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Spring 2015

Ewebsite for Placement Consultant Portal

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Recommended Citation

Karam, Abhilashreddy; Nakarakanti, Karthik; and Sriramoju, Sravani, "Ewebsite for Placement Consultant Portal" (2015). *All Capstone Projects*. 92.
http://opus.govst.edu/capstones/92

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ABSTRACT

This project is aimed at developing an online search Portal for the Placement Dept. of the college. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an Online Job Portal for the Placement Dept of the college to manage the student information with regards to placement. Students logging should be able to upload their information in the form of a CV. Visitors/Company representatives logging in may also access/search any information put up by Students.

The project has been planned to be having the view of distributed architecture, with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of MS-SQL Server and all the user interfaces have been designed using the ASP.Net technologies. The database connectivity is planned using the "SQL Connection" methodology. The standards of security and data protective mechanism have been given a big choice for proper usage. The application takes care of different modules and their associated reports, which are produced as per the applicable strategies and standards that are put forwarded by the administrative staff.

The entire project has been developed keeping in view of the distributed client server computing technology, in mind. The specification has been normalized up to 3NF to eliminate all the anomalies that may arise due to the database transaction that are executed by the general users and the organizational administration. The user interfaces are browser specific to give distributed accessibility for the overall system. The internal database has been selected as MS-SQL server 200.The basic constructs of table spaces, clusters and indexes have been exploited to provide higher consistency and reliability for the data storage. The MS-SQL server 200 was a choice as it provides the constructs of high-level reliability and security. The total front end was dominated using the ASP.Net technologies. At all proper levels high care was taken to check that the system manages the data consistency with proper business rules or validations. The database connectivity was planned using the latest "SQL Connection" technology provided by Microsoft.

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1. INTRODUCTION

1.1. INTRODUCTION TO PROJECT

This project is developed an online search Portal for the Placement Dept. of the college. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an Online Job Portal for the Placement Dept of the college to manage the student information with regards to placement. Students logging should be able to upload their information in the form of a CV. Visitors/Company representatives logging in may also access/search any information put up by Students.

1.2. ORGANIZATION PROFILE

SOFTWARE SOLUTIONS

Software Solutions is an IT solution provider for a dynamic environment where business and technology strategies converge. Their approach focuses on new ways of business combining IT innovation and adoption while also leveraging an organization's current IT assets. Their work with large global corporations and new products or services and to implement prudent business and technology strategies in today's environment.

RANGE OF EXPERTISE INCLUDES:

- Software Development Services
- Engineering Services
- Systems Integration
- Customer Relationship Management
- Product Development
- Electronic Commerce
- Consulting
- IT Outsourcing

We apply technology with innovation and responsibility to achieve two broad objectives:

- Effectively address the business issues our customers face today.

THIS APPROACH RESTS ON:

A strategy where we architect, integrate and manage technology services and solutions - we call it AIM for success. A robust off shore development methodology and reduced demand on customer resources. A focus on the use of reusable frameworks to provide cost and times benefits. They combine the best people, processes and technology to achieve excellent results - consistency. We offer customers the advantages of:

SPEED:

They understand the importance of timing, of getting there before the competition. A rich portfolio of reusable, modular frameworks helps jump-start projects. Tried and tested methodology ensures that we follow a predictable, low - risk path to achieve results. Our track record is testimony to complex projects delivered within and evens before schedule.

EXPERTISE:

Our teams combine cutting edge technology skills with rich domain expertise. What's equally important - they share a strong customer orientation that means they actually start by listening to the customer. They're focused on coming up with solutions that serve customer requirements today and anticipate future needs.

A FULL SERVICE PORTFOLIO:

They offer customers the advantage of being able to Architect, integrate and manage technology services. This means that they can rely on one, fully accountable source instead of trying to integrate disparate multi vendor solutions.

SERVICES:

It is providing it's services to companies which are in the field of production, quality control etc With their rich expertise and experience and information technology they are in best position to provide software solutions to distinct business requirements.

1.3. PURPOSE OF THE PROJECT

This project is aimed at developing an online search Portal for the Placement Dept. of the college. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an Online Job Portal for the Placement Dept of the college to manage the student information with regards to placement. Students logging should be able to upload their information in the form of a CV. Visitors/Company representatives logging in may also access/search any information put up by Students.

1.4. PROBLEM IN EXISTING SYSTEM

- Cannot Upload and Download the latest updates.
- No use of Web Services and Remoting.
- Risk of mismanagement and of data when the project is under development.
- Less Security.
- No proper coordination between different Applications and Users.
- Fewer Users - Friendly.

1.5. SOLUTION OF THESE PROBLEMS

The development of the new system contains the following activities, which try to automate the entire process keeping in view of the database integration approach.

1. User friendliness is provided in the application with various controls.
2. The system makes the overall project management much easier and flexible.
3. Readily upload the latest updates, allows user to download the alerts by clicking the URL.
4. There is no risk of data mismanagement at any level while the project development is under process.
5. It provides high level of security with different level of authentication.

2. SYSTEM ANALYSIS

After analyzing the requirements of the task to be performed, the next step is to analyze the problem and understand its context. The first activity in the phase is studying the existing system and other is to understand the requirements and domain of the new system. Both the activities are equally important, but the first activity serves as a basis of giving the functional specifications and then successful design of the proposed system. Understanding the properties and requirements of a new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system can lead diversion from solution.

2.1. ANALYSIS MODEL

The model that is basically being followed is the WATER FALL MODEL, which states that the phases are organized in a linear order. First of all the feasibility study is done. Once that part is over the requirement analysis and project planning begins. If system exists one and modification and addition of new module is needed, analysis of present system can be used as basic model.

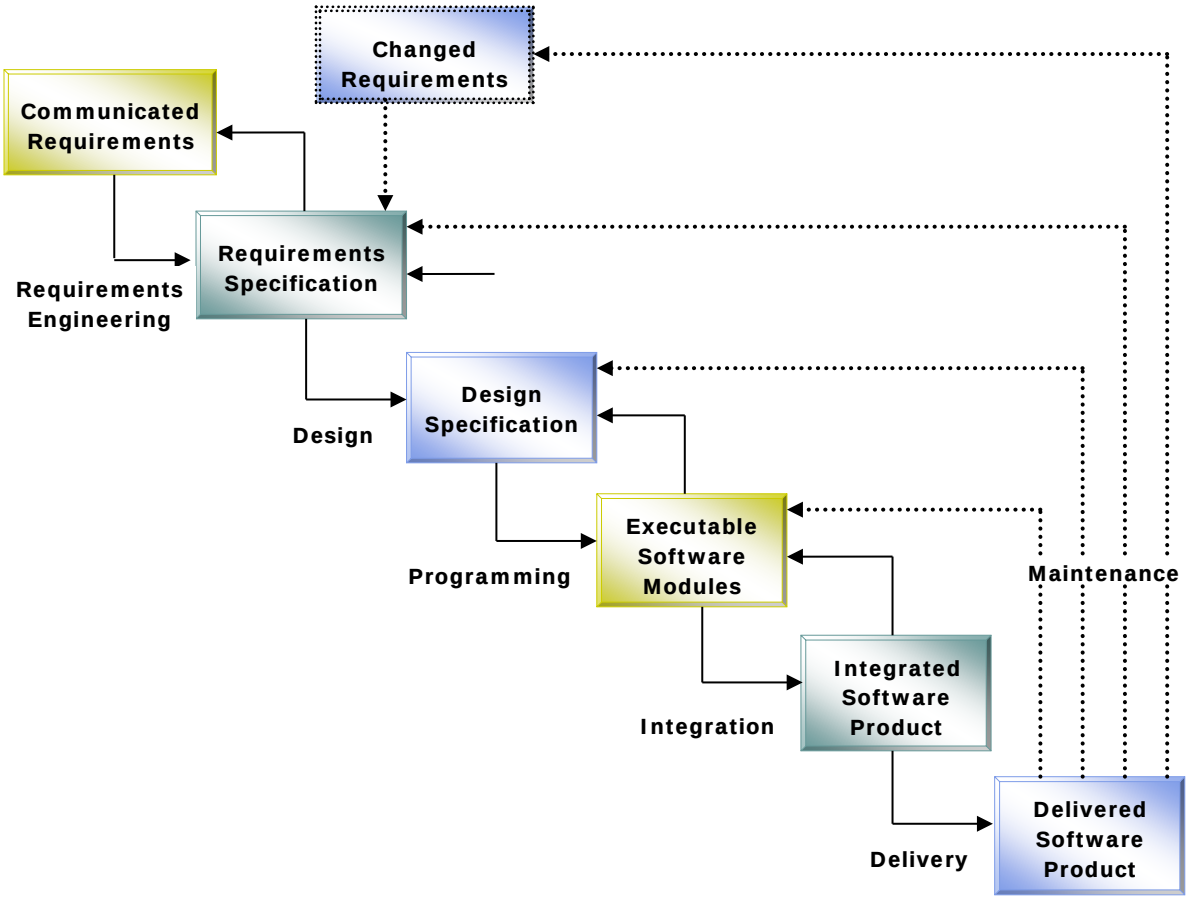
The design starts after the requirement analysis is complete and the coding begins after the design is complete. Once the programming is completed, the testing is done. In this model the sequence of activities performed in a software development project are: -

- Requirement Analysis
- Project Planning
- System design
- Detail design
- Coding
- Unit testing
- System integration & testing

Here the linear ordering of these activities is critical. End of the phase and the output of one phase is the input of other phase. The output of each phase is to be consistent with the overall requirement of the system. Some of the qualities of spiral model are also

incorporated like after the people concerned with the project review completion of each of the phase the work done.

