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International extension programs information system

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INTERNATIONAL EXTENSION PROGRAMS INFORMATION SYSTEM

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

---

by

Yu-Pin Chang

March 2003

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June 2003

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ABSTRACT

International Extension Programs (IEP) is the department offering English programs and international extension programs at California State University, San Bernardino. Students who attend this program usually come from foreign countries and study English for particular purpose. The programs are divided into two parts: ACLP (American Culture and Language Programs) and Open University. Because IEP belongs to another system of CSUSB, so the students are not in regular status to use some information resource. Thus IEPIS will provide some useful tools for those international students. Also, On-Line Application will shorten application time because of international mail and wrong information by the applicant. Moreover, Guests can use the functions of IEPIS to get information about ACLP programs and apply the programs on line. Students can use the functions to check grade, send messages, and chat on the discussion board. The staff can use this system to broadcast news and process on-line application.

ACKNOWLEDGMENTS

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CHAPTER ONE

INTRODUCTION

IEP is the department offering english programs and international extension programs at CSUSB. The programs are divided into two parts: ACLP (American Culture and Language Programs) and Open University. IEPIS will be the main system for IEP's information and students' field. Guests can use the functions of IEPIS to get information about ACLP programs and apply the programs on line. Students can use the functions to check grade, and chat on the discussion board. The staff can use this system to broadcast news and process on-line application. In this system, all the functions are divided into 3 parts. First of all, on-line application and process offers a convenient method for all applicants to apply IEP programs on the web, which shortens much time during post service. Second, information functions provide an environment for all users to check their grades, chat with their friends, discuss and post opinion on the board, and browse news. Finally, the staff and system administrator can use database maintenance part to manage all records saved in the database.

1.1 Purpose of this Project

The purpose of this project is to design, build, and implement an information system for IEP at CSUSB. All the information will be stored in MySQL database and retrieved by JSP and JDBC. The main purpose of the project is on-line application and process, which can shorten application time and ensure data accuracy. Also, this system offers an environment for the users to communicate with each other, and provides all information about IEP. All the records are shared and only authorized person can access and modify the data. Moreover, the secured data, such as credit card payment, is encrypted by cryptography function. In the future, this program can be modified as 3 main programs, IEP part, homestay program part and dormitory application.

1.2 Project Products

This project would lead to the following products:

- Implementation of IEPIS: a working web site with JSP programs and MySQL database, which would achieve the specific needs of IEP office. All the forms will follow the original paper application form in order to get convenient and familiar process.
- Users manual: an implementation manual will be available for the user.

- Systems Manual: a project report (this report) will be available with design details and specifications.

CHAPTER TWO

INTERNATIONAL EXTENSION PROGRAMS INFORMATION SYSTEM ARCHITECTURE

This project, International Extension Programs Information System (IEPIS), implements a web system to provide an environment for the users to do all process of IEP work in IEP office of California State University San Bernardino (CSUSB). Thus, the components needed to implement IEPIS are a database server, a web server, graphical user interface components, and a database interface Application Programming Interface (API) to programmatically access the database. The following figure describes the interaction among the components used in IEPIS.

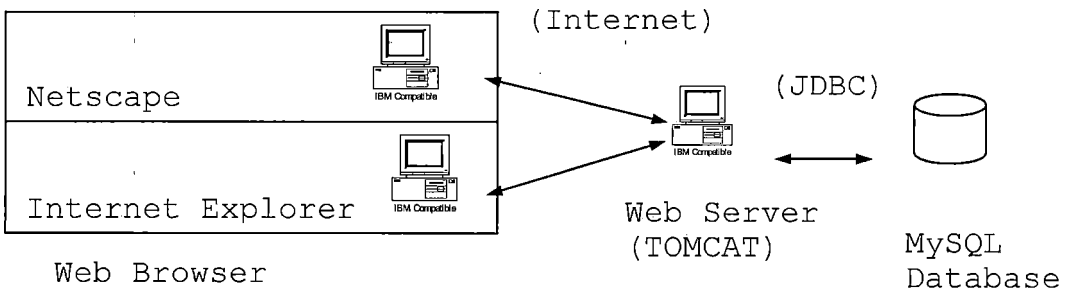


Figure 1. International Extension Programs Information System Architecture

The components used to build IEPIS were chosen with the following criteria: (i) the components should be shareware, i.e., available freely for non-commercial purposes, (ii) be part of a standard, i.e., the do not depend on a specific operating system and hence are easily portable across systems with ease, (iii) database server independent, so that new and different versions of the server can be plugged in easily.

The user interface components are built by using HTML 6.0 forms, frames, Javascript, and Cascading Style Sheets (CSS). And the applications are launched using the JacaServer Pages (JSP). JSP was used because it can use javabean which provides a reused way for all programs and java container, Tomcat, can be installed under Windows or Linux. Also, it is easy to process whole user input from the HTML forms. Moreover, Java provides convenient function, Java Database Connector (JDBC), to connect database.

The database choice available to IEPIS is MySQL. MySQL is a real multi-user database and free. Also, the availability of the JDBC driver for MySQL is the most important reason to choose it. Moreover, the same code could be used to link with another version of MySQL

database by changing proper JDBC driver. Thereby making it database independent.

2.1 Software Interfaces

- Internet browser: Netscape or Internet Explorer.
- Operating system: Windows 98/Me/2000/XP or Unix/Linux.
- Database: MySQL.
- Compiler: JDK 1.4.
- Language: HTML / JAVA / JavaScript / JSP.
- Database connector: JDBC.
- JSP Container/Web server: Jakarta Tomcat.

CHAPTER THREE

DATABASE DESIGN

3.1 Data Analysis

The data for designing and implementing the schema of the database is depending on the blanks of the application forms, grade reports, document, and need of IEP office. The application number, news number, discussion board number, and etc. are auto increased, and all the user functions are linked by social security number except the guest functions. All the data belong to on-line application are connected by application number and whole homestay records are linked by homestay application number. In payment function, credit card number is stored as a cipher text which has been encrypted by JAVA class. All the data saved into database will be checked by JavaScript before submit them.

3.2 Database Schema Conceptual Model - ER Diagram

In designing the schema for the IEPIS database, two distinct parts have been identified. First is information part, which includes personal data, news, grade, course, discussion board and e-mail. All the entities and attributes are described in Figure 2. Second is

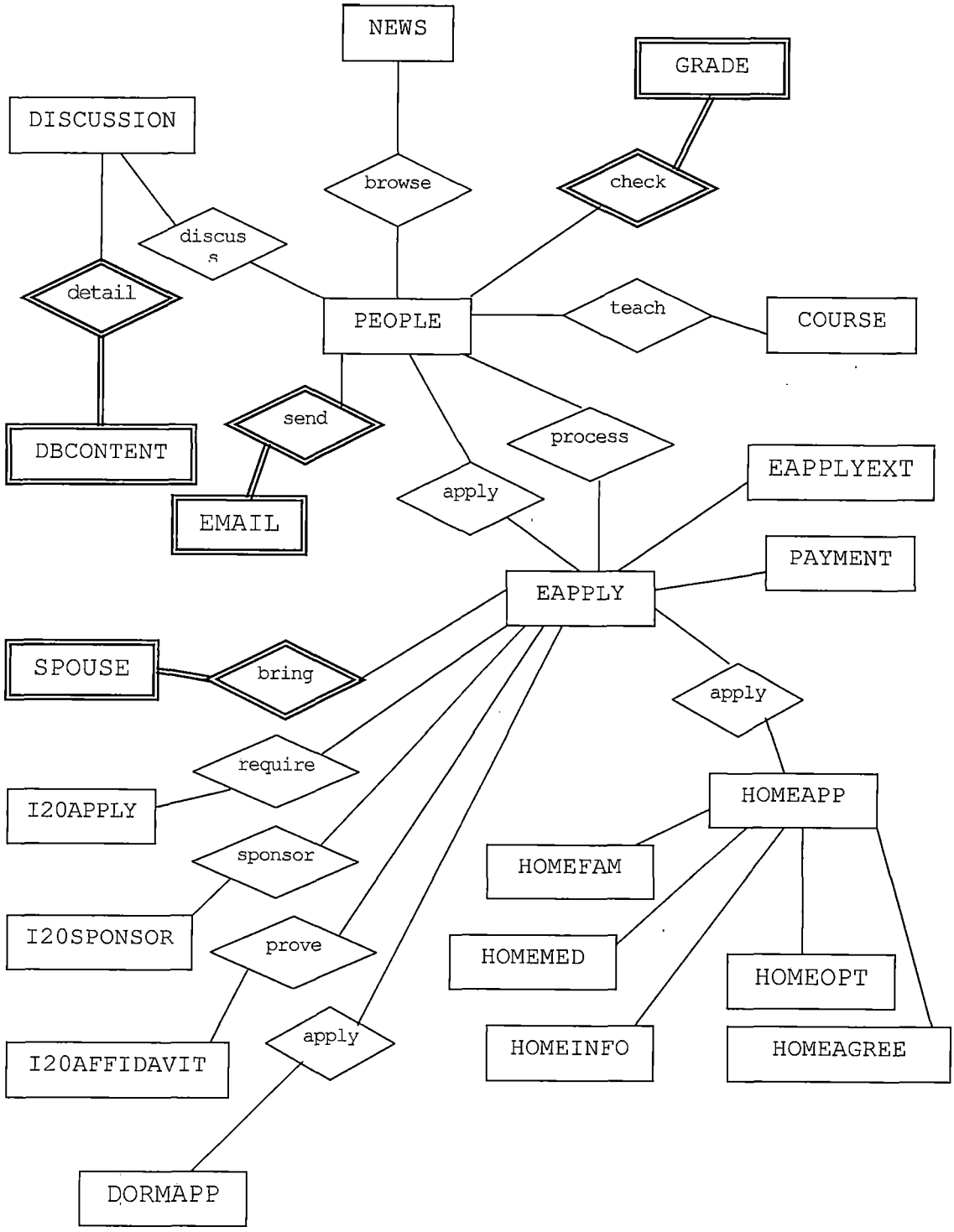


Figure 2. E-R Diagram

application part including applicant information, I-20 application, homestay application, and dormitory application. All the entities and attributes are detailed in Figure 2.

3.3 Database Schema Logical Model - Relational Schema

The conceptual model ER diagram maps into the following relational table design. In the following tables. Underlined fields indicate the primary key.

People

First	last	middle	address	tel	fax	email	dob	cob

coc	ssn	sex	marry	nickname	password	authority	icon	delcheck

News

No	ndate	title	content	poster	delcheck

Grade

no	ssn	session	year	level	michigan	absent	course1

teacher 1	grade 1	course 2	teacher 2	grade 2	course 3	teacher 3	grade 3

course 4	teacher 4	grade 4	course 5	teacher 5	Grade 5	recom	openc1

openg1	openc2	openg2	openc3	openg3

Figure 3. International Extension Programs Information System Database Relational Schema

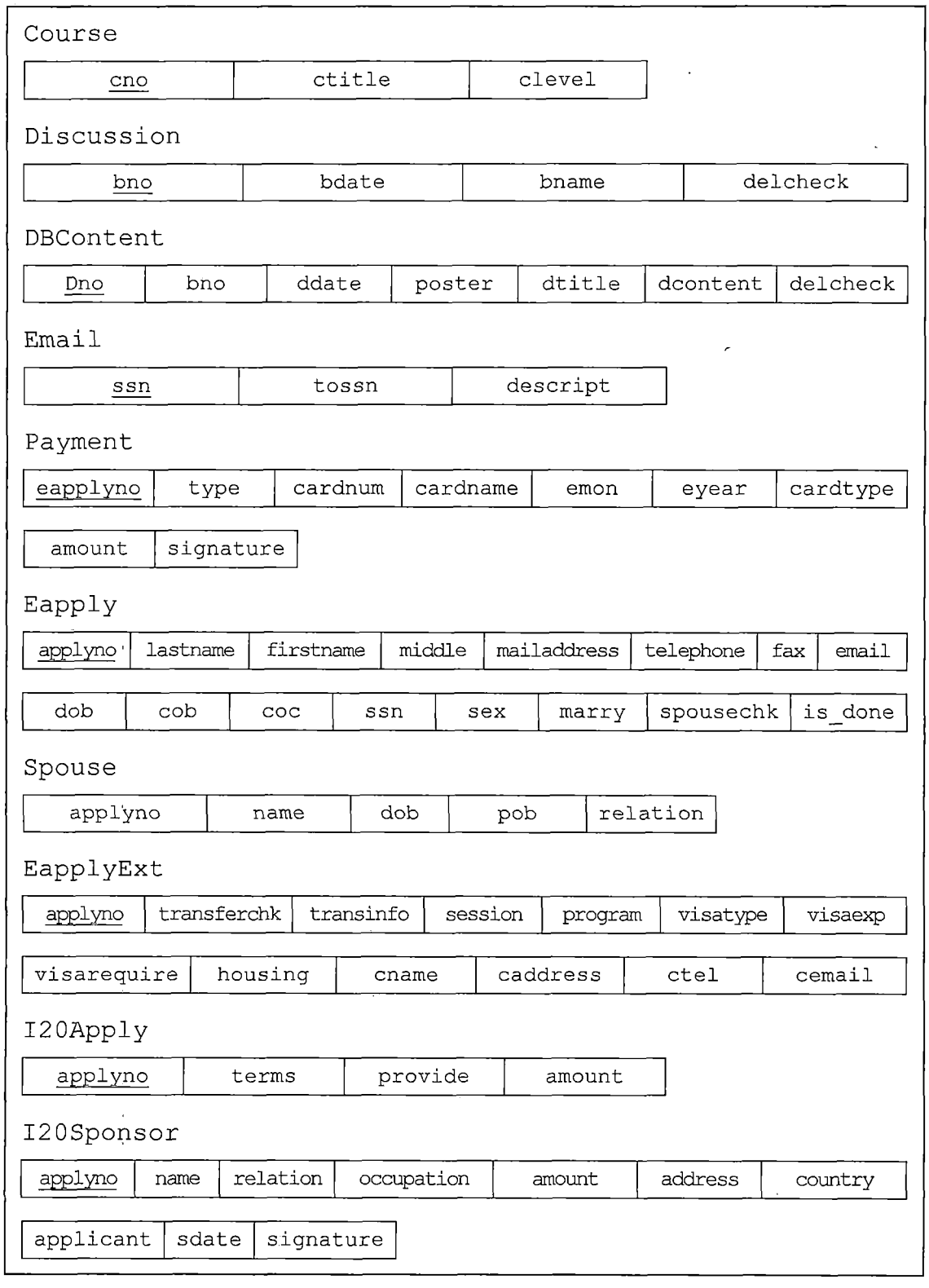


Figure 3. IEPIS Database Relational schema (continued)

