfo.jsp; updateStudentInfoProcess.jsp updateStudentInfoList.jsp updatePersonalInfo.jsp updatePersonalInfoProcess.jsp updatePersonalInfoForm.jsp updateMenu.jsp updateSummary.jsp updateTOEFL.jsp updateStudentCourse.jsp coursesInProgress.jsp updateCommittee.jsp updateProbation.jsp updateMasterOption.jsp updateGradCheck.jsp viewDetail.jsp updateSummaryProcess.jsp updateTOEFLProcess.jsp updateStudentCourseProcess.jsp coursesInProgressProcess.jsp updateCommitteeProcess.jsp updateProbationProcess.jsp updateMasterOptionProcess.jsp updateGradCheckProcess.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.11 Graduate Coordinator: Academic Year Statistics

Function Name	ACADEMIC YEAR STATISTICS
Associate File	academicStatistics.jsp academicStatistics1.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.12 Graduate Coordinator: Advising Link

Function Name	ADVISING LINK
Associate File	advisingPHP.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.13 Graduate Coordinator: Generate Reports

Function Name	GENERATE REPORTS

Associate File	produceReports.jsp;
	produceReportsProcess.jsp;
	attendStatusReports.jsp;
	candidacyReport.jsp;
	classifiedReport.jsp;
	condClassifiedReport.jsp;
	probCondClassifiedReport.jsp;
	adHocReport.jsp;
	adHocProcess.jsp;
	adHocSaveProcess.jsp;
	reusedAdHocReport.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.14 Graduate Coordinator: Quarterly Reports

Function Name	QUARTERLY REPORTS

Associate File	quarterlyReports.jsp;
	quarterlyReportsProcess.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.15 Program Assistant: Comprehensive Exam Information

Function Name	COMP EXAM INFO

Associate File	compExamInfo.jsp;
	compExamInfoProcess.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.16 Program Assistant: Insert New Faculty

Function Name	INSERT NEW FACULTY

Associate File	newFaculty.jsp;
	insertNewFacultyProcess.jsp;
	newFacultyConfirm.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.17 Program Assistant: Insert New Staff

Function Name	INSERT NEW STAFF

Associate File	newStaff.jsp;
	insertNewStaffProcess.jsp;
	newStaffConfirm.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.18 Program Assistant: Print Letters

Function Name	PRINT LETTERS
Associate File	printLetters.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.19 Program Assistant: Update/View Staff Information

Function Name	UPDATE/VIEW STAFF INFO

Associate File	staffInfo.jsp;
	staffInfoProcess.jsp;
	staffInfoList.jsp;
	updateStaffInfoProcess.jsp

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.20 Student: Communications

Function Name	COMMUNICATIONS

Associate File	studentCommunication.jsp;
	studentCommunication1.jsp;
	studentCommunication2.jsp;
	studentCommunicationMail1.jsp;
	studentCommunicationMail2.jsp;
	studentCommunicationMail3.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.21 Student: Update Contact Information

Function Name	UPDATE CONTACT INFO

Associate File	updateContactInfo.jsp;
	updateContactInfoForm.jsp;
	updateContactInfoProcess.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

B.22 Student: View Student Information

Function Name	VIEW STUDENT INFO

Associate File	viewDetailStudent.jsp;
	viewDetailPersonal2.jsp;
	viewDetailAdmission2.jsp;
	viewDetailMenu.htm;
	viewDetailCourses2.jsp;
	viewDetailTOEFL2.jsp;
	viewDetailProbation2.jsp;
	viewDetailMasterOption2.jsp;
	viewDetailGradCheck2.jsp;

Include File	checkSecurePage.jsp;
	publicFunction.jsp;
	/Connections/gradConnectBean.jsp;
	noCache.jsp;

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