WATER FALL MODEL was being chosen because all requirements were known beforehand and the objective of our software development is the computerization/automation of an already existing manual working system.



2.3. STUDY OF THE SYSTEM

In the flexibility of the uses the interface has been developed a graphics concept in mind, associated through a browser interface. The GUI'S at the top level have been categorized as

1. Administrative user interface
2. The operational or generic user interface

The administrative user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Date updating along with the extensive data search capabilities.

The operational or generic user interface helps the users upon the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information helps the ordinary users in managing their own information in a customized manner as per the assisted flexibilities.

The system after careful analysis has been identified to be presented with the following modules:

The modules involved are:

- Admin
- Job Seeker
- Job Provider
- Notification
- Search
- Report
- Authentication

Admin

In this module Admin will add all the qualifications, skill, experience, city, state, country and update and delete information about the job provider or job seeker he can also search for the job seeker and he can send mail to offer the job to job seeker and he can also see the jobs add by the job provider.

Job Seeker

In this module Job Seeker register himself and upload his resume and fill the profile give by admin and after login he will search for the job on various conditions and he can change his profiles and resume and he can apply for the jobs based on various conditions. He can see the response of the company and he can call the company person for the interview.

Job provider

In this module Job Provider register himself and his company and after login he will add new job and he can search for the job seekers on various conditions and he can offer the job to job seeker according to the job profile and he can also see the response from the job seekers and send the mail.

Notification

In this module admin and job provider send the notification to the job seeker in the form of email.

Reports:-

This module contains all the information about the reports generated by the admin based on the particular job seeker, particular job provider, all job seeker and job provider, all jobs generated by the job providers.

Authentication:-

This module contains all the information about the authenticated user. User without his username and password can't enter into the login if he is only the authenticated user then he can enter to his login.

PROJECT INSTRUCTIONS:

- Based on the given requirements, conceptualize the Solution Architecture. Choose the domain of your interest otherwise develop the application for ultimatedotnet.com. Depict the various architectural components, show interactions and connectedness and

show internal and external elements. Design the web services, web methods and database infrastructure needed both and client and server.

- Provide an environment for up gradation of application for newer versions that are available in the same domain as web service target.

2.4. HARDWARE SPEDIFICATIONS

HARDWARE REQUIREMENTS:

- I5 Processor
- RAM 4GB
- HDD 500 GB Hard Disk Space

SOFTWARE REQUIREMENTS:

- WINDOWS 8.1
- Visual Studio 2012 professional
- SQL Server management studio 2012

2.5. PROPOSED SYSTEM

To debug the existing system, remove procedures those cause data redundancy, make navigational sequence proper. To provide information about audits on different level and also to reflect the current work status depending on organization/auditor or date. To build strong password mechanism.

NEED FOR COMPUTERIZATION

We all know the importance of computerization. The world is moving ahead at lightning speed and everyone is running short of time. One always wants to get the information and

perform a task he/she/they desire(s) within a short period of time and too with amount of efficiency and accuracy. The application areas for the computerization have been selected on the basis of following factors:

- Minimizing the manual records kept at different locations.
- There will be more data integrity.
- Facilitating desired information display, very quickly, by retrieving information from users.
- Facilitating various statistical information which helps in decision-making?
- To reduce manual efforts in activities that involved repetitive work.
- Updating and deletion of such a huge amount of data will become easier.

FUNCTIONAL FEATURES OF THE MODEL

As far as the project is developed the functionality is simple, the objective of the proposal is to strengthen the functioning of Audit Status Monitoring and make them effective and better. The entire scope has been classified into five streams knows as Coordinator Level, management Level, Auditor Level, User Level and State Web Coordinator Level. The proposed software will cover the information needs with respect to each request of the user group viz. accepting the request, providing vulnerability document report and the current status of the audit.

2.6. INPUT AND OUTPUT

The main inputs, outputs and major functions of the system are as follows

INPUTS:

- Head operator enters his or her user id and password.
- Operators enter his or her user id and password.
- Technicians enter his or her user id and password.

- Sub technicians enter his or her user id and password.
- User requests the reports.
- User requests the search.
- Head operator can edits the personal details and so on.

OUTPUTS:

- Head operator receives personal details.
- Operator receives the personal details.
- Technicians receive personal and technical details.
- Users receive requested reports.
- Displays search result.

2.7. PROCESS MODELS USED WITH JUSTIFICATION

ACCESS CONTROL FOR DATA WHICH REQUIRE USER AUTHENTICATION

The following commands specify access control identifiers and they are typically used to authorize and authenticate the user (command codes are shown in parentheses)

USER NAME (USER)

The user identification is that which is required by the server for access to its file system. This command will normally be the first command transmitted by the user after the control connections are made (some servers may require this).

PASSWORD (PASS)

This command must be immediately preceded by the user name command, and, for some sites, completes the user's identification for access control. Since password information is quite sensitive, it is desirable in general to "mask" it or suppress type out.

3. Feasibility Report

Preliminary investigation examine project feasibility, the likelihood the system will

be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

- Technical Feasibility
- Operation Feasibility
- Economical Feasibility

3.1. Technical Feasibility

The technical issue usually raised during the feasibility stage of the investigation includes the following:

- Does the necessary technology exist to do what is suggested?
- Do the proposed equipments have the technical capacity to hold the data required to use the new system?
- Will the proposed system provide adequate response to inquiries, regardless of the number or location of users?
- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Earlier no system existed to cater to the needs of 'Secure Infrastructure Implementation System'. The current system developed is technically feasible. It is a web based user interface for audit workflow at NIC-CSD. Thus it provides an easy access to the users. The database's purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security. The software and hard requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

3.2. Operational Feasibility

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility of a project includes the following: -

- Is there sufficient support for the management from the users?
- Will the system be used and work properly if it is being developed and implemented?
- Will there be any resistance from the user that will undermine the possible application benefits?

This system is targeted to be in accordance with the above-mentioned issues. Beforehand, the management issues and user requirements have been taken into consideration. So there is no question of resistance from the users that can undermine the possible application benefits.

The well-planned design would ensure the optimal utilization of the computer resources and would help in the improvement of performance status.

3.3. Economic Feasibility

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economical feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs.

The system is economically feasible. It does not require any addition hardware or software. Since the interface for this system is developed using the existing resources and technologies available at NIC, There is nominal expenditure and economical feasibility for certain.

4. SOFTWARE REQUIREMENT SPECIFICATION

The software, Site Explorer is designed for management of web sites from a remote location.

Purpose: The main purpose for preparing this document is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

Scope: This Document plays a vital role in the development life cycle (SDLC) and it describes the complete requirement of the system. It is meant for use by the developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

DEVELOPERS RESPONSIBILITIES OVERVIEW:

The developer is responsible for:

- Developing the system, which meets the SRS and solving all the requirements of the system?
- Demonstrating the system and installing the system at client's location after the acceptance testing is successful.
- Submitting the required user manual describing the system interfaces to work on it and also the documents of the system.
- Conducting any user training that might be needed for using the system.
- Maintaining the system for a period of one year after installation.