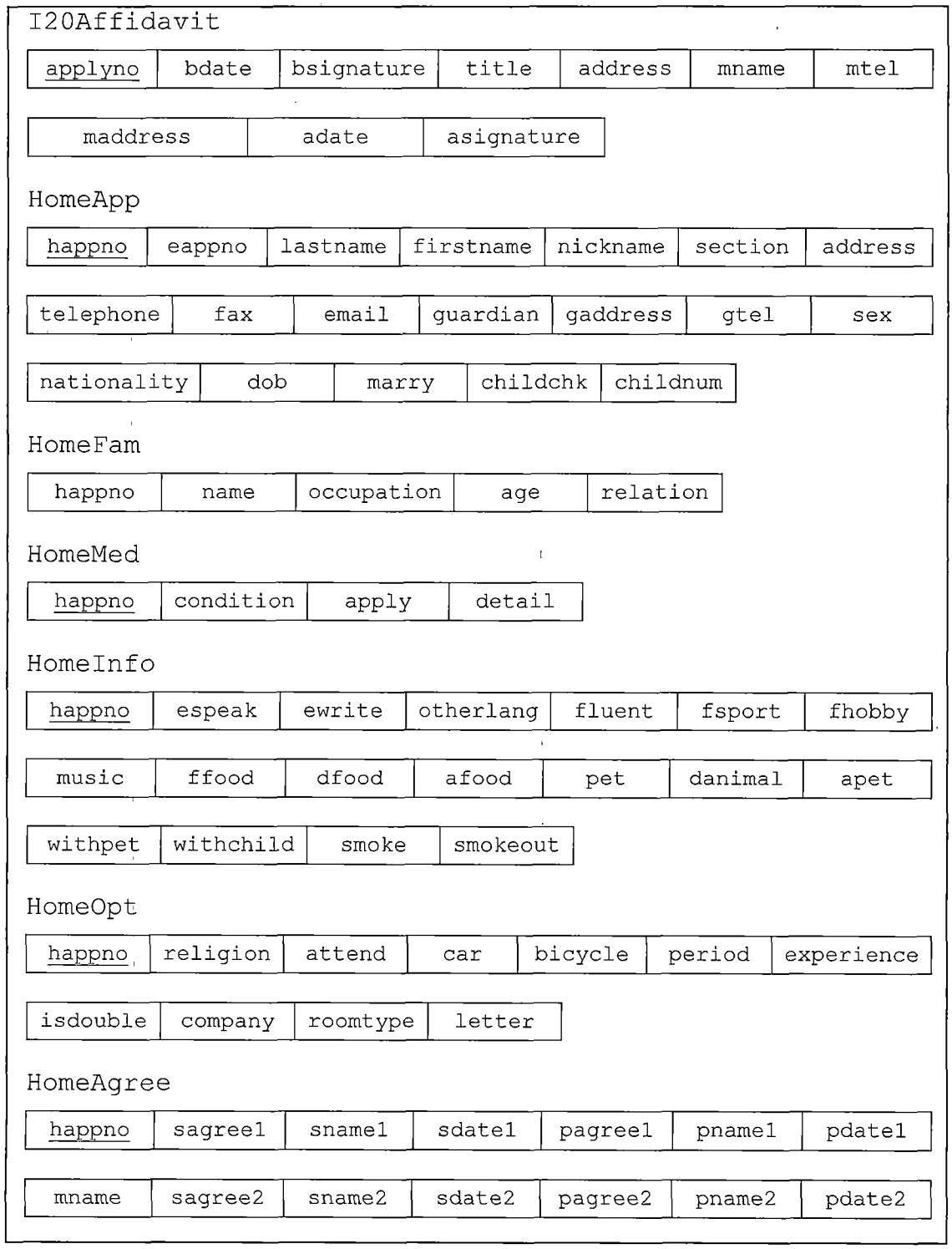


Figure 3. IEPIS Database Relational schema (continued)

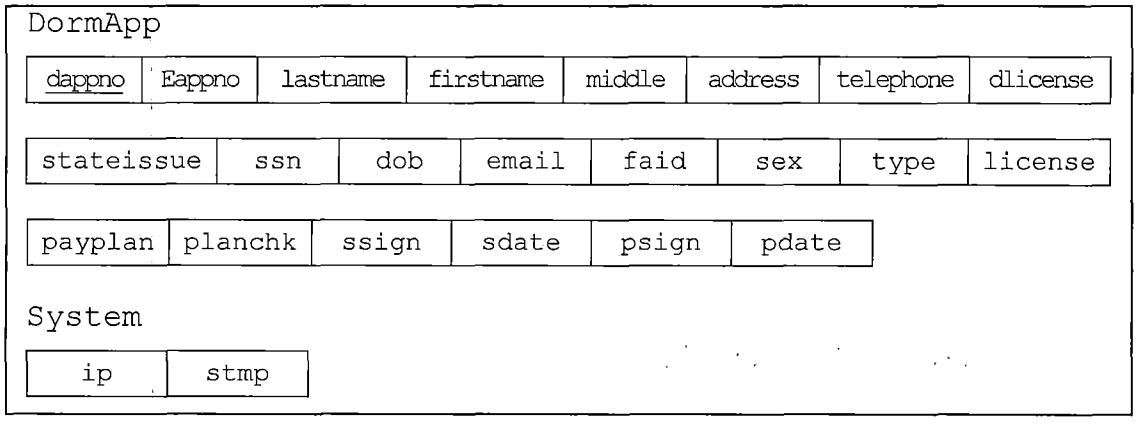


Figure 3. IEPIS Database Relational schema (continued)

3.4 Data Type and Details

The logical model established into the following detail design in MySQL database. The following tables describe data type, length, primary key or not, null or non-null key, and extra information, such as auto_increment.

Table 1. Structure of Table People

field	type	null	key	default	extra
first	varchar(20)				
last	varchar(20)				
middle	char(1)	YES		NULL	
address	varchar(80)	YES		NULL	
tel	varchar(15)	YES		NULL	
fax	varchar(15)	YES		NULL	
email	varchar(30)	YES		NULL	
dob	date			0000-00-00	
cob	varchar(15)	YES		NULL	
coc	varchar(15)	YES		NULL	
ssn	varchar(9)		PRI		
sex	int(1)			0	
marry	int(1)			0	
nickname	varchar(15)	YES		NULL	
password	varchar(8)	YES		NULL	
authority	int(1)			0	
icon	int(2)	YES		NULL	
delcheck	int(1)	YES		NULL	

Table 2. Structure of Table News

field	type	null	key	default	extra
no	int(5)		PRI	NULL	auto_increment
ndate	datetime			0000-00-00 00:00:00	
title	varchar(100)				
content	text	YES		NULL	
poster	varchar(9)				
delcheck	int(1)	YES		NULL	

Table 3. Structure of Table Grade

field	type	null	key	default	extra
ssn	varchar(9)				
session	int(1)			0	
year	int(4)			0	
level	int(1)	YES		NULL	
Michigan	int(3)	YES		NULL	
absent	int(2)	YES		NULL	
course1	varchar(40)	YES		NULL	
teacher1	varchar(40)	YES		NULL	
grade1	char(1)	YES		NULL	
course2	varchar(40)	YES		NULL	
teacher2	varchar(40)	YES		NULL	
grade2	char(1)	YES		NULL	
course3	varchar(40)	YES		NULL	
teacher3	varchar(40)	YES		NULL	
grade3	char(1)	YES		NULL	
course4	varchar(40)	YES		NULL	
teacher4	varchar(40)	YES		NULL	
grade4	char(1)	YES		NULL	
course5	varchar(40)	YES		NULL	
teacher4	varchar(40)	YES		NULL	
grade5	char(1)	YES		NULL	
recom	int(1)	YES		NULL	
openc1	varchar(9)	YES		NULL	
openg1	char(1)	YES		NULL	
openc2	varchar(9)	YES		NULL	
openg2	char(1)	YES		NULL	
openc3	varchar(9)	YES		NULL	
openg3	char(1)	YES		NULL	
no	int(7)		PRI	NULL	auto_increment

Table 4. Structure of Table Course

Field	Type	null	key	default	extra
Cno	varchar(6)		PRI		
Ctitle	varchar(40)				
Clevel	int(2)	YES		NULL	

Table 5. Structure of Table Discussion

field	type	null	key	default	extra
bno	int(3)		PRI	NULL	auto_increment
bdate	date			0000-00-00	
bname	varchar(40)				
delcheck	int(1)	YES		NULL	

Table 6. Structure of Table DBContent

field	type	null	key	default	extra
dno	int		PRI	NULL	auto_increment
bno	int(3)	YES		NULL	
ddate	datetime			0000-00-00 00:00:00	
poster	varchar(9)				
dtitle	varchar(100)				
dcontent	text	YES		NULL	
delcheck	int(1)	YES		NULL	

Table 7. Structure of Table Email

field	type	null	key	default	extra
ssn	varchar(9)				
tossn	varchar(9)				
descript	varchar(40)	YES		NULL	

Table 8. Structure of Table Spouse

field	Type	null	key	default	extra
applyno	Int			0	
name	varchar(40)				
dob	date	YES		NULL	
pob	varchar(15)	YES		NULL	
relation	varchar(15)	YES		NULL	

Table 9. Structure of Table Eapply

field	type	null	key	default	extra
applyno	int		PRI	NULL	auto_increment
lastname	varchar(20)				
firstname	varchar(20)				
middle	char(1)	YES		NULL	
mailaddress	varchar(100)	YES		NULL	
telephone	varchar(20)	YES		NULL	
fax	varchar(20)	YES		NULL	
email	varchar(40)	YES		NULL	
dob	date			0000-00-00	
cob	varchar(15)	YES		NULL	
coc	varchar(15)	YES		NULL	
ssn	varchar(9)	YES		NULL	
sex	int(1)			0	
marry	int(1)	YES		NULL	
spousechk	int(1)	YES		NULL	
is_done	int(1)	YES		NULL	

Table 10. Structure of Table I20apply

field	Type	null	key	default	extra
applyno	Int		PRI	0	
terms	int(1)	YES		NULL	
provide	int(1)	YES		NULL	
amount	int(8)	YES		NULL	

Table 11. Structure of Table Eapplyext

field	Type	null	key	default	extra
applyno	int		PRI	0	
transferchk	int(1)	YES		NULL	
transinfo	varchar(50)	YES		NULL	
session	varchar(12)	YES		NULL	
program	int(1)	YES		NULL	
visatype	varchar(10)	YES		NULL	
visaexp	varchar(15)	YES		NULL	
visarequire	int(1)	YES		NULL	
housing	int(1)	YES		NULL	
cname	varchar(40)	YES		NULL	
caddress	varchar(100)	YES		NULL	
ctel	varchar(20)	YES		NULL	
cemail	varchar(40)	YES		NULL	

Table 12. Structure of Table I20sponsor

field	Type	null	key	default	extra
applyno	Int		PRI	0	
name	varchar(40)	YES		NULL	
relation	varchar(25)	YES		NULL	
occupation	varchar(25)	YES		NULL	
amount	int(8)	YES		NULL	
address	varchar(100)	YES		NULL	
country	varchar(15)	YES		NULL	
applicant	varchar(40)	YES		NULL	
sdate	date	YES		NULL	
signature	varchar(40)	YES		NULL	

Table 13. Structure of Table I20affidavit

field	Type	null	key	default	extra
applyno	int		PRI	0	
bdate	date	YES		NULL	
bsignature	varchar(40)	YES		NULL	
title	varchar(50)	YES		NULL	
address	varchar(100)	YES		NULL	
mname	varchar(40)	YES		NULL	
mtel	varchar(20)	YES		NULL	
maddress	varchar(100)	YES		NULL	
adate	date	YES		NULL	
asignature	varchar(40)	YES		NULL	

Table 14. Structure of Table HomeApp

field	type	null	key	default	extra
happno	int		PRI	NULL	auto_increment
eappno	int	YES		NULL	
lastname	varchar(20)				
firstname	varchar(20)				
nickname	varchar(15)	YES		NULL	
section	varchar(12)	YES		NULL	
address	varchar(100)	YES		NULL	
telephone	varchar(20)	YES		NULL	
fax	varchar(20)	YES		NULL	
email	varchar(40)	YES		NULL	
guardian	varchar(40)	YES		NULL	
gaddress	varchar(100)	YES		NULL	
gtel	varchar(20)	YES		NULL	
sex	int(1)			0	
nationality	varchar(15)	YES		NULL	
dob	date			0000-00-00	
marry	int(1)			0	
childchk	int(1)	YES		NULL	
childnum	int(2)	YES		NULL	

Table 15. Structure of Table HomeFam

field	type	null	key	default	extra
happno	int			0	
name	varchar(40)				
occupation	varchar(30)	YES		NULL	
age	int(3)	YES		NULL	
relation	varchar(15)	YES		NULL	

Table 16. Structure of Table HomeMed

field	type	null	key	default	extra
happno	int		PRI	0	
condition	int(1)	YES		NULL	
apply	varchar(4)	YES		NULL	
detail	text	YES		NULL	

Table 17. Structure of Table HomeInfo

field	type	null	key	default	extra
happno	int		PRI	0	
espeak	int(1)	YES		NULL	
ewrite	int(1)	YES		NULL	
otherlang	int(1)	YES		NULL	
fluent	varchar(30)	YES		NULL	
fsport	varchar(40)	YES		NULL	
fhobby	varchar(40)	YES		NULL	
music	varchar(40)	YES		NULL	
ffood	varchar(40)	YES		NULL	
dfood	varchar(40)	YES		NULL	
afood	varchar(40)	YES		NULL	
pet	varchar(40)	YES		NULL	
danimal	varchar(40)	YES		NULL	
apet	varchar(40)	YES		NULL	
withpet	int(1)	YES		NULL	
withchild	int(1)	YES		NULL	
smoke	int(1)	YES		NULL	
smokeout	int(1)	YES		NULL	

Table 18. Structure of Table HomeOpt

field	type	null	key	default	extra
happno	int		PRI	0	
religion	varchar(40)	YES		NULL	
attend	int(1)	YES		NULL	
car	int(1)	YES		NULL	
bicycle	int(1)	YES		NULL	
period	varchar(40)	YES		NULL	
experience	text	YES		NULL	
isdouble	int(1)	YES		NULL	
company	varchar(50)	YES		NULL	
roomtype	int(1)	YES		NULL	
letter	text	YES		NULL	

Table 19. Structure of Table HomeAgree

field	Type	null	key	default	extra
happno	Int		PRI	0	
sagree1	int(1)	YES		NULL	
sname1	varchar(40)	YES		NULL	
sdate1	Date	YES		NULL	
pagree1	int(1)	YES		NULL	
pname1	varchar(40)	YES		NULL	
pdate1	date	YES		NULL	
mname	varchar(40)	YES		NULL	
sagree2	int(1)	YES		NULL	
sname2	varchar(40)	YES		NULL	
sdate2	Date	YES		NULL	
pagree2	int(1)	YES		NULL	
pname2	varchar(40)	YES		NULL	
pdate2	Date	YES		NULL	

Table 20. Structure of Table DormApp

field	type	null	key	default	extra
dappno	int		PRI	NULL	auto_increment
eappno	int	YES		NULL	
lastname	varchar(20)				
firstname	varchar(20)				
middle	char(1)	YES		NULL	
address	varchar(100)	YES		NULL	
telephone	varchar(20)	YES		NULL	
dlicense	varchar(10)	YES		NULL	
stateissue	varchar(3)	YES		NULL	
ssn	varchar(9)	YES		NULL	
dob	date	YES		NULL	
email	varchar(40)	YES		NULL	
faid	int(1)	YES		NULL	
sex	int(1)			0	
type	int(1)			0	
license	varchar(9)	YES		NULL	
payplan	int(1)	YES		NULL	
planchk	char(1)	YES		NULL	
ssign	varchar(40)	YES		NULL	
sdate	date	YES		NULL	
psign	varchar(40)	YES		NULL	
pdate	date	YES		NULL	

Table 21. Structure of Table System

field	type	null	key	default	extra
ip	varchar(30)	YES		NULL	
stmp	varchar(30)	YES		NULL	

Table 22. Structure of Table Payment

field	type	null	key	default	extra
eapplyno	int		PRI	0	
type	int(1)	YES		NULL	
cardnum	varchar(16)	YES		NULL	
cardname	varchar(30)	YES		NULL	
emon	int(2)	YES		NULL	
eyear	int(4)	YES		NULL	
cardtype	int(1)	YES		NULL	
amount	float	YES		NULL	
signature	varchar(40)	YES		NULL	

CHAPTER FOUR

PROJECT IMPLEMENTATION

IEPIS is designed to perform 11 different functions for 4 different users. The following Figure 4 is the Use Case Diagram of this project.