4.1. FUNCTIONAL REQUIREMENTS:

OUTPUT DESIGN

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of the results for later consultation. The various types of outputs in general are:

- External Outputs, whose destination is outside the organization,
- Internal Outputs whose destination is within organization and they are the
- User's main interface with the computer.
- Operational outputs whose use is purely within the computer department.
- Interface outputs, which involve the user in communicating directly with

OUTPUT DEFINITION

The outputs should be defined in terms of the following points

- Type of the output
- Content of the output
- Format of the output
- Location of the output
- Frequency of the output
- Volume of the output
- Sequence of the output

It is not always desirable to print or display data as it is held on a computer. It should be decided as which form of the output is the most suitable.

For Example

- Will decimal points need to be inserted
- Should leading zeros be suppressed.

Output Media:

In the next stage it is to be decided that which medium is the most appropriate for the output. The main considerations when deciding about the output media are:

- The suitability for the device to the particular application.
- The need for a hard copy.
- The response time required.
- The location of the users
- The software and hardware available.

Keeping in view the above description the project is to have outputs mainly coming under the category of internal outputs. The main outputs desired according to the requirement specification are:

The outputs were needed to be generated as a hot copy and as well as queries to be viewed on the screen. Keeping in view these outputs, the format for the output is taken from the outputs, which are currently being obtained after manual processing. The standard printer is to be used as output media for hard copies.

INPUT DESIGN

Input design is a part of overall system design. The main objective during the input design is as given below:

- To produce a cost-effective method of input.
- To achieve the highest possible level of accuracy.
- To ensure that the input is acceptable and understood by the user.

INPUT STAGES:

The main input stages can be listed as below:

- Data transcription
- Data conversion
- Data verification
- Data control
- Data transmission
- Data validation

- Data correction

INPUT TYPES:

It is necessary to determine the various types of inputs. Inputs can be categorized as follows:

- External inputs, which are prime inputs for the system.
- Internal inputs, which are user communications with the system.
- Operational, which are computer department's communications to the system?
- Interactive, which are inputs entered during a dialogue.

INPUT MEDIA:

At this stage choice has to be made about the input media. To conclude about the input media consideration has to be given to;

- Type of input
- Flexibility of format
- Speed
- Accuracy
- Verification methods
- Rejection rates
- Ease of correction
- Storage and handling requirements
- Security
- Easy to use
- Portability

Keeping in view the above description of the input types and input media, it can be said that most of the inputs are of the form of internal and interactive. As

Input data is to be the directly keyed in by the user, the keyboard can be considered to be the most suitable input device.

ERROR AVOIDANCE

At this stage care is to be taken to ensure that input data remains accurate form the stage at which it is recorded up to the stage in which the data is accepted by the system. This can be achieved only by means of careful control each time the data is handled.

ERROR DETECTION

Even though every effort is make to avoid the occurrence of errors, still a small proportion of errors is always likely to occur, these types of errors can be discovered by using validations to check the input data.

DATA VALIDATION

Procedures are designed to detect errors in data at a lower level of detail. Data validations have been included in the system in almost every area where there is a possibility for the user to commit errors. The system will not accept invalid data. Whenever an invalid data is keyed in, the system immediately prompts the user and the user has to again key in the data and the system will accept the data only if the data is correct. Validations have been included where necessary.

The system is designed to be a user friendly one. In other words the system has been designed to communicate effectively with the user. The system has been designed with popup menus.

USER INTERFACE DESIGN

It is essential to consult the system users and discuss their needs while designing the user interface:

USER INTERFACE SYSTEMS CAN BE BROADLY CLASIFIED AS:

1. User initiated interface the user is in charge, controlling the progress of the user/computer dialogue. In the computer-initiated interface, the computer selects the next stage in the interaction.
2. Computer initiated interfaces

In the computer initiated interfaces the computer guides the progress of the user/computer dialogue. Information is displayed and the user response of the computer takes action or displays further information.

USER_INITIATED INTERGFACES

User initiated interfaces fall into tow approximate classes:

1. Command driven interfaces: In this type of interface the user inputs commands or queries which are interpreted by the computer.
2. Forms oriented interface: The user calls up an image of the form to his/her screen and fills in the form. The forms oriented interface is chosen because it is the best choice.

COMPUTER-INITIATED INTERFACES

The following computer – initiated interfaces were used:

1. The menu system for the user is presented with a list of alternatives and the user chooses one; of alternatives.
2. Questions – answer type dialog system where the computer asks question and takes action based on the basis of the users reply.

Right from the start the system is going to be menu driven, the opening menu displays the available options. Choosing one option gives another popup menu with more options. In this way every option leads the users to data entry form where the user can key in the data.

ERROR MESSAGE DESIGN:

The design of error messages is an important part of the user interface design. As user is bound to commit some errors or other while designing a system the system should be designed to be helpful by providing the user with information regarding the error he/she has committed. This application must be able to produce output at different modules for different inputs.

4.2. PERFORMANCE REQUIREMENTS

Performance is measured in terms of the output provided by the application. Requirement specification plays an important part in the analysis of a system. Only when the requirement specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely in the part of the users of the existing system to give the requirement specifications because they are the people who finally use the system. This is because the requirements have to be known during the initial stages so that the system can be designed according to those requirements. It is very difficult to change the system once it has been designed and on the other hand designing a system, which does not cater to the requirements of the user, is of no use.

5. SELECTED SOFTWARE

5.1. INTRODUCTION TO .NET Framework

The .NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet. The .NET Framework is designed to fulfill the following objectives:

- To provide a consistent object-oriented programming environment whether object code is stored and executed locally, executed locally but Internet-distributed, or executed remotely.
- To provide a code-execution environment that minimizes software deployment and versioning conflicts.
- To provide a code-execution environment that guarantees safe execution of code, including code created by an unknown or semi-trusted third party.

- To provide a code-execution environment that eliminates the performance problems of scripted or interpreted environments.
- To make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications.
- To build all communication on industry standards to ensure that code based on the .NET Framework can integrate with any other code.

The .NET Framework has two main components: the common language runtime and the .NET Framework class library. The common language runtime is the foundation of the .NET Framework. You can think of the runtime as an agent that manages code at execution time, providing core services such as memory management, thread management, and Remoting, while also enforcing strict type safety and other forms of code accuracy that ensure security and robustness. In fact, the concept of code management is a fundamental principle of the runtime. Code that targets the runtime is known as managed code, while code that does not target the runtime is known as unmanaged code. The class library, the other main component of the .NET Framework, is a comprehensive, object-oriented collection of reusable types that you can use to develop applications ranging from traditional command-line or graphical user interface (GUI) applications to applications based on the latest innovations provided by ASP.NET, such as Web Forms and XML Web services.

5.2 SQL SERVER

A database management, or DBMS, gives the user access to their data and helps them transform the data into information. Such database management systems include dBase, paradox, IMS, SQL Server and SQL Server. These systems allow users to create, update and extract information from their database.

A database is a structured collection of data. Data refers to the characteristics of people, things and events. SQL Server stores each data item in its own fields. In SQL Server, the fields relating to a particular person, thing or event are bundled together to form a single complete unit of data, called a record (it can also be referred to as raw or an

occurrence). Each record is made up of a number of fields. No two fields in a record can have the same field name.

During an SQL Server Database design project, the analysis of your business needs identifies all the fields or attributes of interest. If your business needs change over time, you define any additional fields or change the definition of existing fields.

SQL SERVER TABLES

SQL Server stores records relating to each other in a table. Different tables are created for the various groups of information. Related tables are grouped together to form a database.

PRIMARY KEY

Every table in SQL Server has a field or a combination of fields that uniquely identifies each record in the table. The Unique identifier is called the Primary Key, or simply the Key. The primary key provides the means to distinguish one record from all other in a table. It allows the user and the database system to identify, locate and refer to one particular record in the database.

RELATIONAL DATABASE

Sometimes all the information of interest to a business operation can be stored in one table. SQL Server makes it very easy to link the data in multiple tables. Matching an employee to the department in which they work is one example. This is what makes SQL Server a relational database management system, or RDBMS. It stores data in two or more tables and enables you to define relationships between the table and enables you to define relationships between the tables.

FOREIGN KEY

When a field is one table matches the primary key of another field is referred to as a foreign key. A foreign key is a field or a group of fields in one table whose values match those of the primary key of another table.

REFERENTIAL INTEGRITY

Not only does SQL Server allow you to link multiple tables, it also maintains consistency between them. Ensuring that the data among related tables is correctly matched is referred to as maintaining referential integrity.

DATA ABSTRACTION

A major purpose of a database system is to provide users with an abstract view of the data. This system hides certain details of how the data is stored and maintained. Data abstraction is divided into three levels.

Physical level: This is the lowest level of abstraction at which one describes how the data are actually stored.

Conceptual Level: At this level of database abstraction all the attributed and what data are actually stored is described and entries and relationship among them.

View level: This is the highest level of abstraction at which one describes only part of the database.

6. SYSTEM DESIGN

Software design sits at the technical kernel of the software engineering process and is applied regardless of the development paradigm and area of application. Design is the first step in the development phase for any engineered product or system. The designer's goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement have been specified and analyzed, system design is the first of the three technical activities -design, code and test that is required to build and verify software.

The importance can be stated with a single word "Quality". Design is the place where quality is fostered in software development. Design provides us with representations of software that can assess for quality. Design is the only way that we can accurately translate a customer's view into a finished software product or system. Software design serves as a foundation for all the software engineering steps that follow. Without a

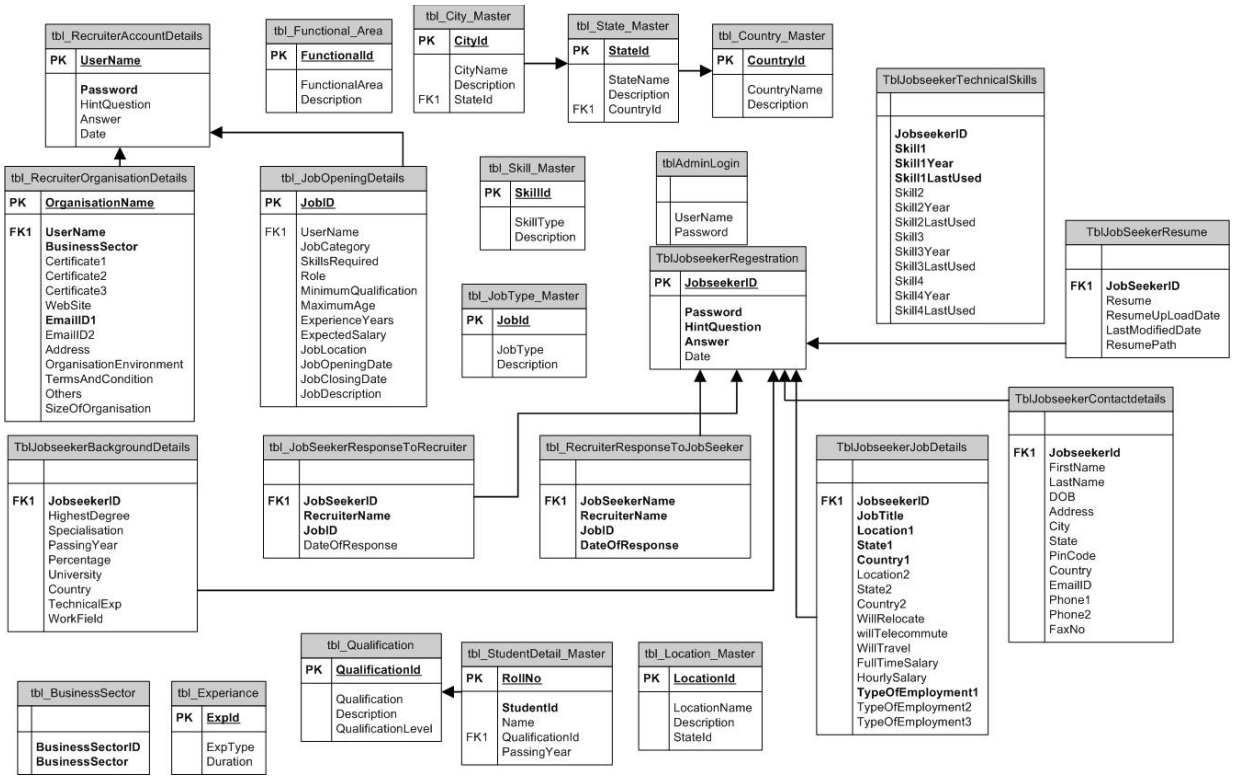
strong design we risk building an unstable system – one that will be difficult to test, one whose quality cannot be assessed until the last stage.

During design, progressive refinement of data structure, program structure, and procedural details are developed reviewed and documented. System design can be viewed from either technical or project management perspective. From the technical point of view, design is comprised of four activities – architectural design, data structure design, interface design and procedural design.

6.1. E – R DIAGRAMS

- The relation upon the system is structure through a conceptual ER-Diagram, which not only specifics the existential entities but also the standard relations through which the system exists and the cardinalities that are necessary for the system state to continue.
- The entity Relationship Diagram (ERD) depicts the relationship between the data objects. The ERD is the notation that is used to conduct the date modeling activity the attributes of each data object noted is the ERD can be described resign a data object descriptions.
- The set of primary components that are identified by the ERD are
    - ◆ Data object
    - ◆ Relationships
    - ◆ Attributes
    - ◆ Various types of indicators.

The primary purpose of the ERD is to represent data objects and their relationships.



6.2. DATA DICTONARY

After carefully understanding the requirements of the client the entire data storage requirements are divided into tables. The below tables are normalized to avoid any anomalies during the course of data entry.

Placement Manager

Business Sector

Column Name	Data Type	Length	Allow Nulls
BusinessSectorID	int	4	
BusinessSector	varchar	50	

City Details

Column Name	Data Type	Length	Allow Nulls
CityId	int	4	
CityName	varchar	50	✓
Description	varchar	80	✓
StateId	int	4	✓

Country Details

Column Name	Data Type	Length	Allow Nulls
CountryId	int	4	
CountryName	varchar	50	✓
Description	varchar	80	✓

Experience Detail

Column Name	Data Type	Length	Allow Nulls
ExpId	int	4	
ExpType	varchar	50	✓
Duration	char	10	✓

Functional Area

Column Name	Data Type	Length	Allow Nulls
FunctionalId	int	4	
FunctionalArea	varchar	50	✓
Description	varchar	50	✓

Job Openinng Detail

Column Name	Data Type	Length	Allow Nulls
UserName	nvarchar	50	✓
JobID	nvarchar	50	
JobCategory	nvarchar	50	✓
SkillsRequired	nvarchar	100	✓
Role	nvarchar	15	✓
MinimumQualification	nvarchar	50	✓
MaximumAge	tinyint	1	✓
ExperienceYears	tinyint	1	✓
ExpectedSalary	money	8	✓
JobLocation	nvarchar	50	✓
JobOpeningDate	datetime	8	✓
JobClosingDate	datetime	8	✓
JobDescription	nvarchar	2000	✓

Jobseeker Response to Recruiter

Column Name	Data Type	Length	Allow Nulls
JobSeekerID	varchar	50	
RecruiterName	varchar	50	
JobID	varchar	50	
DateOfResponse	datetime	8	✓

Job Type Detail

Column Name	Data Type	Length	Allow Nulls
JobId	int	4	
JobType	varchar	50	✓
Description	varchar	80	✓

Location Master

Column Name	Data Type	Length	Allow Nulls
LocationId	int	4	
LocationName	varchar	50	✓
Description	varchar	80	✓
StateId	int	4	✓

Qualification

Column Name	Data Type	Length	Allow Nulls
QualificationId	int	4	
Qualification	varchar	50	✓
Description	varchar	50	✓
QualificationLevel	int	4	✓

Recruiter Account Details

Column Name	Data Type	Length	Allow Nulls
UserName	nvarchar	50	
Password	nvarchar	50	
HintQuestion	nvarchar	100	✓
Answer	nvarchar	100	✓
[Date]	datetime	8	✓

Recruiter Organization Details

Column Name	Data Type	Length	Allow Nulls
UserName	nvarchar	50	
OrganisationName	nvarchar	50	
BusinessSector	nvarchar	50	
Certificate1	nvarchar	50	✓
Certificate2	nvarchar	50	✓
Certificate3	nvarchar	50	✓
WebSite	nvarchar	100	✓
EmailID1	nvarchar	100	
EmailID2	nvarchar	100	✓
Address	nvarchar	1024	✓
OrganisationEnvironm	nvarchar	2000	✓
TermsAndCondition	nvarchar	2000	✓
Others	nvarchar	2000	✓
SizeOfOrganisation	int	4	✓