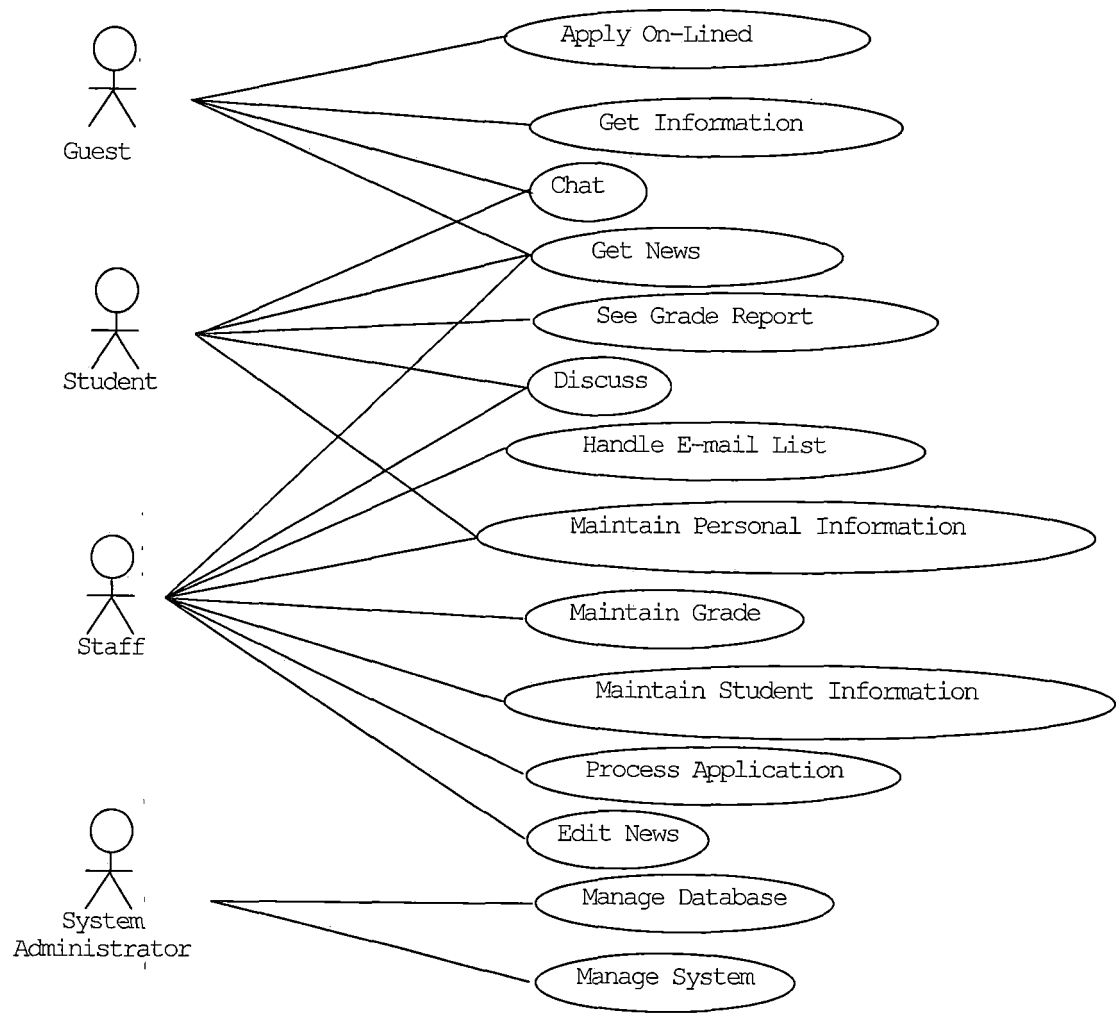


Figure 4. Use Case Diagram

4.1 International Extension Programs Information System Graphical User Interface Design

IEPIS GUI is easy to use. The GUI is written using Hyper Text Markup Language (HTML) Version 6.0 forms and frames. Also, it also uses JavaScript to check the user input's accuracy and Cascading Style Sheets (CSS) to control output and color. Hence, the IEPIS GUI is executable under Internet Explorer 5.0 or greater. The following sub sections explain the GUI work and details.

4.1.1 International Extension Programs Information System Login

The user logs in by providing a user id (SSN) and a password. After verifying the user id and password, the JSP program will send the page to main menu. Also, the program will record the user id, nickname, authority, icon into session for later use. The menu program will display different user menu depending on the authority value. If the user id or password is error, the program will show the error message and the user can re-login. For guests, there is no need to check database.

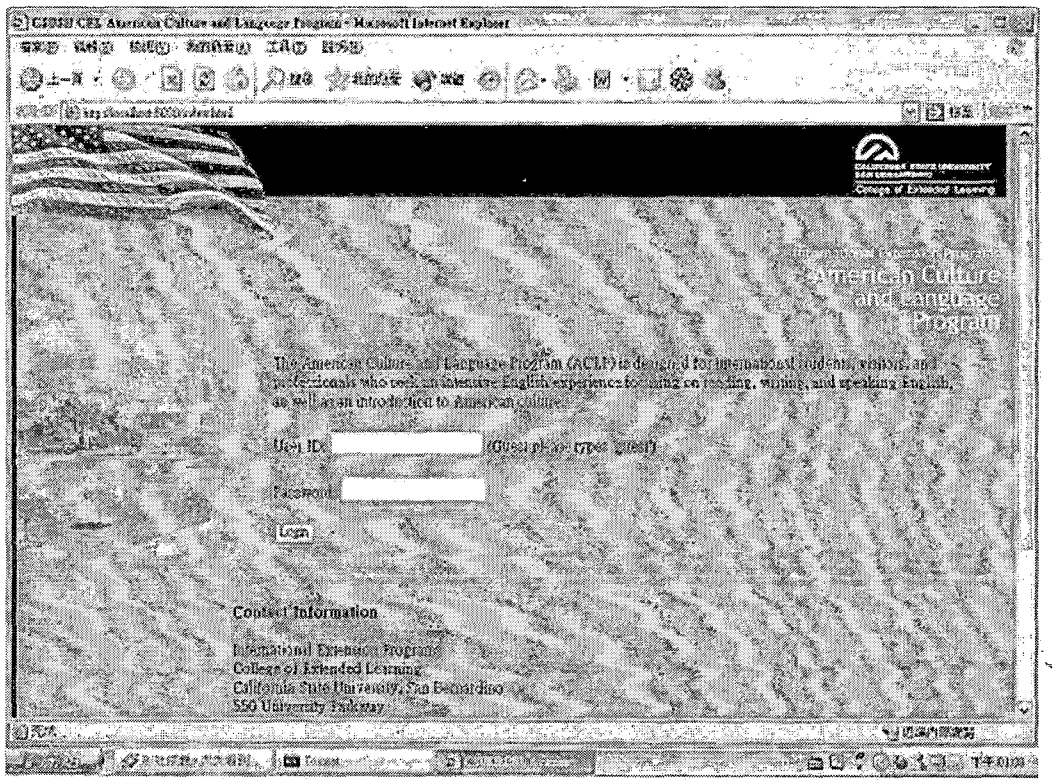


Figure 5. Login Page

4.1.2 On-Line Application

This function is the most important part in this project. All the application forms appear in the pop-up window and follow the original application papers. After filling out each form, the JSP program will check the required information before submit it. Then the JSP program will save all the information into session. There are 4 application forms, Application for Enrollment, Application for I-20, Application for the IEP Homestay Program, and Student Housing License Agreement, and will be chosen by the program depending on which form fits the

user's request. Moreover, that duplicating pervious information automatically to next form is convenient for the user to reduce typing again. In payment part, if the user chooses paying by credit, the program will open a secured page by Socket Security Layer (SSL) to ensure the data safety during transmission between client and server. Also, after the data arrive server, the java class will encrypt the data into cipher text and store into database. The cryptography part will discuss in next chapter.