Recruiter Response to Jobseeker

Column Name	Data Type	Length	Allow Nulls
JobSeekerName	varchar	50	
RecruiterName	varchar	50	
JobID	varchar	50	
DateOfResponse	datetime	8	

Skill Master

Column Name	Data Type	Length	Allow Nulls
SkillId	int	4	
SkillType	varchar	50	✓
Description	varchar	50	✓

State detail

Column Name	Data Type	Length	Allow Nulls
StateId	int	4	
StateName	varchar	50	✓
Description	varchar	80	✓
CountryId	int	4	✓

Student Detail

Column Name	Data Type	Length	Allow Nulls
StudentId	int	4	
RollNo	varchar	50	
Name	varchar	50	✓
QualificationId	int	4	✓
PassingYear	varchar	50	✓

Admin Login

Column Name	Data Type	Length	Allow Nulls
UserName	varchar	50	✓
Password	varchar	50	✓

Jobseeker Background Details

Column Name	Data Type	Length	Allow Nulls
JobseekerID	varchar	50	
HighestDegree	varchar	50	✓
Specialisation	varchar	50	✓
PassingYear	int	4	✓
Percentage	float	8	✓
University	varchar	50	✓
Country	varchar	50	✓
TechnicalExp	varchar	50	✓
WorkField	varchar	25	✓

Contact Details

Column Name	Data Type	Length	Allow Nulls
JobseekerId	varchar	50	
FirstName	char	20	✓
LastName	char	20	✓
DOB	datetime	8	✓
Address	varchar	50	✓
City	varchar	50	✓
State	varchar	50	✓
PinCode	int	4	✓
Country	varchar	50	✓
EmailID	varchar	25	✓
Phone1	varchar	20	✓
Phone2	varchar	20	✓
FaxNo	varchar	20	✓

Jobseeker Job Details

Column Name	Data Type	Length	Allow Nulls
JobseekerID	varchar	50	
JobTitle	varchar	50	
Location1	varchar	50	
State1	varchar	50	
Country1	varchar	50	
Location2	varchar	50	✓
State2	varchar	50	✓
Country2	varchar	50	✓
WillRelocate	varchar	50	✓
willTelecommute	varchar	50	✓
WillTravel	varchar	50	✓
FullTimeSalary	varchar	50	✓
HourlySalary	varchar	50	✓
TypeOfEmployment1	varchar	80	
TypeOfEmployment2	varchar	80	✓
TypeOfEmployment3	varchar	80	✓

Jobseeker Registration

Column Name	Data Type	Length	Allow Nulls
JobseekerID	varchar	50	
Password	varchar	50	
HintQuestion	varchar	50	
Answer	varchar	50	
[Date]	datetime	8	✓

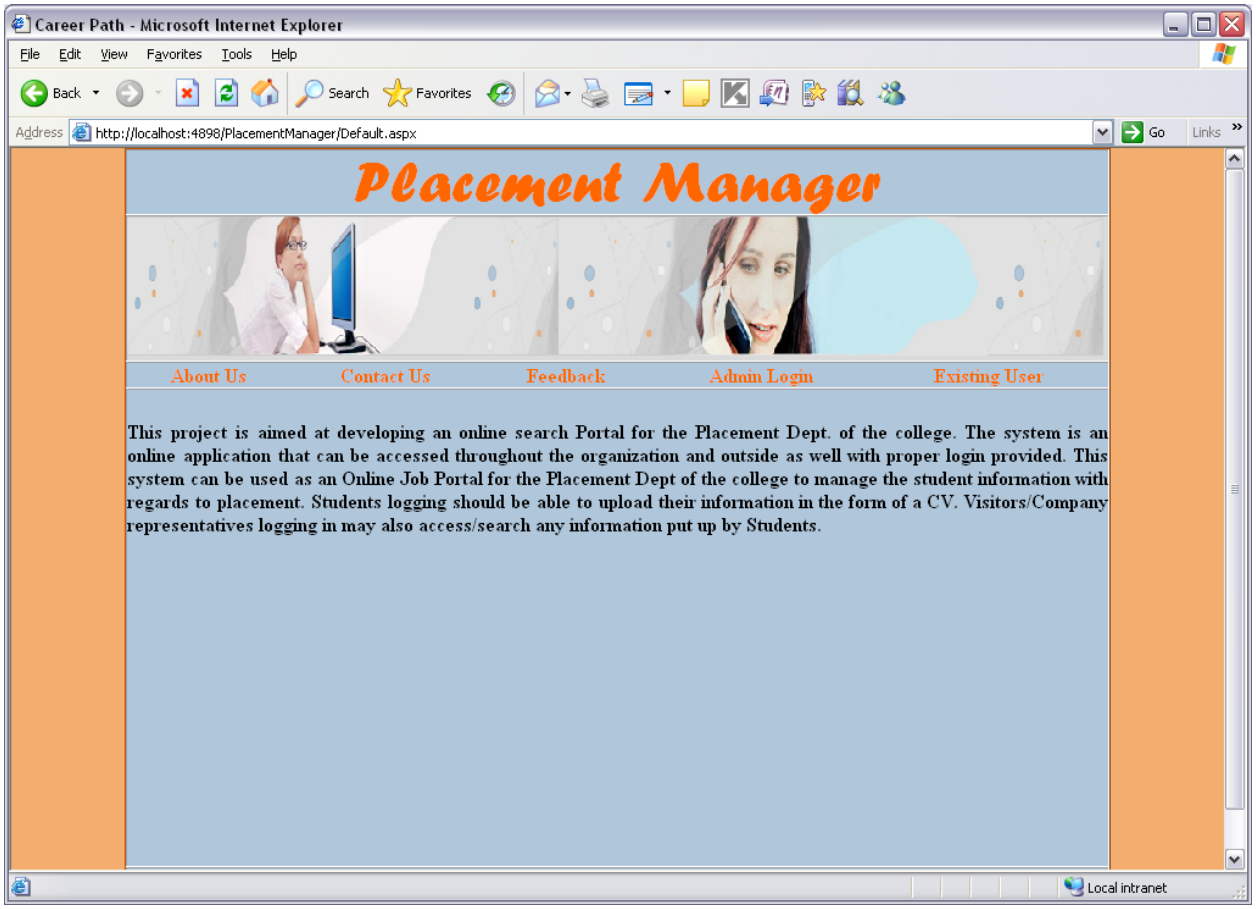
Jobseeker Resume

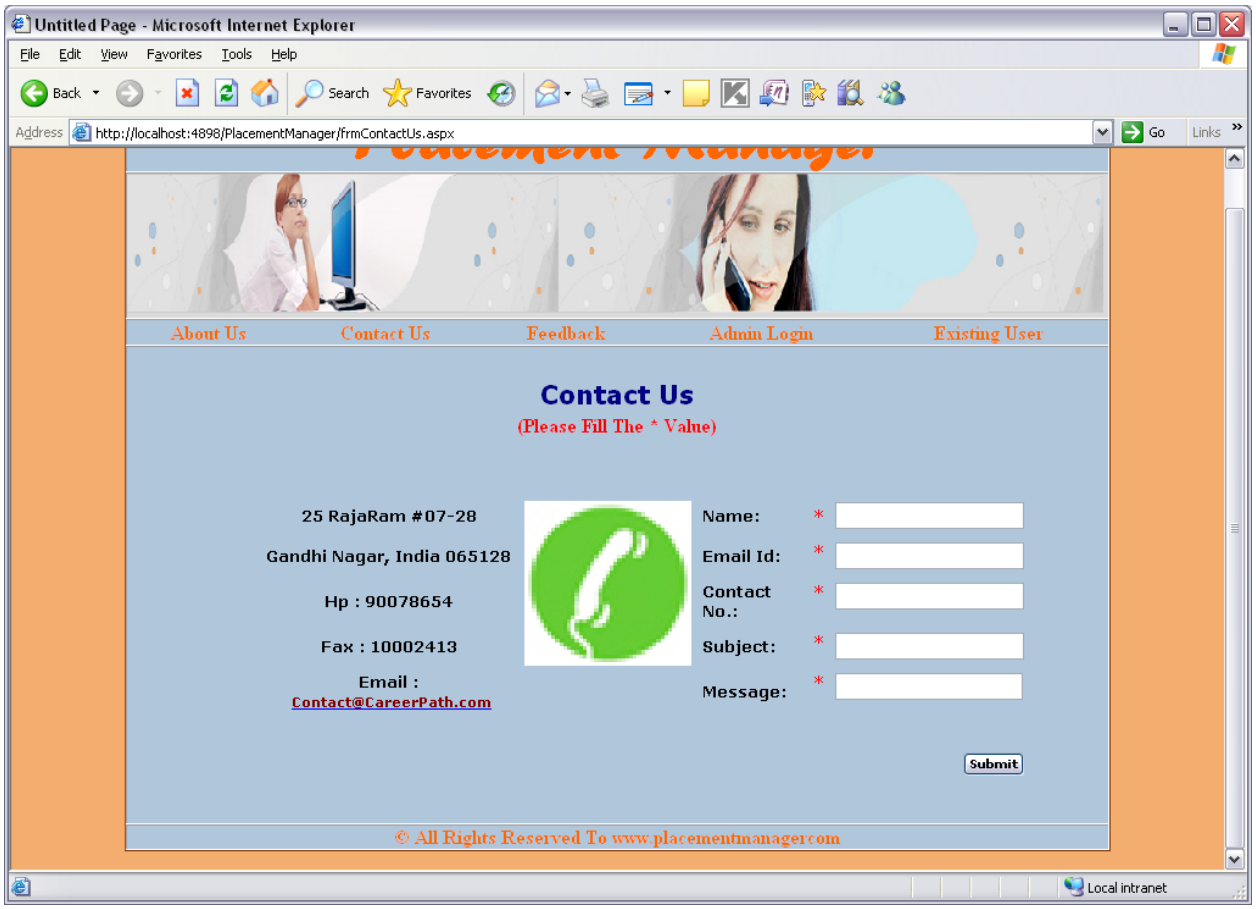
Column Name	Data Type	Length	Allow Nulls
JobSeekerID	varchar	50	
Resume	ntext	16	✓
ResumeUpLoadDate	datetime	8	✓
LastModifiedDate	datetime	8	✓
ResumePath	varchar	100	✓

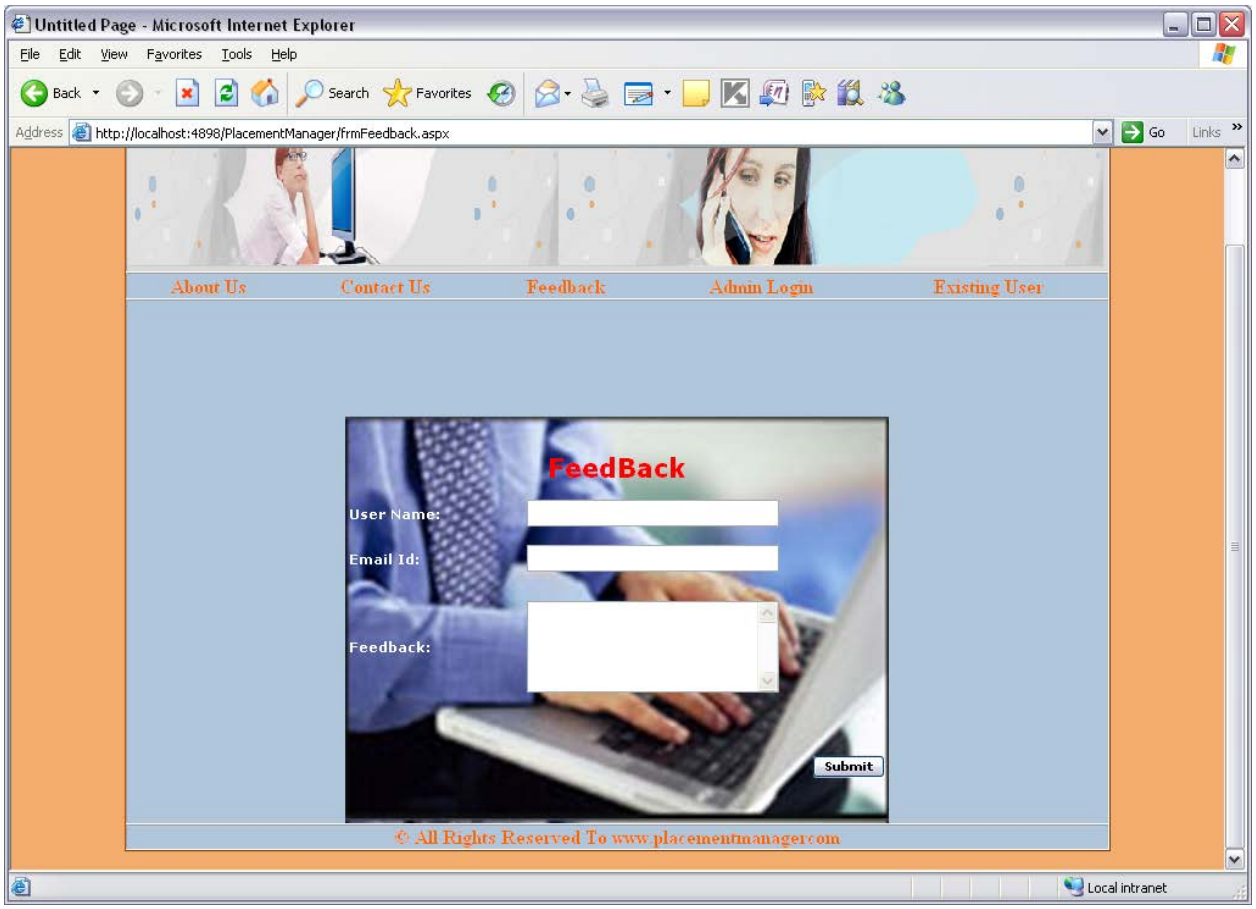
Jobseeker Technical Details

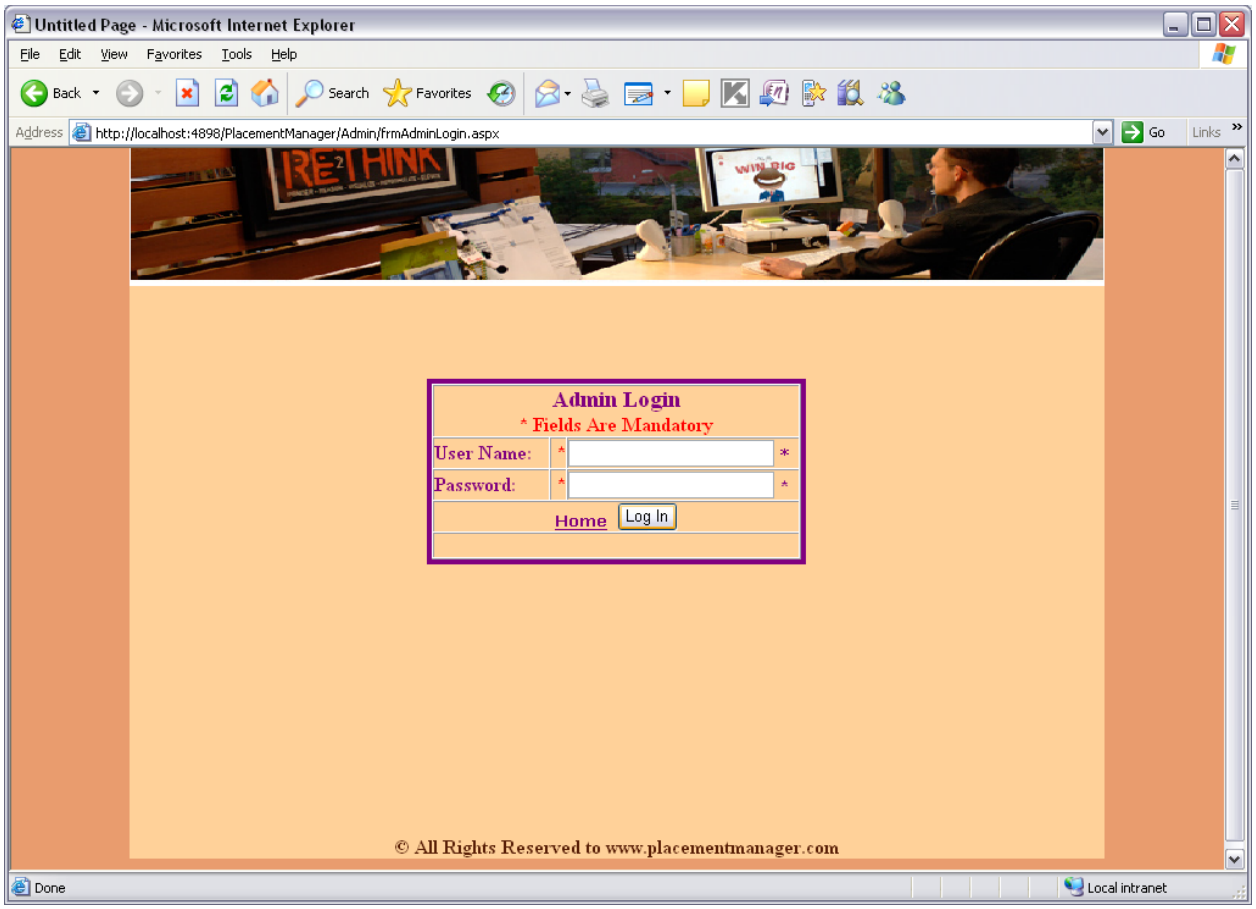
Column Name	Data Type	Length	Allow Nulls
JobseekerID	varchar	50	
Skill1	varchar	20	
Skill1Year	int	4	
Skill1LastUsed	int	4	
Skill2	varchar	20	✓
Skill2Year	int	4	✓
Skill2LastUsed	int	4	✓
Skill3	varchar	20	✓
Skill3Year	int	4	✓
Skill3LastUsed	int	4	✓
Skill4	varchar	20	✓
Skill4Year	int	4	✓
Skill4LastUsed	int	4	✓