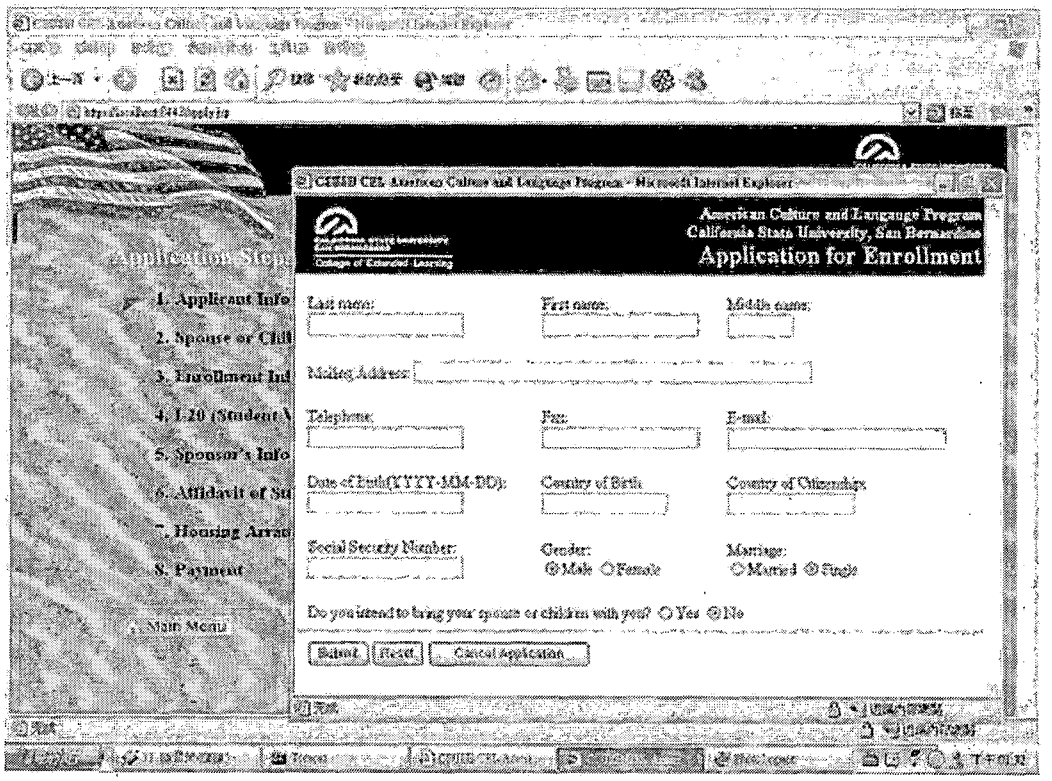


Figure 6. On-Line Application for Enrollment

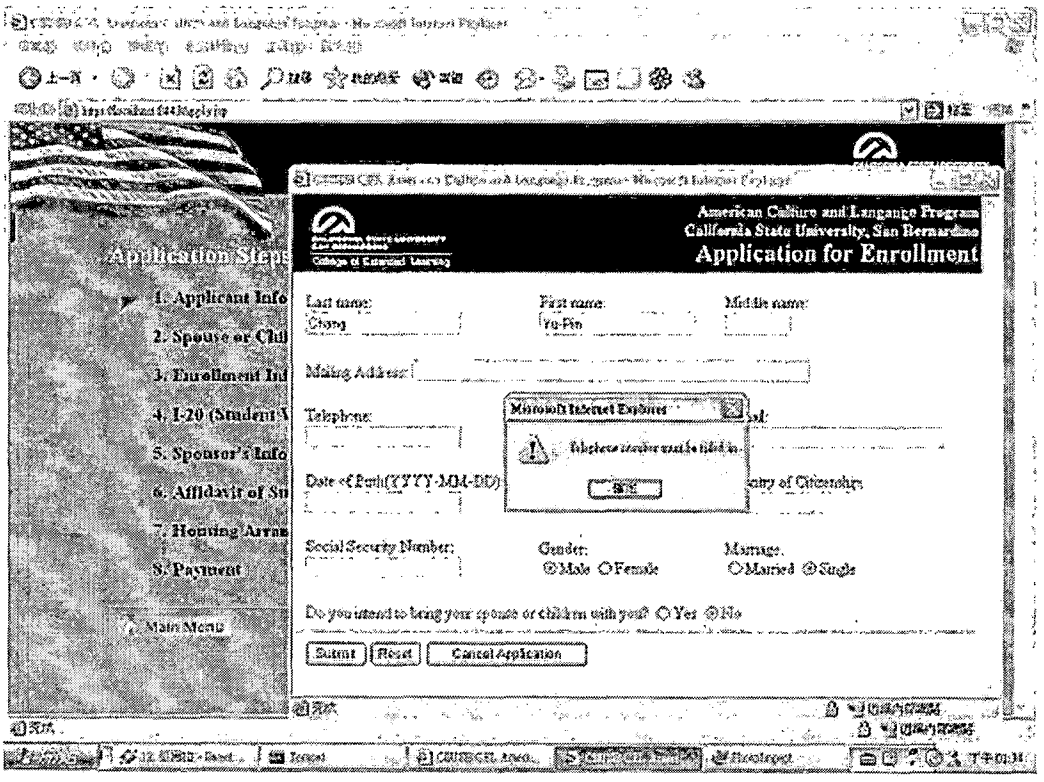


Figure 7. Warning for Application Input Error

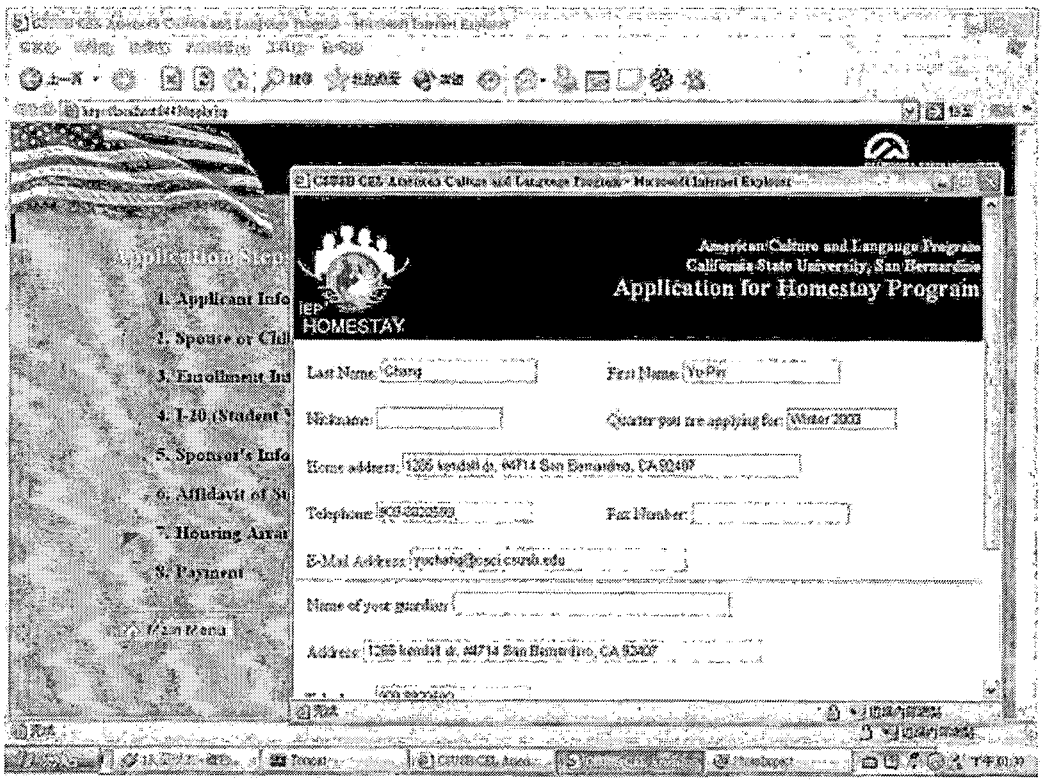


Figure 8. Application for Homestay Program

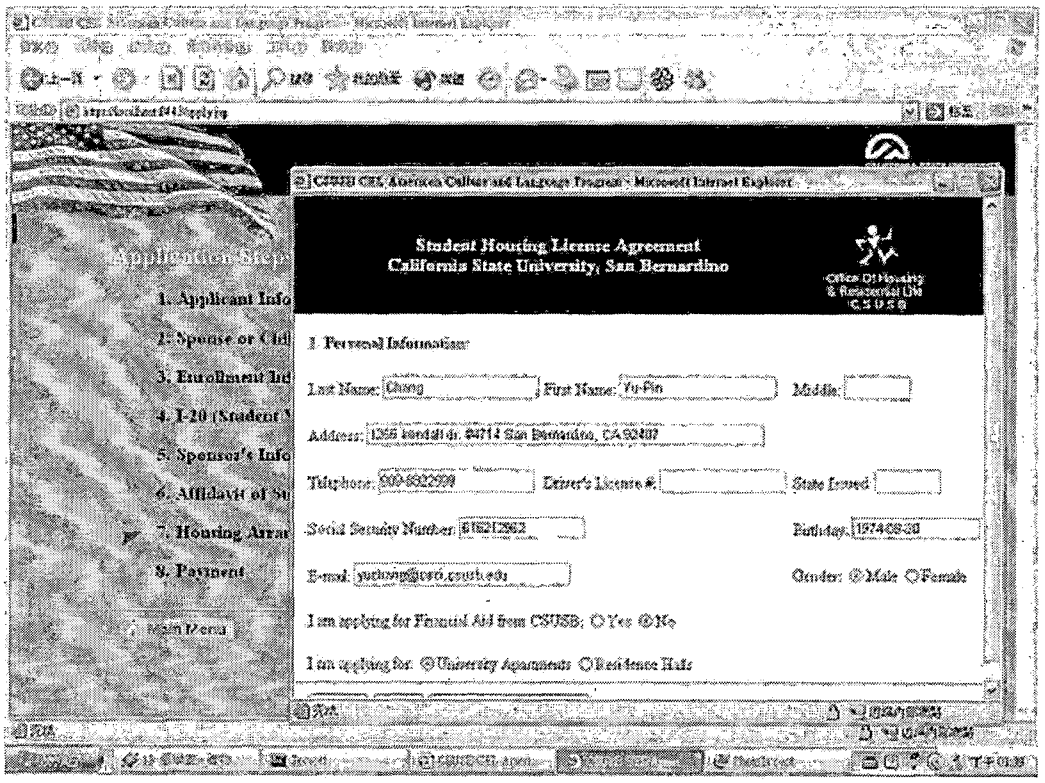


Figure 9. Application for Dormitory

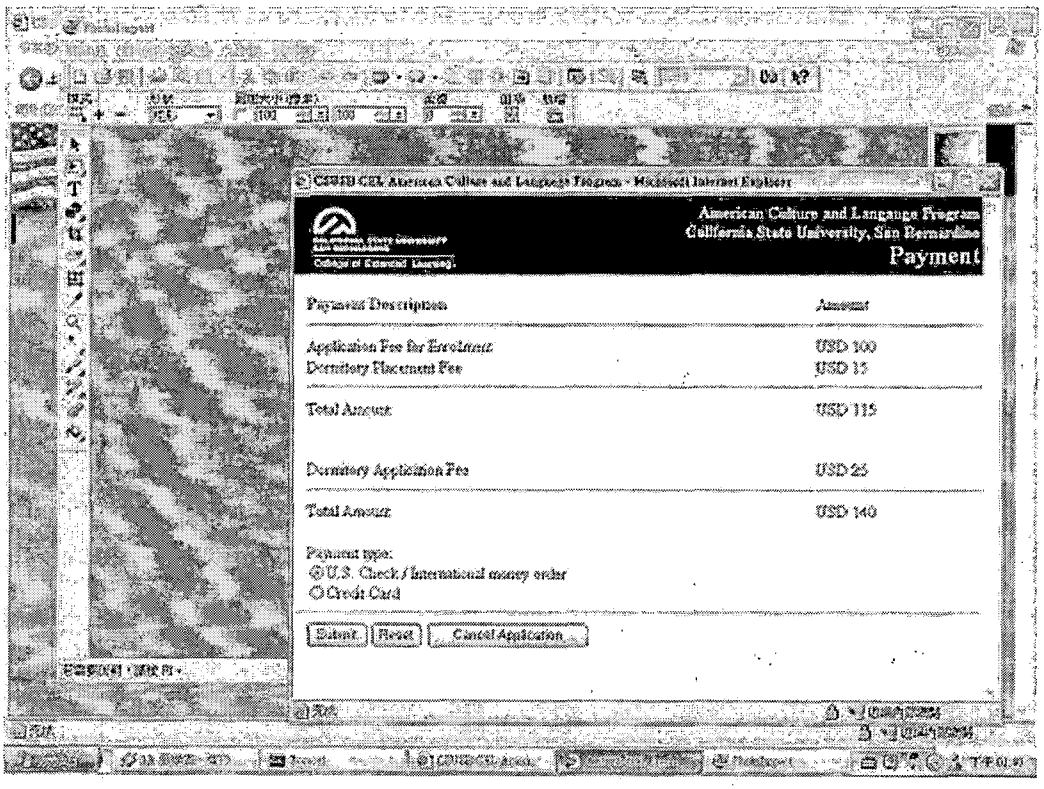


Figure 10. Payment List

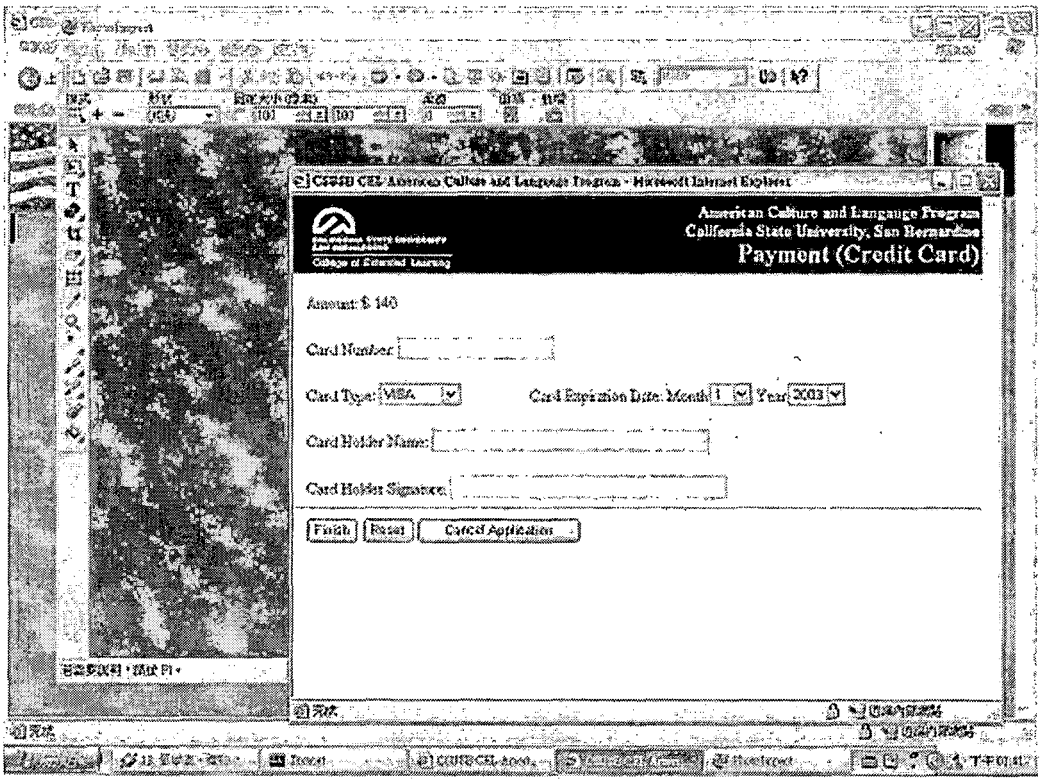


Figure 11. Payment by Credit Card

4.1.3 International Extension Programs Information

This part is totally the same as the original IEP web site. It is just written in HTML and CSS. It is divided into 3 main sub sections, Our Programs, Our Location, and How to Apply. All the details are from ACLP catalog and web pages.

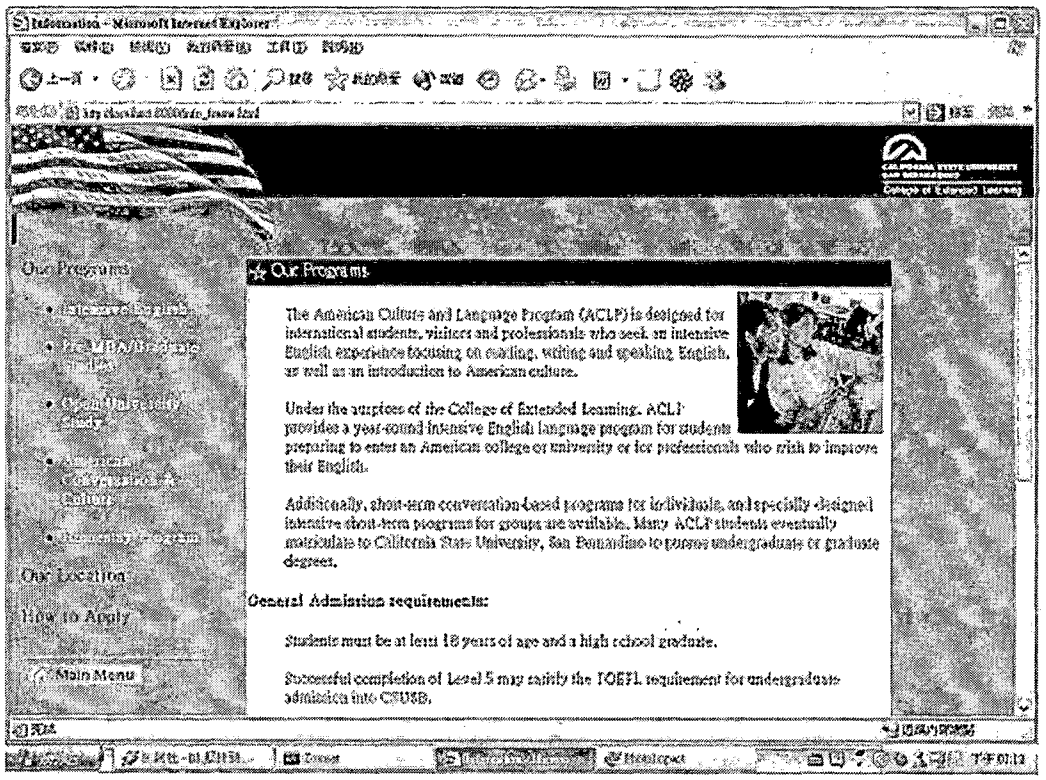


Figure 12. International Extension Programs Information Page

4.1.4 Chat Room

There are 30 chatting rooms available in this program. In pop-up window, it is divided into 4 frames. On the top, it's the user name and chatting room number. In the left, it is all users' nickname and automatically refresh in 20 seconds. In the right-top are the whole chatting contents and controlled under 1024 bytes. Also, the program will replace all the symbols into icons. In this frame, it refreshes every 3 seconds. All the user

names and chatting contents are stored in Application array which can be shared by every user at the same time.

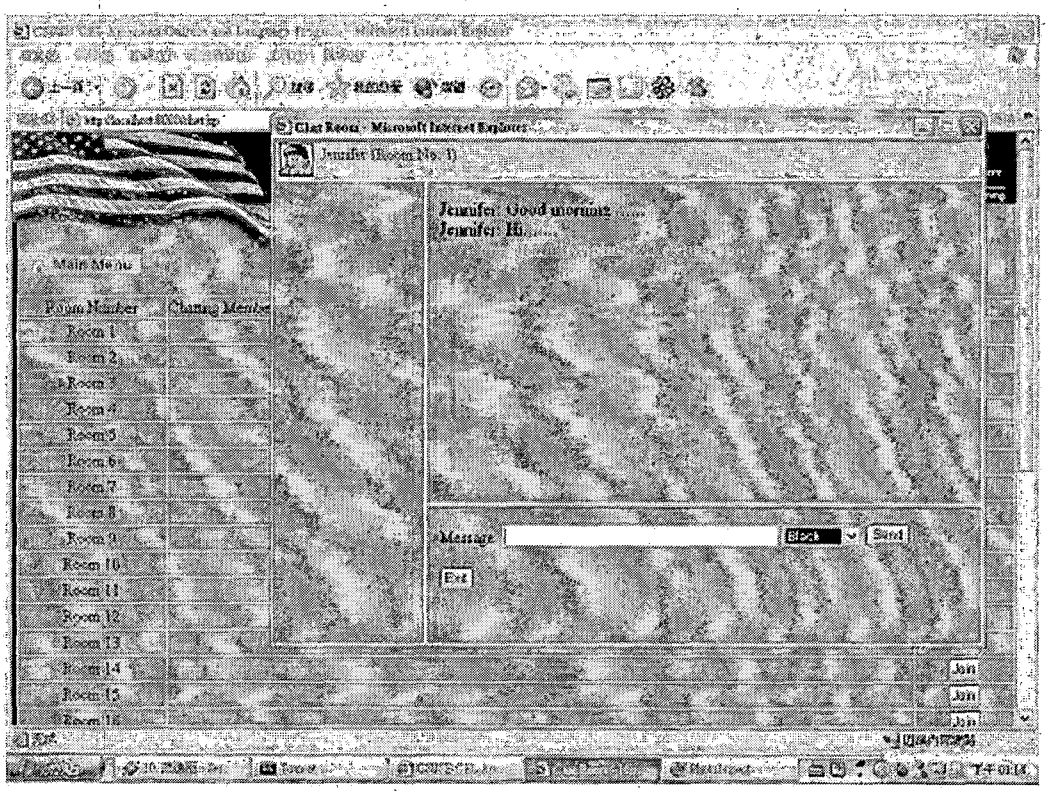


Figure 13. Chatting Room Page

4.1.5 News

The staffs can post all the information about activities, exams, or any kinds of messages in ACLP here, then all the users can browse those news on the board. This function includes 6 fields, auto increased news number, auto produced date and time from the system, title, content, poster and delete check which default is 0.

Figure 14. News Maintenance Page

4.1.6 Grade Report

This function provides the students to check their grades. The staff can use Grade Maintenance function to insert a student's grade, modify or delete it. The primary key in grade table is grade number, and search key is combination of SSN, Session and Year. All the outputs are the same format as grade papers, so the student can print the grade report on line. Moreover, a function named Smart Grade can help staff to input students' grade easily and quickly.