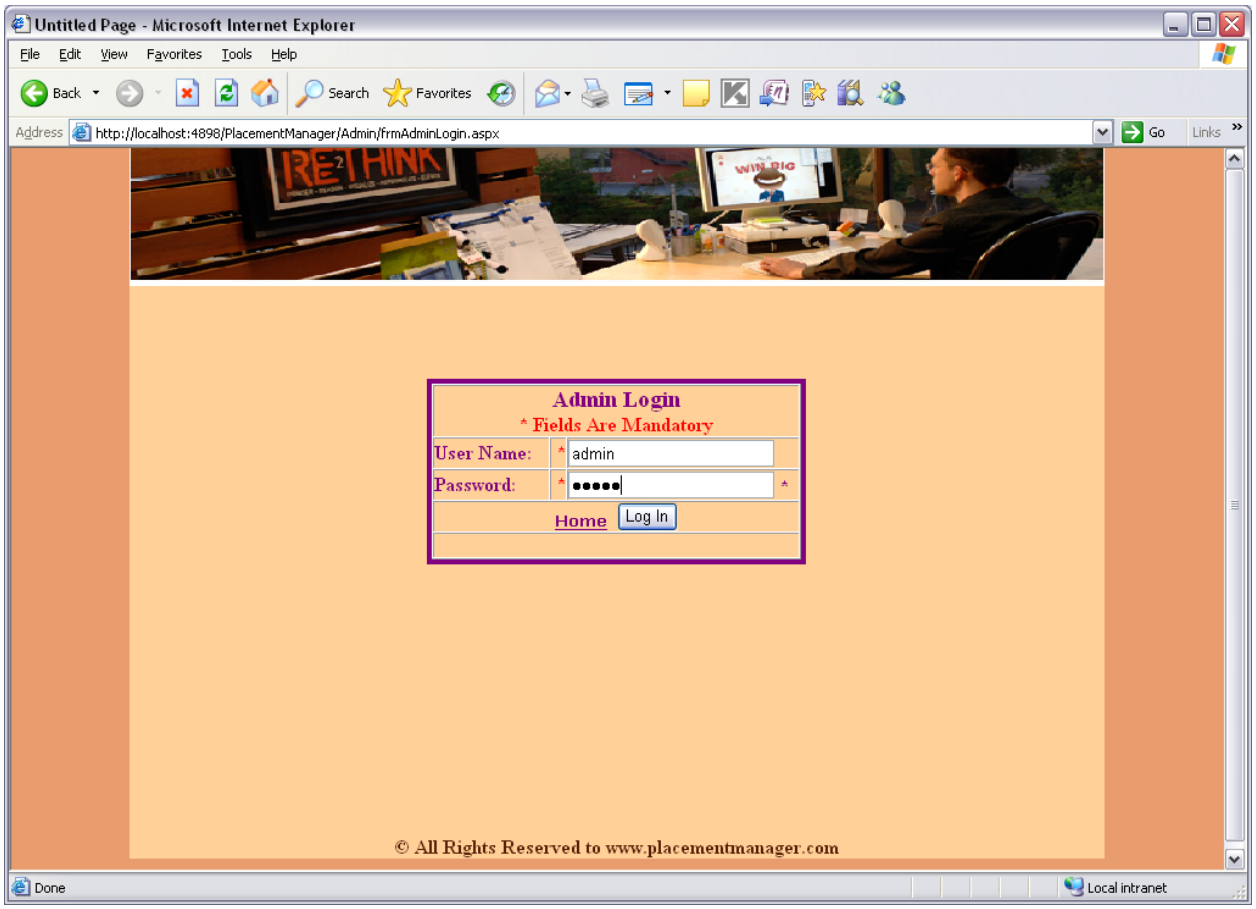
7. OUTPUT SCREENS

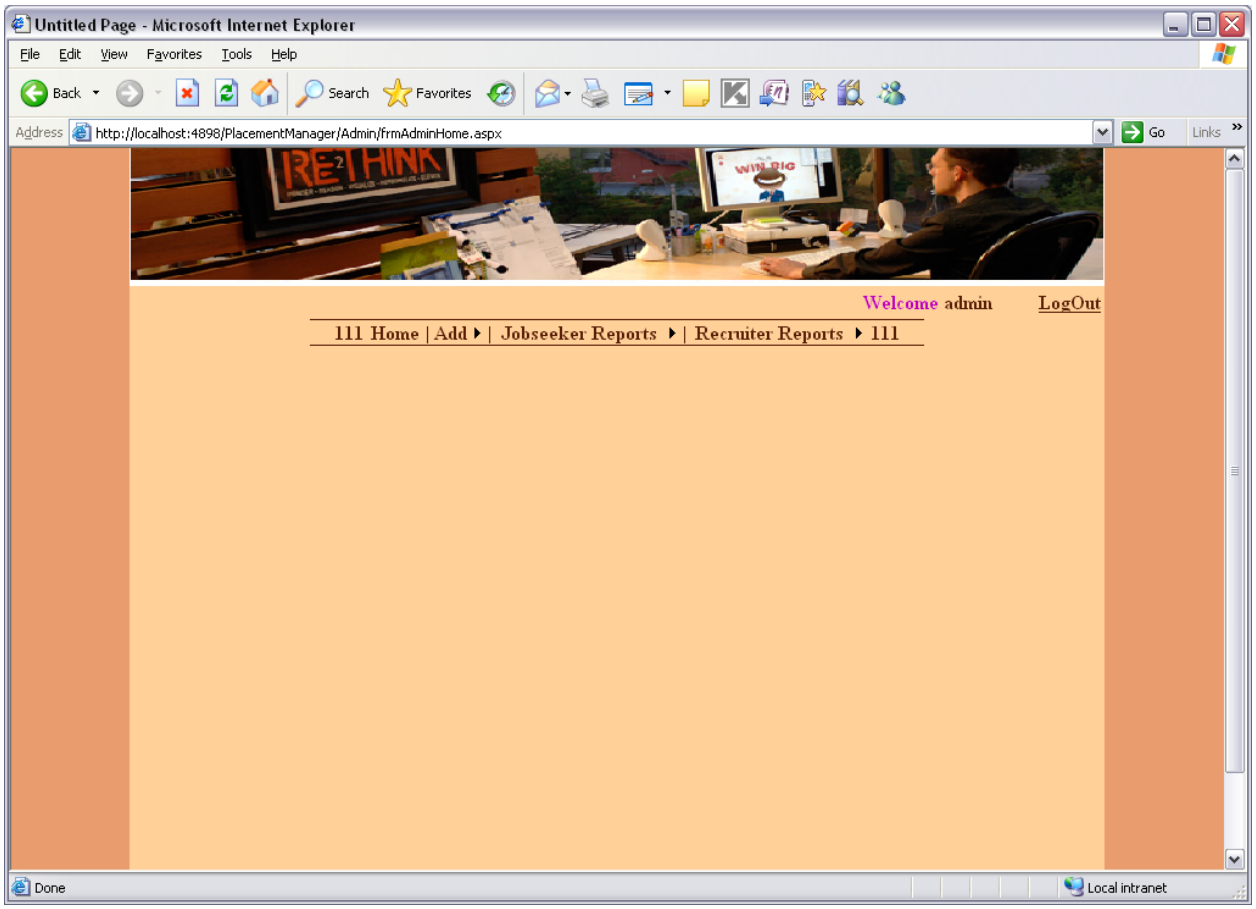


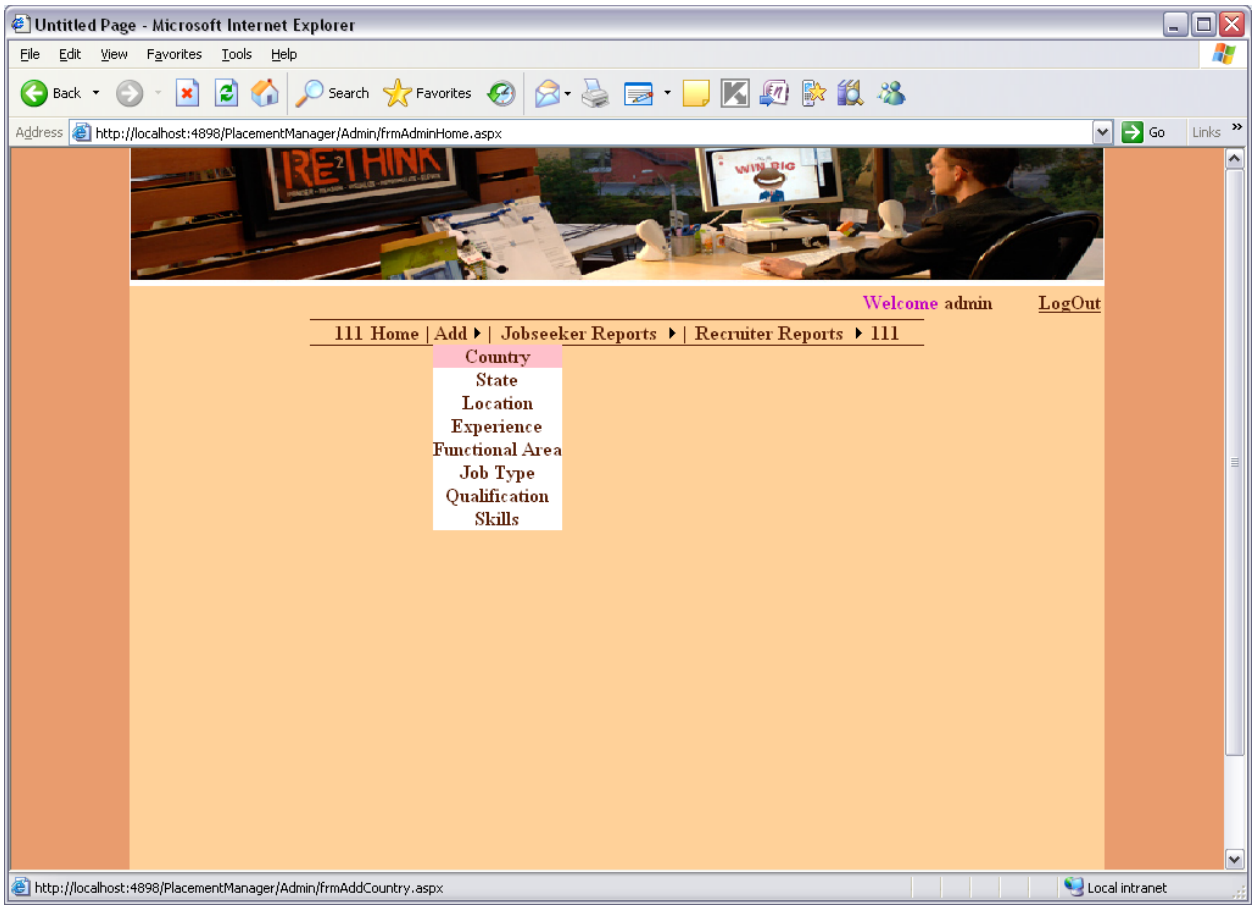

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/frmContactUs.aspx
Go Links
About Us
Contact Us
Feedback
Admin Login
Existing User
Contact Us
(Please Fill The * Value)
25 RajaRam #07-28
Gandhi Nagar, India 065128
Hp : 90078654
Fax : 10002413
Email :
Contact@CareerPath.com