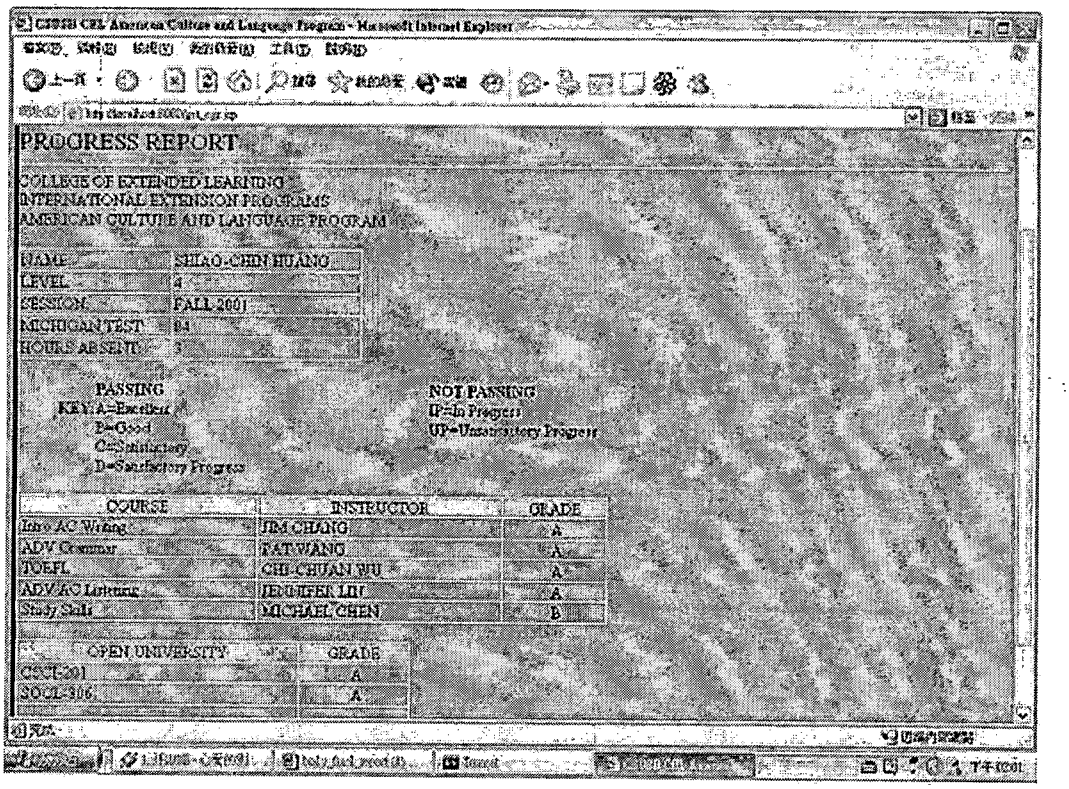


Figure 15. Progress Report

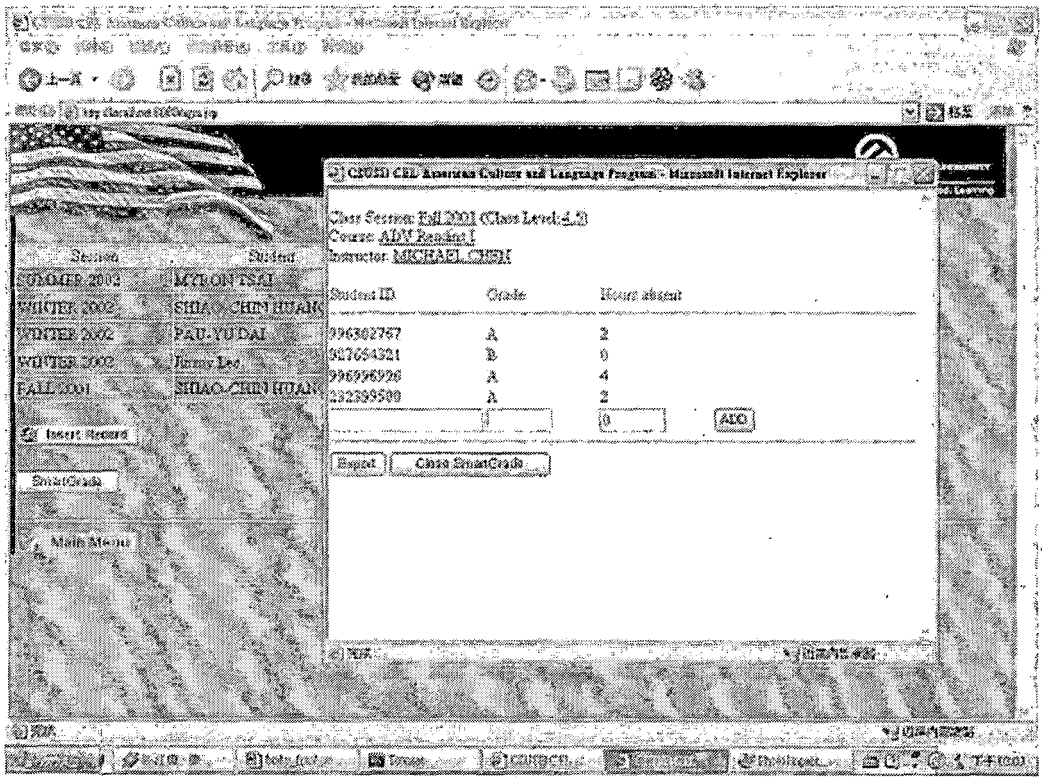


Figure 16. Smart Grade Input

4.1.7 Discussion Board

It includes 2 main pages, Group title and Discussion content. The staffs can open a new board name, then all the users can insert discussion content into it. If the staffs or administrator delete the board, the system will delete all the discussion content related to this board. In database, there are 2 tables, discussion and DBContent, related to this function. In table Discussion board number (BNO) is primary key and discussion content number (DNO) is primary key in table DBContent. The field BNO is a foreign key referenced to table Discussion.

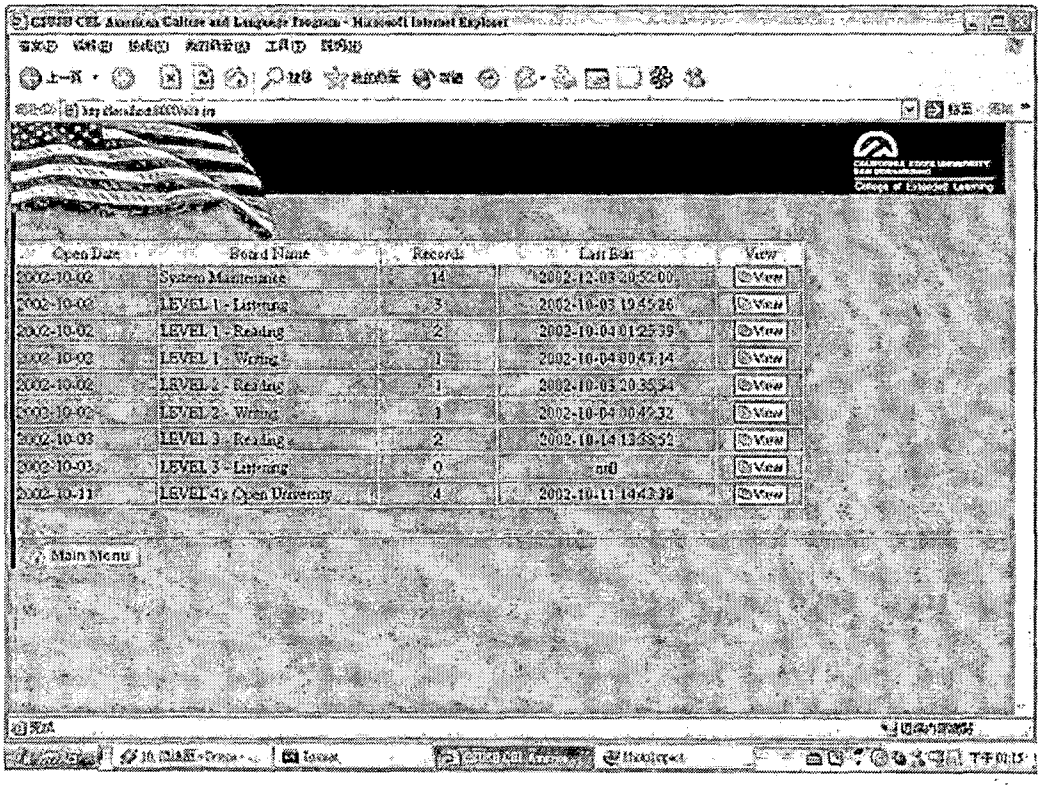


Figure 17. Discussion Board List

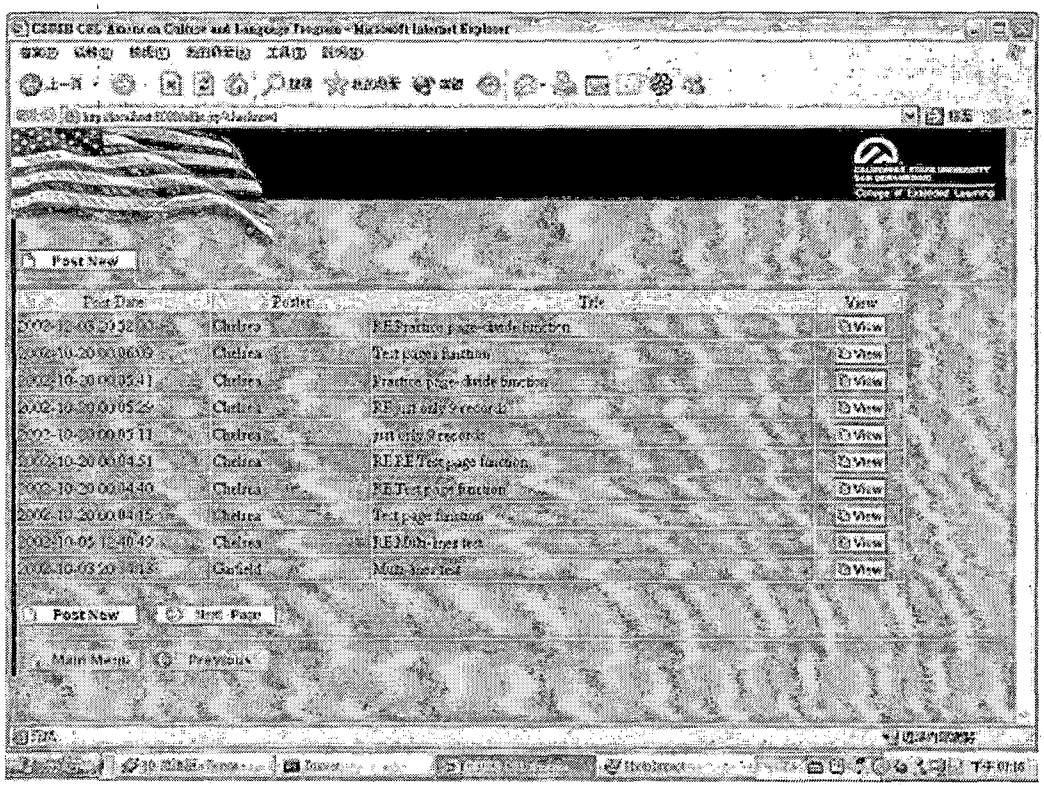


Figure 18. Discussion Content

4.1.8 E-mail List Handling

This function is written by JavaMail to send message and JavaScript to control the checkbox of e-mail list. Also, maintenance of the list is controlled by JSP programs. In database, only user's SSN, recipient's SSN and description are stored. Thus, even the recipient changes his/her e-mail address, the user still can send message to the current address in recipient's profile. In this function, one thing that the administrator has to pay attention is the SMTP server, it can be setup under the administrator's function.

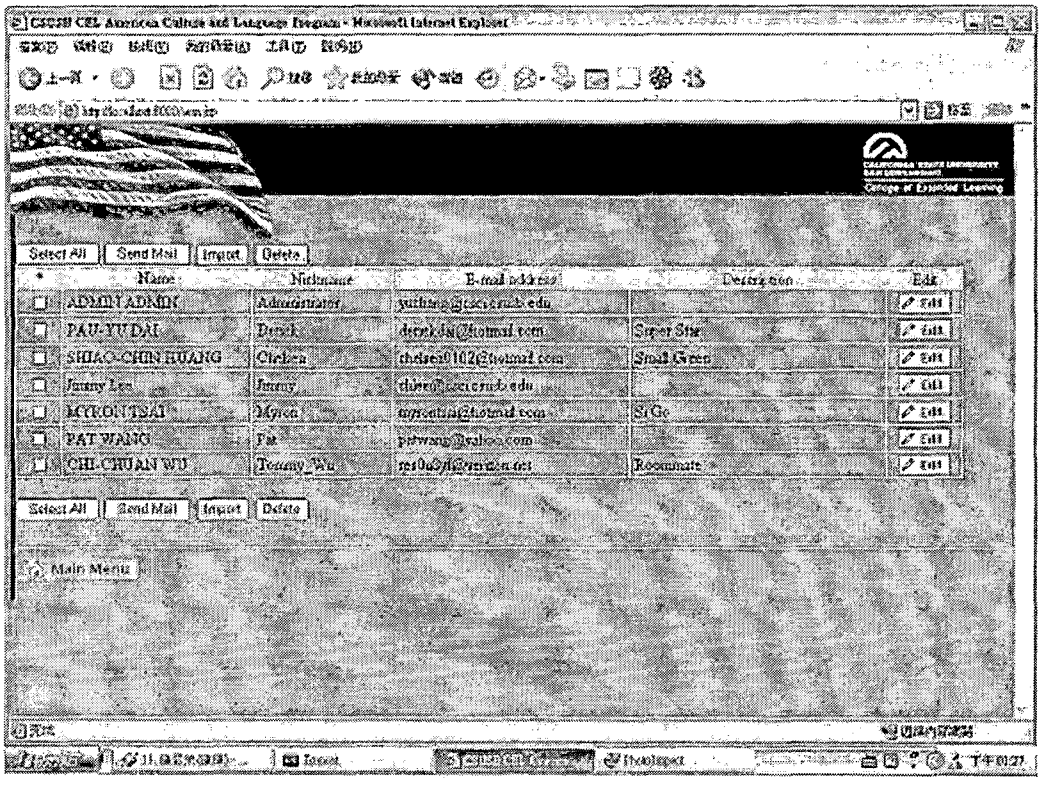


Figure 19. E-mail List

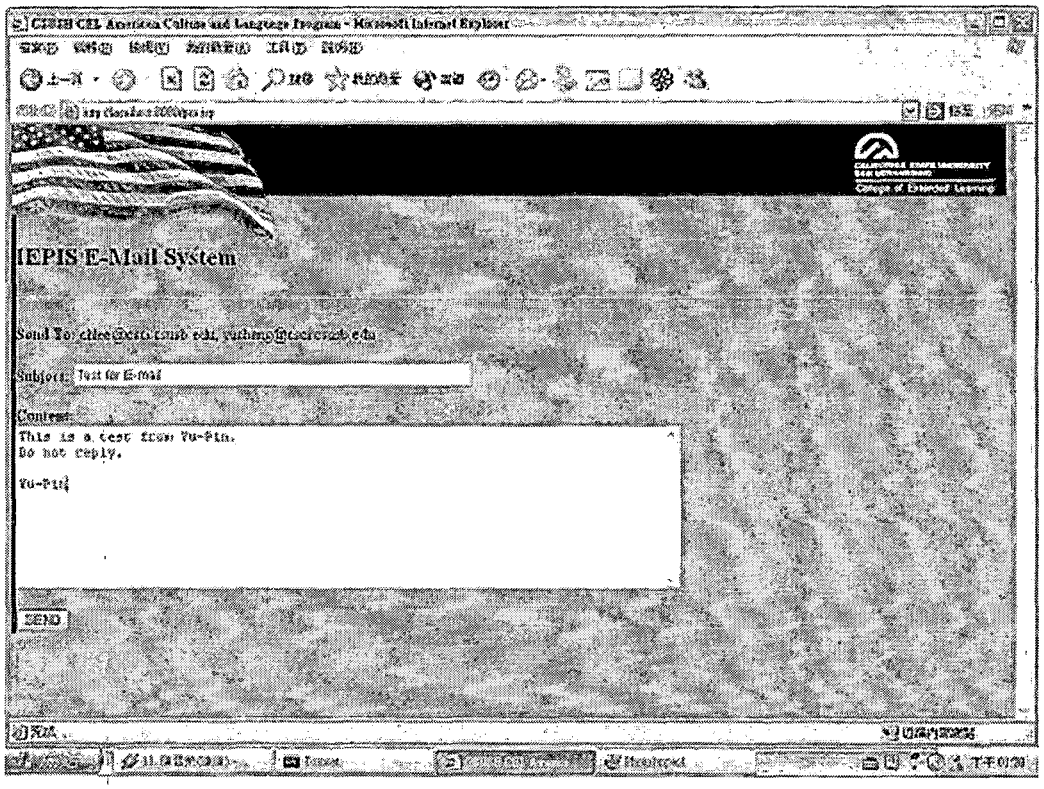


Figure 20. Send E-mail

4.1.9 Personal Information Maintenance

This function provides all the users to modify their profiles or change their passwords. However, some data, such as Date of Birth, SSN, Name and authority, can not be changed by the user. If the above information is error, the user should ask staffs or administrator to change it.

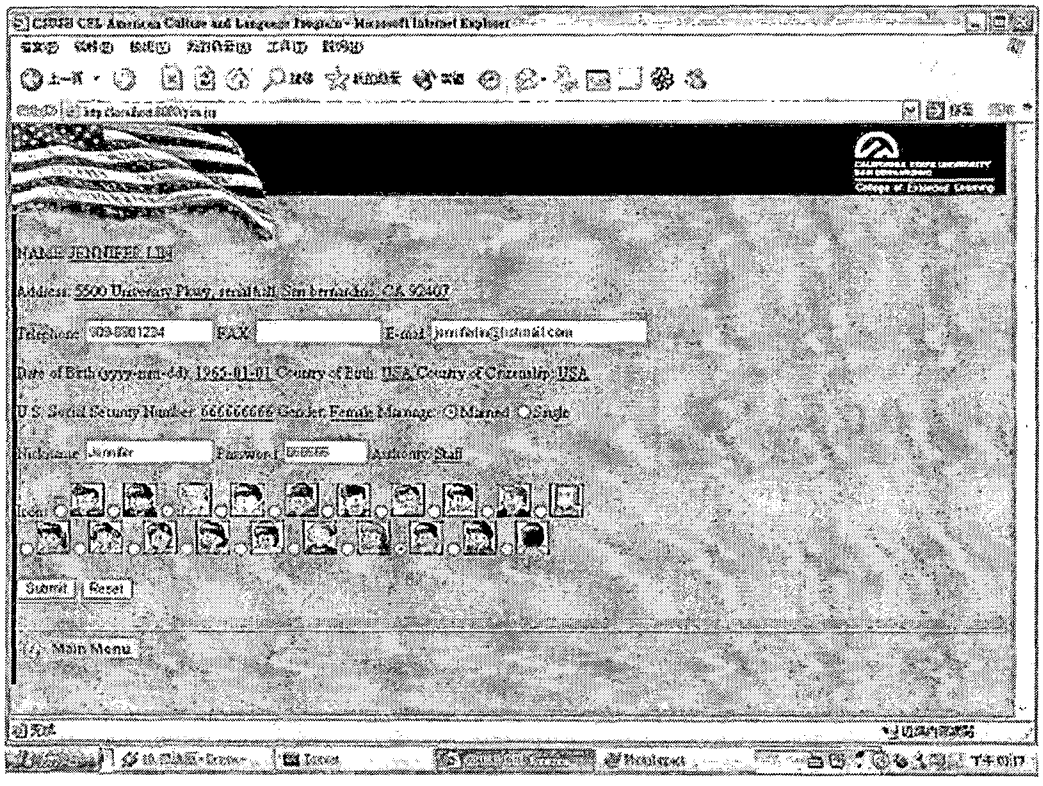


Figure 21. Personal Information Page

4.1.10 Application Process

The staffs can use this function to browse all the applicants' application forms and print them. This program links 14 tables in database and can print up to 8 pages application forms. Each page is divided by <DIV style=page-break-after: always> tag and payment part is using JavaBean to decrypt the cipher text to plain text.

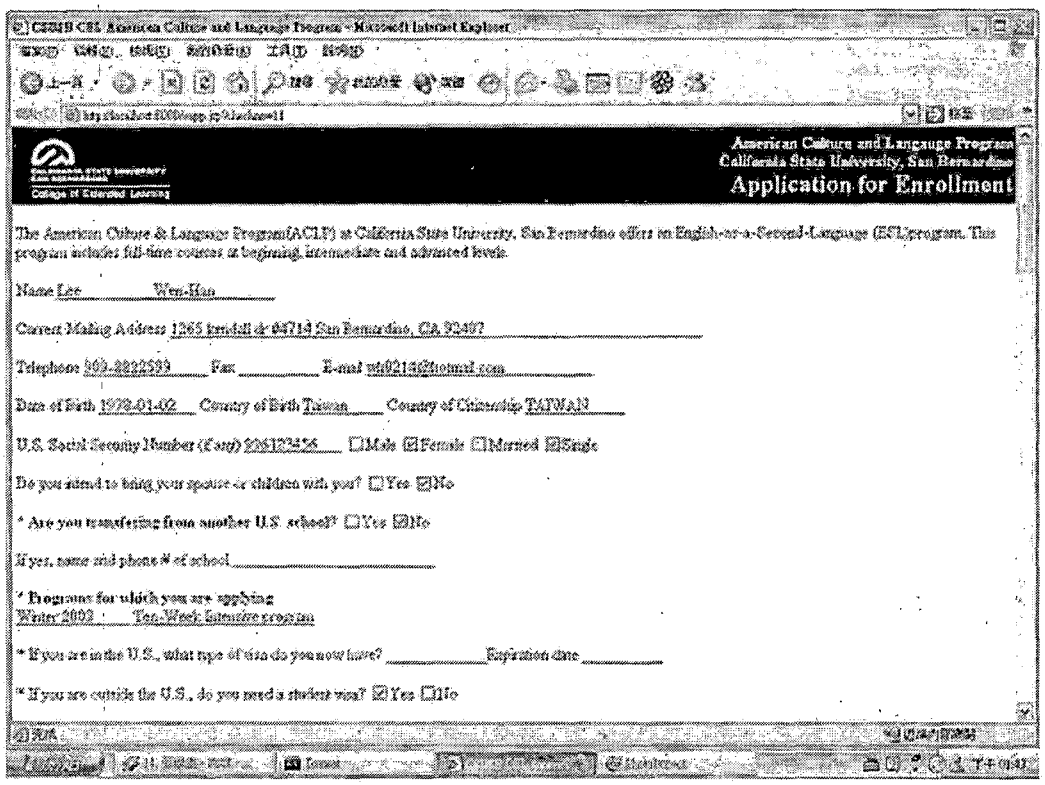


Figure 22. Application Process (1)

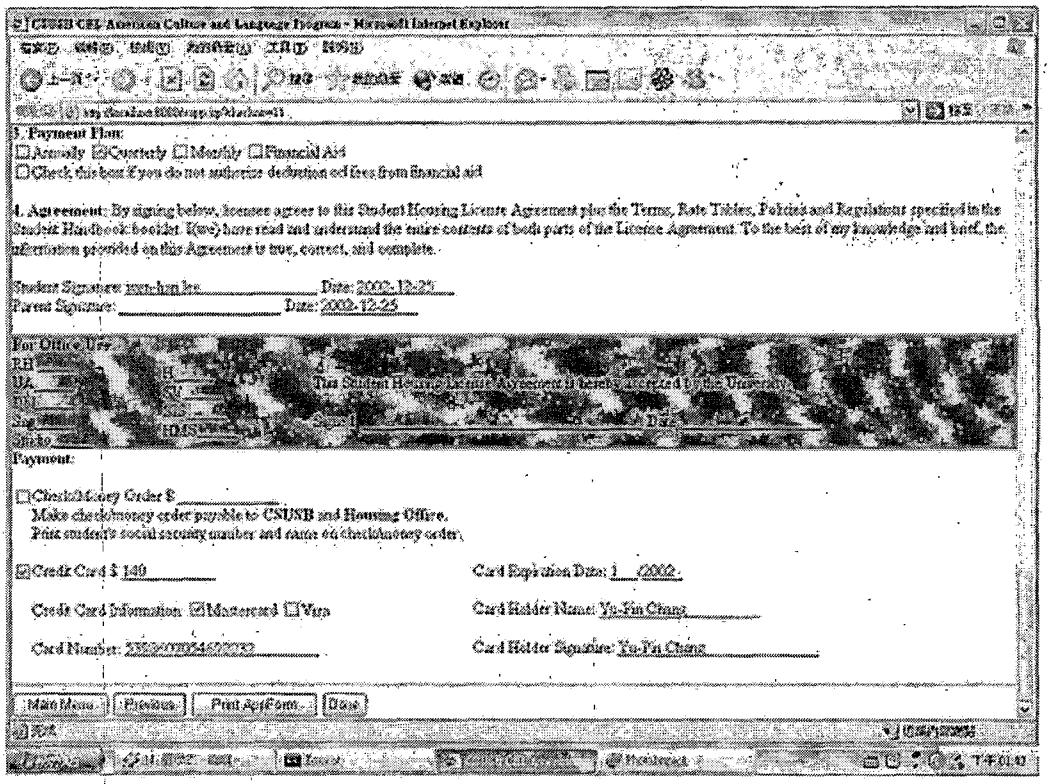


Figure 23. Application Process (2)

CHAPTER FIVE

SECURITY

Since this system includes all the users' private information and electronic transaction, so data security is pretty important part. In this project, there are 4 kinds of security methods ensuring the information secured.

5.1 Login Page

When the user enter the system, the system will require the user to enter user ID and password except guests. If the user ID is not found in database or the password is incorrect for the input ID, then the system will show the error message and ask the user to re-login again.

5.2 Authority Variable

After the user pass the login page, the system will set the authority variable into session depending on the user's type in the database. This variable will be checked in every page except guest function. If the authority variable is not allowed to browse this specific page, then the system will send the user directly to the login page. Thus, even though remembering the program name, the user

can't just input address into URL field without login. This variable will be removed after logout, so the next user has to login again to set his authority variable.

5.3 Secure Sockets Layer

SSL, or Secure Socket Layer, is a technology which allows web browsers and web servers to communicate over a secured connection. This means that the data being sent is encrypted by one side, transmitted, then decrypted by the other side before processing. This is a two-way process, meaning that both the server AND the browser encrypt all traffic before sending out data.

Another important aspect of the SSL protocol is Authentication. This means that during your initial attempt to communicate with a web server over a secure connection, that server will present your web browser with a set of credentials, in the form of a "Certificate", as proof the site is who and what it claims to be. In certain cases, the server may also request a Certificate from your web browser, asking for proof that *you* are who you claim to be. This is known as "Client Authentication," although in practice this is used more for business-to-business (B2B) transactions than with individual users. Most SSL-enabled web servers do not request Client Authentication.

The first time a user attempts to access a secured page on your site, he or she is typically presented with a dialog containing the details of the certificate (such as the company and contact name), and asked if he or she wishes to accept the Certificate as valid and continue with the transaction. Some browsers will provide an option for permanently accepting a given Certificate as valid, in which case the user will not be bothered with a prompt each time they visit your site. Other browsers do not provide this option. Once approved by the user, a Certificate will be considered valid for at least the entire browser session.

Also, while the SSL protocol was designed to be as efficient as securely possible, encryption/decryption is a computationally expensive process from a performance standpoint. It is not strictly necessary to run an entire web application over SSL, and indeed a developer can pick and choose which pages require a secure connection and which do not. In this project, all the application pages including payment part are secured. Those pages within an application can be requested over a secure socket by simply prefixing the address with https: instead of http:. In Tomcat server, after installing Java Secure Socket Extensions (J2EE) and set the Java Certificate Keystore,

system developer just needs to remove comment tags of "SSL HTTP/1.1 Connector on port 8443" and restarts the Tomcat. The SSL pages will be use the port 8443, such as https://localhost:8443.

5.4 Cryptography

The discipline relating to the use and development of techniques to encrypt and decrypt message is called Cryptography. The process of encryption entails taking a message (often referred to as plaintext or cleartext) and changing it to hide the original meaning from everybody but the intended recipients. Decryption is the process that takes the encrypted message (now referred to as ciphertext) and restores it to the original message. This project uses two methods of cryptography, Vigenere Ciphers and Transportation Ciphers.

5.4.1 Vigenere Ciphers

The goal of a substitution cipher should be to break up the natural frequency of occurrence for letters and groups of letters. One way to accomplish this is to change the substitution key during the message. For example, if we chose the numeric key

3 5 7 9 11

we would shift the first letter three characters, the second five, the third seven, and so forth with the sixth letter starting the sequence over. This yields the following ciphertext for our earlier message:

Now is the time for all good men

Qtd rd wml ctpj mxc dqs pzri tny

5.4.2 Transportation Ciphers

Transposition ciphers differ from vigenere ciphers in that they do not change the characters themselves but rather the order in which they appear in the message. A simple example, using our previous message, is as follows:

won si eht emit rof lla doog nem

In this extremely simple example, the order of the characters has been reversed in each word while each character maintains its original identify. This means that the frequency of occurrence for each letter will not change and provides a clue that a transposition cipher is being used. While the above example is easily read, using other methods to transpose the character positions yields significantly more difficult ciphertext. The plaintext can be arranged, for example, in two vertical columns, then taken in horizontal pairs and placed into groups of five characters yielding.

N o

o r

w a

i l

s l

t g Noorw ailsl tghoe otdim meenf

h o

e o

t d

i m

m e

e n

f

CHAPTER SIX

SYSTEM VALIDATION

Testing of system validation is the testing process to ensure that the program as implemented meets the expectation of the user. The purpose of system validation is to have assurance about the software quality and functionalities. This guarantees system performance and reliability also.

6.1 Unit Test

Unit test is the basic level of testing where individual components are tested to ensure that they operate correctly. These individual components can be object, class, program and etc. The unit testing results of IEPIS are shown in Table 23.

Table 23. Unit Test Results

Forms	Tests Performed	Results
Login page	• Verify handling valid data input. • Check all the links and buttons work properly.	Pass
Guest menu	• Check all the links work as expected.	Pass

Forms	Tests Performed	Results
On-Line Application Application for Enrollment	• Check pop-up window and its position. • Check SSL function working as expected. • Verify all required input validated. • Make sure all input data stored in session.	Pass
On-Line Application Application for I-20	• Verify all required input validated. • Check this function appear correctly. • Make sure all input data stored in session.	Pass
On-Line Application Affidavit of Support	• Verify all required input validated. • Make sure all input data stored in session.	Pass
On-Line Application Housing License Agreement	• Verify all required input validated. • Make sure all input data stored in session. • Verify all data transferring from pervious input is correct. • Make sure all required form show up. • Check all the selected option transfer to string correctly.	Pass

Forms	Tests Performed	Results
On-Line Application Homestay Program	• Verify all required input validated. • Make sure all input data stored in session. • Verify all data transferring from pervious input is correct. • Make sure all required form show up. • Check all the selected option transfer to string correctly.	Pass
On-Line Application Payment (Check)	• Check the amount of application fee correct. • Check the application fee list correct. • Make sure all the required information appeared. • Verify all required input validated. • Make sure all input data stored in session.	Pass
On-Line Application Payment (Credit Card)	• Check the amount of application fee correct. • Make sure all the required information appeared. • Ensure the Javabean of Credit Card working. • Check the credit card number correct. • Ensure credit card number encrypted. Verify all required input validated. • Make sure all input data stored in session.	Pass

Forms	Tests Performed	Results
Information Our Programs	• Make sure the menu in left frame works. • Check the CSS part working. • Check all the information and links correctly. • Make sure the application form valid for downloading.	Pass
Information Our Location	• Check all the information and links correctly. • Make sure the menu in left frame works. • Check the CSS part working.	Pass
Information How to Apply	• Make sure the menu in left frame works. • Check the CSS part working. • Check all the information and links correctly. • Make sure the application form valid for downloading.	Pass
News (List)	• Check all the links correct. • Make sure the page divider working as expected. • Check all the buttons work properly.	Pass
News (View)	• Check all the content from database is correct. • Make sure all the links and buttons working as expected.	Pass

Forms	Tests Performed	Results
Guest log out	• Make sure all session values clear. • Check the re-direct page.	Pass
Chatting Room Room list	• Check all the application values correct. • Make sure all the links and buttons working as expected. • Check the pop-up window and position.	Pass
Chatting Room	• Check the top frame shows the correct room number, user name, and icon. • Check the left frame shows the correct users list from application variable. • Make sure all the input message appeared in the content frame. • Make sure the message box and all the selected options and buttons working as expected. • Make sure CSS function works properly. • Check the refresh time correct.	Pass
Grade Report Request page	• Verify handling valid data input. • Check all the links and buttons work properly.	Pass
Grade Report Result page	• Make sure all the data from database matching the request. • Check the format of report. • Check all the links and buttons work properly.	Pass

Forms	Tests Performed	Results
Discussion Board Board List	• Make sure all the board information from database correct. • Check the fields of records and last edit date correctly catch from another table. • Check all the links and buttons work properly.	Pass
Discussion Board Board Content	• Make sure all the board content from database correct. • Check all the links and buttons work properly. • Make sure the page divider function working.	Pass
Discussion Board Post New	• Check the date and time produced automatically and correctly. • Make sure all the input data stored into database correctly. • Check the re-direct page properly.	Pass
Discussion Board Reply	• Check the reply title. • Check the date and time produced automatically and correctly. • Make sure all the input data stored into database correctly. • Check the re-direct page properly.	Pass
Discussion Board View	• Check all the content from database is correct. • Make sure all the links and buttons working as expected.	Pass

Forms	Tests Performed	Results
Personal Information	• Verify handling valid data input. • Check all the links and buttons work properly.	Pass
Student log out	• Make sure all session values clear. • Check the re-direct page.	Pass
E-mail List	• Check all the information in the database correct. • Make sure Select All and Release All by JavaScript work as expected. • Check all the links and buttons work properly.	Pass
E-mail List Edit	• Verify handling valid data input. • Check all the links and buttons work properly.	Pass
E-mail List Import	• Check all the links and buttons work properly. • Make sure selected data stored into database.	Pass
E-mail List Delete	• Check all the selected items are removed from database. • Check all the links and buttons work properly.	Pass
E-mail List Send Mail	• Check all the selected people in the recipient list. • Check all the selected people receive e-mail and correct subject and content. • Check all the links and buttons work properly.	Pass

Forms	Tests Performed	Results
Application Process List	• Make sure all the application appear in the list. • Check all the links and buttons work properly.	Pass
Application Process View	• Check all the links and buttons work properly. • Check all the information matching the input which the user key in. • Check the print function works and the print out papers are divided as expected by CSS. • Check the Done function change the is_done attribute in the database.	Pass
Student Information List	• Check all the links and buttons work properly. • Check all the information correct.	Pass
Student Information Insert	• Check all the links and buttons work properly. • Make sure the input from the user is correctly stored into database.	Pass
Student Information Edit	• Check all the links and buttons work properly. • Make sure all the default values are correct from the selected ID. • Check the updated data is stored into database.	Pass

Forms	Tests Performed	Results
Student Information Delete	• Check all the links and buttons work properly. • Check the selected item is removed from the list. • Check the delcheck attribute in database.	Pass
Student Information View	• Check all the links and buttons work properly. • Check all the information of the selected student.	Pass
Grade Maintenance List	• Check all the links and buttons work properly. • Check all the information correct.	Pass
Grade Maintenance Insert	• Check all the links and buttons work properly. • Make sure the input from the user is correctly stored into database. • Make sure all the courses options and instructors matching the items in database.	Pass
Grade Maintenance View	• Check all the links and buttons work properly. • Check all the information of the selected student, session and year.	Pass
Grade Maintenance Edit	• Check all the links and buttons work properly. • Check the updated data is stored into database.	Pass
Grade Maintenance Delete	• Check all the links and buttons work properly. • Check the selected item is removed from the list.	Pass

Forms	Tests Performed	Results
Grade Maintenance Smart Grade Request Page	• Check the pop-up window • Check all the links and buttons work properly. • Verify the input sent to input page.	Pass
Grade Maintenance Smart Grade Input Page	• Check all the links and buttons work properly. • Make sure all the input data stored into session variable.	Pass
Grade Maintenance Smart Grade Export Page	• Check all the links and buttons work properly. • Make sure all the input data stored in session is correctly transfer to grade table in special record and attribute. • Check the failure export. • Check the full grade record condition.	Pass
News Maintenance List	• Check all the links and buttons work properly. • Check all the information correct.	Pass
News Maintenance Insert	• Check all the links and buttons work properly. • Make sure the input from the user is correctly stored into database.	Pass
News Maintenance View	• Check all the links and buttons work properly. • Check all the information of the selected news.	Pass
News Maintenance Edit	• Check all the links and buttons work properly. • Check the updated data is stored into database.	Pass

Forms	Tests Performed	Results
News Maintenance Delete	• Check all the links and buttons work properly. • Check the selected item is removed from the list.	Pass
Courses Maintenance List	• Check all the links and buttons work properly. • Check all the information correct.	Pass
Courses Maintenance Insert	• Check all the links and buttons work properly. • Make sure the input from the user is correctly stored into database.	Pass
Courses Maintenance Edit	• Check all the links and buttons work properly. • Check the updated data is stored into database.	Pass
Courses Maintenance Delete	• Check all the links and buttons work properly. • Check the selected item is removed from the list.	Pass
Staff / Faculty log out	• Make sure all session values clear. • Check the re-direct page.	Pass
System Variable	• Verify handling valid data input. • Check all the links and buttons work properly. • Check the inputs are stored into database.	Pass
Administrator log out	• Make sure all session values clear. • Check the re-direct page.	Pass

6.2 Subsystem Testing

Subsystem testing is the next step up in the testing process where all related units from a subsystem to do a certain task. Thus, the subsystem test process is useful for detecting interface errors and specific functions. Table 24 show subsystem test results in detail.

Table 24. Subsystem Test Results

Subsystem	Tests Performed	Results
On-Line Application Subsystem	• Test all the required input. • Check all the input in session variable. • Check the proper form appears. • Make sure all the information stored into database. • Ensure data security during transmission and in database by SSL and encryption. • Make sure all the information correctly shows up in application process, including data decryption.	Pass
Database Maintenance Subsystem	• Test insert / edit / edit / delete function of each table. • Check all the information in database.	Pass

Subsystem	Tests Performed	Results
E-mail Subsystem	• Test sending E-mail by JavaMail. • Check all the recipients' mailbox.	Pass
Chatting Subsystem	• Test multi-user chatting. • Check all the messages from the users. • Check the icons and color correct.	Pass
Discussion Board Subsystem	• Test and check all the message are correct. • Check delete function taking care of two databases. • Check Discussion and DBContent table.	Pass

6.3 System Testing

System testing is the testing process that uses real data, which the system is intended to manipulate, to test the system. First all subsystem will be integrated into one system. Then test the system by using a variety of data to see the overall result.

System testing of IEPIS system begins with the following steps (Table 25):

Table 25. System Test Results

System Testing	Results
1. Install IEPIS system into server.	Pass
2. Start up all services such as JSP engine, MySQL database engine.	Pass
3. Running testing by using real data on all forms and reports.	Pass

CHAPTER SEVEN

MAINTENANCE MANUAL

It's impossible to produce systems of any size, which do not need to be maintained. System maintenance is an important step to ensure that the system runs smoothly and meets the customer's expectation. In IEPIS system, there are 3 major issues: Software Installation, Variables Modification, and IEPIS Installation /Migration.

7.1 Software Installation

In IEPIS, it requires MySQL, JSDK, TOMCAT, and JDBC to run the programs. Following will detail the installation of those 4 software.

7.1.1 MySQL Installation

MySQL is the database system we use in IEPIS and it's free. Because it also provides JDBC to easily connect by JAVA program, thus it's a good choice for designing this project. First of all, we need to download MySQL 3.23 for windows 95/98/2000/XP at http://www.mysql.com/downloads/mysql-3.23.html. After downloading the compress file, please unzip the file and install it. Second, in DOS command, we type

C:\mysql\bin>mysqld-nt -install

Then we install the MySQL service in our server. Third, we type

C:\mysql\bin>net start mysql

to start our service. Forth, we have to setup the user and password, the default user is named 'ROOT', so we have to set its password to 3090.

C:\mysql\bin>mysqladmin -u root password 3090

After that, we can try to input following command:

C:\mysql\bin>mysqld

mysql>select * from user

mysql>exit

C:\mysql\bin>

Then, we have already installed MySQL and it's working as expected.

7.1.2 JAVA 2 Platform, Standard Edition (J2SE)

J2SE is the compiler program for JSP programs and it's required in TOMCAT JAVA Container. Fist of all, we go to http://java.sun.com/j2se/1.4.1/download.html to download SDK Windows (all languages, including English), then install it. In IEPIS, we also use JavaMail and SSL function, so it requires J2SDK version 1.4 or greater to execute this project. If the version is lower, it needs JavaMail and JSEE.

7.1.3 Tomcat

TOMCAT is one of Jakarta apache project which is a JAVA container to process JSP programs and construct a web server for web pages. First of all, we go to http://apache.mirrorcentral.com/dist/jakarta/tomcat-4/binaries/ to download the file tomcat-4.1.18.zip and extract it to hard driver. Also, we copy C:\tomcat\bin\startup.bat and shutdown.bat to the desktop as shortcut in order to easily start and shut sown tomcat.

7.1.4 JAVA Database Connectivity (JDBC)

The API used to execute SQL statement is different for each database engine. Java programmers, however, are lucky and are freed from such database portability issues. They have a single API, the Java Database Connectivity API (JDBC), that's portable between database engines. The JDBC library provides an interface for executing SQL statements. It provides the basic functionality for data access. A number of drivers are available for MySQL, and information about this can be obtained at the MySQL homepage at http://www.mysql.com/downloads, under JDBC. For our purpose, we will use the MM.MySQL driver which is a Type-4 JDBC driver that is under the GNU Library License.

7.2 Variables Modification

In IEPIS, we have to change some environment variables in windows system, server.xml in Tomcat server for SSL function, and setting for startup.bat, shutdown.bat, and JDBC.

7.2.1 System Variables

1. Go into the Control Panel and open up the System control panel application.
2. You should have a window entitled System Properties on your screen; select the Advanced tab, and click on the Environment Variable button.
3. A new window named Environment Variables should have opened. Click on the New button in the System Variables Section.
4. The New System Variable window should now be on your screen. Enter JAVA_HOME for as the name and the path to your JDK (such as c:\j2sdk1.4.1_01) for the value.
5. Repeat step 3, and enter CATALINA_HOME for as the name and the path to your TOMCAT (such as c:\tomcat) for the value.
6. Repeat step 3, and enter CLASSPATH for as the name and c:\tomcat\common\lib\servlet.jar;

c:\mm.mysql.jdbc-2.0pre5\mysql_2_comp.jar;

c:\mm.mysql.jdbc-2.0pre5\mysql_2_uncomp.jar; for the value. c:\tommat is the TOMCAT path and c:\mm.mysql.jdbc-2.0pre5 is the path for JDBC.

7.2.2 Batch Files Modification

There are two files should be modified. Add following two lines into c:\tomcat\bin\startup.bat and c:\tomcat\bin\shutdown.bat.

```
set JAVA_HOME = c:\j2sdk1.4.1_01
set CATALINA_HOME = c:\tomcat
```

7.2.3 Copying Files

Copy following two files,

c:\mm.mysql.jdbc-2.0pre5\mysql_2_comp.jar

c:\mm.mysql.jdbc-2.0pre5\mysql_2_uncomp.jar

to c:\tomcat\common\lib.

7.2.4 Secure Sockets Layer Configuration

1. Create a certificate keystore by executing the following command:
   %JAVA_HOME%\bin\keytool -genkey -alias tomcat-keyalg RSA and specify a password value of "changeit".
2. Uncomment the "SSL HTTP/1.1 Connector" entry in $CATALINA_HOME/conf/server.xml and tweak.

7.3 International Extension Programs Information System Installation/Migration

1. All the JSP programs and HTML programs are stored in

   %CATALINA_HOME%\webapps\ROOT\

2. All the icons are stored in

   %CATALINA_HOME%\webapps\ROOT\icon

3. All the classes are stored in

   %CATALINA_HOME%\webapps\ROOT\WEB-INF\classes\

4. All the database files are stored in

   %MYSQL%\data\garfield\

7.4 Backup

Backup is a very important action for an administrator. We can't ensure the system will work and not stuck forever, so backup can recover the system to original status. In IEPIS, we need backup two components, system files and database.

7.4.1 System Backup

All the IEPIS programs and required graphic are stored under a directory %CATALINA_HOME%\webapps\ROOT\, including all sub-directories. Thus, the administrator just needs to copy all the files under this directory or

use compressing software, such as WINZIP or WINRAR, to backup the system programs.

7.4.2 Database Backup

All the database files are stored under %MYSQL%\data\garfield\ directory including all *.frm, *.MYD, and *.MYI.

CHAPTER EIGHT

CONCLUSION AND FUTURE DIRECTIONS

8.1 Conclusion

IEPIS provides a perfect environment for IEP office and ACLP students. All the students and staffs can communicate with each other by this system and discuss their assignment on the board. Moreover, it also offers several functions such as grade report, information, and news that help the users understanding IEP programs, checking their grade, and browsing the news or activities posted by the staffs.

Especially, on-line application provides a good way for guests to apply ACLP programs on line. It not only shortens application time from international post, but also ensures the applicant information accuracy. Thus, applicants will not miss any required information and be noticed by system messages. In application function, it also offers homestay program application and dormitory agreement license. So applicants also can arrange their housing for living during CSUSB life.

IEPIS has already been tested for several times and it's mature to be used in IEP office. This project will be

used in Spring 2003 and be the official web site under CSUSB.

8.2 Future Directions

IEPIS has on-line application function which provides a start point for general on-line application for CSUSB. It just needs to change the form format and database tables, then can be used for all departments. Also, it has homestay application and dormitory agreement license which can be separated as an independent system for all CSUSB students, not only for ACLP students.

Due to new policy in the U.S., all the international students' information has to be sent to immigration office. In the future, IEPIS will offer this function so that the staffs can easily process this work. And this function also can be used in International Student Service (ISS) office to do that same job.

APPENDIX A

PROGRESS REPORT PRINTOUT

PROGRESS REPORT

COLLEGE OF EXTENDED LEARNING

INTERNATIONAL EXTENSION PROGRAMS

AMERICAN CULTURE AND LANGUAGE PROGRAM

NAME:	SHIAO-CHIN HUANG
LEVEL:	5
SESSION:	WINTER 2002
MICHIGAN TEST:	90
HOURS ABSENT:	17

PASSING	NOT PASSING
KEY:A=Excellent	IP=In Progress
B=Good	UP=Unsatisactory Progress
C=Satisfactory	
D=Satisfactory Progress	

COURSE	INSTRUCTOR	GRADE
ADV AC Listening	JIM CHANG	A
TOEFL	MICHAEL CHEN	A
ADV Grammar	MICHAEL CHEN	B
Spreaking	CHI-CHUAN WU	B
ADV Reading I	PAT WANG	A

OPEN UNIVERSITY	GRADE
CSCI-330	A

APPENDIX B

APPLICATION PROCESS PRINTOUT

American Culture and Langauge ProgramCalifornia State University, San BernardinoApplication for Enrollment

The American Culture & Language Program(ACLP) at California State University, San Bernardino offers an English-as-a-Second-Language (ESL)program. This program includes full-time courses at beginning, intermediate and advanced levels.

Name Lee Wen-Han

Current Mailing Address 2065 w college ave #2066 San Bernardino, CA 92407

Telephone 909-4746640 Fax _____ E-mail wh0214@hotmail.com

Date of Birth 1979-02-14 Country of Birth Taiwan Country of Citizenship TAIWAN

U.S. Social Security Number (if any) 996123456 ☐ Male ☑ Female ☐ Married ☑ Single

Do you intend to bring your spouse or children with you? ☐ Yes ☑ No

*** Are you transfering from another U.S. school?** ☐ Yes ☑ No

If yes, name and phone # of school _____

*** Programs for which you are applying**

Spring 2003 Ten-Week Intensive program

* If you are in the U.S., what type of visa do you now have? _____Expiration date _____

* If you are outside the U.S., do you need a student visa? ☑ Yes ☐ No

* Housing assistance? **Homestay**

Person in the United States we may contact concerning your arrival:

Name: Yu-Pin Chang

Address: 1265 kendall dr #4714 San Bernardino, CA 92407

Telephone: 909-8822599 E-mail: yuchang@csci.csusb.edu

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
College of Extended Learning

American Culture and Langauge ProgramCalifornia State University, San BernardinoApplication for I-20 (Student Visa)

If you plan to enter the United States on a student visa(F-1) from the American Culture and Language Program(ACLP), please provide the following information:You are required to certify that you possess sufficient funds ($5,700.00 US for each term of study in the ACLP) to cover fees, local transportation and living expenses. For a married applicant who plans to bring spouse and/or children, a larger amount must be certified. You must include a verification of financial support (a letter from your bank or a verification of scholarship or a sponsor's statement of support) along with the application form.

* How many terms (10-week periods) will you attend the ACLP? 2

* How will you provide for your expenses while enrolled in the ACLP? ☐ Personal Savings ☑ Family and/or Friend ☐ Sponsor

If you will be supported by a source other than a scholarship or personal savings, please provide the following information:

Sponsor's name Yu-Pin Chang Relationship to applicant Brother

Occupation Student Total amount available to student $ 60000

Address 1265 kendall dr #4714 San Bernardino, CA 92407

Country USA

*** Please have the person above complete the following statement**

I Guarantee that the funds described herein will be available to Lee Wen-Han

during his or her entire period of study in the American Culture and Language Program.

Date 2002-11-14 Signature of Sponsor Yu-Pin Chang

AFFIDAVIT OF SUPPORT

The California State University and the American Culture and Language Program (ACLP) require verification that either the applicant or sponsor has adequate funds in the bank. Please have a bank official from applicant's bank or sponsor's bank complete the following statement or enclose a separate letter on official bank stationery. (This section is not required for scholarship students.)I certify that the above statement of financial support is true and accurate, to the best of my knowledge, and that the private sponsor (applicant, relative or friend) named above is financially capable of meeting his or her commitment and is permitted to do so under present regulations

Date 2002-11-14 Signature of Bank Official jennifer

Bank Official's Title Bank of America

Address of Bank 100 Waterman San Bernardino, CA 92406

* Please indicate where the **I-20 Form** should be mailed:

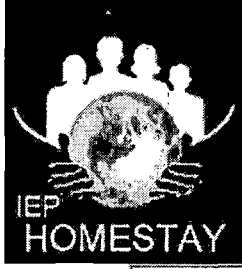
Name Lee Wen-Han Telephone 909-4746640

Address 2065 w college ave #2066 San Bernardino, CA 92407

* Applicant should sign the statement below after reading it carefully:

I certify the statements on the application form and the certified financial statement are correct and understand that inclusion of any false information is cause for dismissal from the American Culture and Language Program.

Date 2002-11-14 Signature of Applicant Yu-Pin Chang



American Culture and Langauge ProgramCalifornia State University, San BernardinoApplication for Homestay Program

Last name: Lee First name: Wen-Han

Nickname: Diana Quarter you are applying for: Spring 2003

Home Address: 2065 w college ave #2066 San Bernardino, CA 92407

Telphone: 909-474664 Fax Number: E-Mail Address: wh0214@hotmail.com

---

Name of Your Guardian: Yu-Pin Chang

Address: 2065 w college ave #2066 San Bernardino, CA 92407

Telephone: 909-4746640

Your Gender ☐ male ☑ Female

Your Nationality: TAIWAN

Date of birth: 1979-02-14

Marital Status ☑ Single ☐ Married

Do you have children? ☐ Yes ☑ No

If yes, how many? 0

Family Information

Name	Occupation	Age	Relation
Yu-Pin Chang	Student	28	Brother

Page1-Student Application fro the IEP Homestay Program

Medical Information

Please check your health condition: ☑ excellent ☐ good ☐ fair

Please check the following that apply:

☐ allergies ☑ medication ☐ previous illness ☑ physical handicap

If you have checked any of the above, please provide details:

my heart was broken before!!!

Student Information

Engliah speaking ability ☑ good ☐ fair ☐ poor

English writing ability ☑ good ☐ fair ☐ poor

Do you speak another foreign language (other then English)? ☑ Yes ☐ No

If yes, how fluently? perfect chinese

What are your favorite sports? swim

What are your favorite hobbies? play piano

Do you play any music instruments? piano

What are your favorite foods? vegetable

What food do you dislike? meat

Are you allergic to any food? no

Do you have any pets? no

Are there any animals which you dislike? no

Are you allergic to any pets? no

Do you prefer a family ☐ with pets ☐ without pets ☑ doesn't matter

Do you prefer a family ☐ with chileren ☐ without chileren ☑ doesn't matter

Do you smoke? ☐ Yes ☑ No. If yes, are you willing to smoke outside only? ☑ Yes ☐ No.

Optional

What is your religion? no

How often do you attend religious services? ☐ weekly ☐ monthly ☑ occasionally/holidays

Do you intend to purchase a car during your stay in America? ☑ Yes ☐ No

Do you intend to purchase a bicycle during your stay in America? ☐ Yes ☑ No

How long do you plan to study at our university? 2 years

What do you hope to learn from this Homestay experience?

nothing

Would you prefer to live in a Single or Double Homestay? ☑ Single ☐ Double

If you know the name of the IEP student with whom you would like to live, please write his/her name:

Do you prefer a single room? ☑ Yes ☐ No ☐ doesn't matter

I understand that completion and submission of this homestay application to the International Extension Programs (IEP) office does not guarantee me placement with a host family. I agree that under no circumstances will I sue or threaten to sue IEP for non-placement in, or removal from a host family's home, such decisions being at the sole discretion of IEP. Futher, any grievances or disputes will be settled outside of court through arbitration only.

☑ I agree ☐ I do not agree

Student's Name Wen-Han Lee Date 2002-11-14

☑ I agree ☐ I do not agree

Parent/Legal Guardian's Name Date 2002-11-14

Medical Release

Student's Name Lee Wen-Han

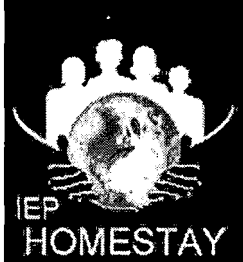
We, the Student and/or Parent/Legal Guardian, hereby brant IEP, the Coordinator, the Host Family and any other independent agent of IEP, all necessary permissions and authorizations to act as legal guardians and 'in loco prentis' in any situation, especially in emergencies whether medical or other, including the possibility of permission for surgical operations or any other medical treatment.

☑ I agree ☐ I do not agree

Student's Name Wen-Han Lee Date 2002-11-14

☑ I agree ☐ I do not agree

Parent/Legal Guardian's Name _____ Date 2002-11-14



Letter to Host Family

Please write a letter to your host family. Please write in English. You may describe your family, your lifestyle, your school, your country, and any additional information you think your host family may find interesting.

This is my first time to live with American Family.....

Page5-Student Application fro the IEP Homestay Program

Payment:

☑ Check/Money Order $ 175

Make check/money order payable to **CSUSB.**

Print student's social security number and name on check/money order.

☐ Credit Card $

Credit Card Information: ☐ Mastercard ☐ Visa

Card Number: _____

Card Expiration Date: __/____

Card Holder Name: _____

Card Holder Signature: _____

APPENDIX C

APPLICATION PROCESS PRINTOUT

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
College of Extended Learning

American Culture and Langauge ProgramCalifornia State University, San BernardinoApplication for Enrollment

The American Culture & Language Program(ACLP) at California State University, San Bernardino offers an English-as-a-Second-Language (ESL)program. This program includes full-time courses at beginning, intermediate and advanced levels.

Name HUANG SHIAO-CHIN

Current Mailing Address 2065 w college ave #2066 San Bernardino, CA 92407

Telephone 909-4738418 Fax _____ E-mail chelsea0102@hotmail.com

Date of Birth 1978-01-02 Country of Birth Taiwan Country of Citizenship TAIWAN

U.S. Social Security Number (if any) 996666666 ☐ Male ☑ Female ☐ Married ☑ Single

Do you intend to bring your spouse or children with you? ☐ Yes ☑ No

*** Are you transfering from another U.S. school?** ☐ Yes ☑ No

If yes, name and phone # of school _____

*** Programs for which you are applying**

Spring 2003 Ten-Week Intensive program

* If you are in the U.S., what type of visa do you now have? _____ Expiration date _____

* If you are outside the U.S., do you need a student visa? ☑ Yes ☐ No

* Housing assistance? **Dormitory**

Person in the United States we may contact concerning your arrival:

Name: Yu-Pin Chang

Address: 1265 kendall dr #4714 San Bernardino, CA 92407

Telephone: 909-8822599 E-mail: yuchang@csci.csusb.edu

CALIFORNIA STATE UNIVERSITY SAN BERNARDINO
College of Extended Learning

American Culture and Langauge ProgramCalifornia State University, San BernardinoApplication for I-20 (Student Visa)

If you plan to enter the United States on a student visa(F-1) from the American Culture and Language Program(ACLP), please provide the following information:You are required to certify that you possess sufficient funds ($5,700.00 US for each term of study in the ACLP) to cover fees, local transportation and living expenses. For a married applicant who plans to bring spouse and/or children, a larger amount must be certified. You must include a verification of financial support (a letter from your bank or a verification of scholarship or a sponsor's statement of support) along with the application form.

* How many terms (10-week periods) will you attend the ACLP? 2

* How will you provide for your expenses while enrolled in the ACLP? ☐ Personal Savings ☑ Family and/or Friend ☐ Sponsor

If you will be supported by a source other than a scholarship or personal savings, please provide the following information:

Sponsor's name Yu-Pin Chang Relationship to applicant Brother

Occupation Student Total amount available to student $ 100000

Address 1265 kendall dr #4714 San Bernardino, CA 92407

Country Taiwan

*** Please have the person above complete the following statement**

I Guarantee that the funds described herein will be available to HUANG SHIAO-CHIN

during his or her entire period of study in the American Culture and Language Program.

Date 2002-11-23 Signature of Sponsor Yu-Pin Chang

AFFIDAVIT OF SUPPORT

The California State University and the American Culture and Language Program(ACLP) require verification that either the applicant or sponsor has adequate funds in the bank. Please have a bank official from applicant's bank or sponsor's bank complete the following statement or enclose a separate letter on official bank stationery. (This section is not required for scholarship students.)I certify that the above statement of financial support is true and accurate, to the best of my knowledge, and that the private sponsor (applicant, relative or friend) named above is financially capable of meeting his or her commitment and is permitted to do so under present regulations.

Date 2002-11-23 Signature of Bank Official Alabuda

Bank Official's Title Banco De Ora

Address of Bank #100 santiago st dalandanan valenzuela, metro manila

* Please indicate where the **I-20 Form** should be mailed:

Name HUANG SHIAO-CHIN Telephone 909-4738418

Address 2065 w college ave #2066 San Bernardino, CA 92407

* Applicant should sign the statement below after reading it carefully:
I certify the statements on the application form and the certified financial statement are correct and understand that inclusion of any false information is cause for dismissal from the American Culture and Language Program.

Date 2002-11-23 Signature of Applicant Yu-Pin Chang

Student Housing License AgreementCalifornia State University, San Bernardino

Office Of Housing & Residential Life CSUSB

1. Personal Information (Please Print)
Name HUANG SHIAO-CHIN
Address 2065 w college ave #2066 San Bernardino, CA 92407
Telephone 909-4738418 Driver's License # 2NOR309 State Issued CA
Social Security Number 996666666 Birthday 1978-01-02
E-mail chelsea0102@hotmail.com ☐ Male ☑ Female
I am applying for Financial Aid from CSUSB: ☐ Yes ☑ No
I am applying for: ☑ University Apartments ☐ Residence Halls

2. License Agreement for:
☐ Fall ☐ Winter ☑ Spring ☐ 12 Months ☐ Academic Year
Summer: ☐ Session I ☐ Session II ☐ Session III ☐ IEP

3. Payment Plan:
☐ Annually ☐ Quarterly ☑ Monthly ☐ Financial Aid
☐ Check this box if you do not authorize deduction od fees from financial aid.

4. Agreement: By signing below, licensee agrees to this Student Housing License Agreement plus the Terms, Rate Tables, Policies and Regulations specified in the Student Handbook booklet. I(we) have read and understand the entire contents of both parts of the License Agreement. To the best of my knowledge and brief, the information provided on this Agreement is true, correct, and complete.

Student Signature: Shiao-Chin Huang Date: 2002-11-23
Parent Signature: _____ Date: 2002-11-23

For Office Use:		
RH	H	This Student Housing License Agreement is hereby accepted by the
UA	SV	University.
Dbl	SIS	
Sng	HM	Signed: _____ Date:
Studio		

Payment:

☐ Check/Money Order $ _____

Make check/money order payable to **CSUSB** and **Housing Office.**

Print student's social security number and name on check/money order.

☑ Credit Card $ 140

Credit Card Information: ☑ Mastercard ☐ Visa

Card Number: **********

Card Expiration Date: 4 /2004

Card Holder Name: Yu-Pin Chang

Card Holder Signature: Yu-Pin Chang

REFERENCES

1. Martin Fowler with Kendall Scott. UML Distilled - A brief guide to the standard object modeling language. Addison Wesley Longman, July 2001.

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