Name: *
Email Id: *
Contact No.: *
Subject: *
Message: *
Submit
© All Rights Reserved To www.placementmanager.com
Local intranet

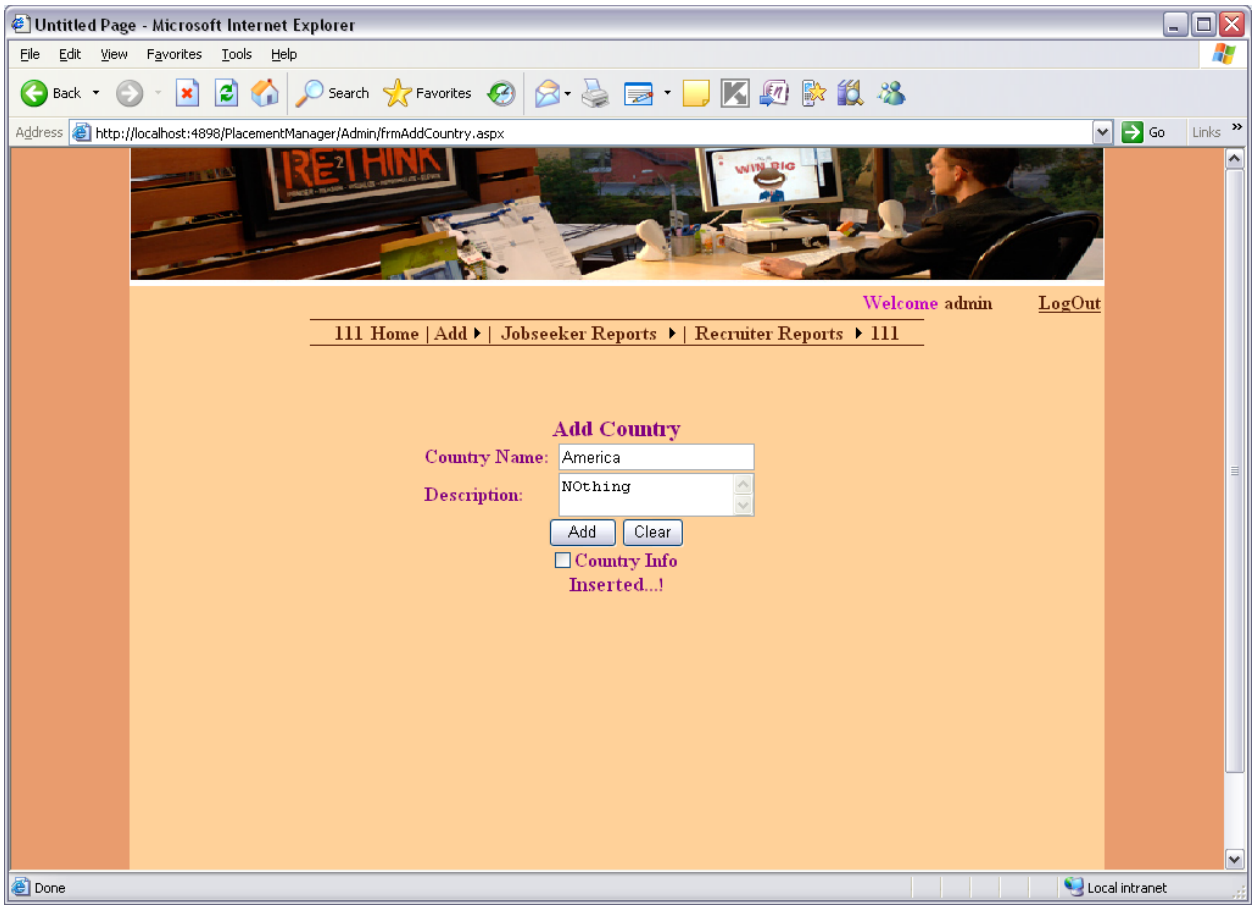

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/frmFeedback.aspx
Go Links
About Us
Contact Us
Feedback
Admin Login
Existing User
FeedBack
User Name:
Email Id:
Feedback:
Submit
© All Rights Reserved To www.placementmanager.com
Local intranet

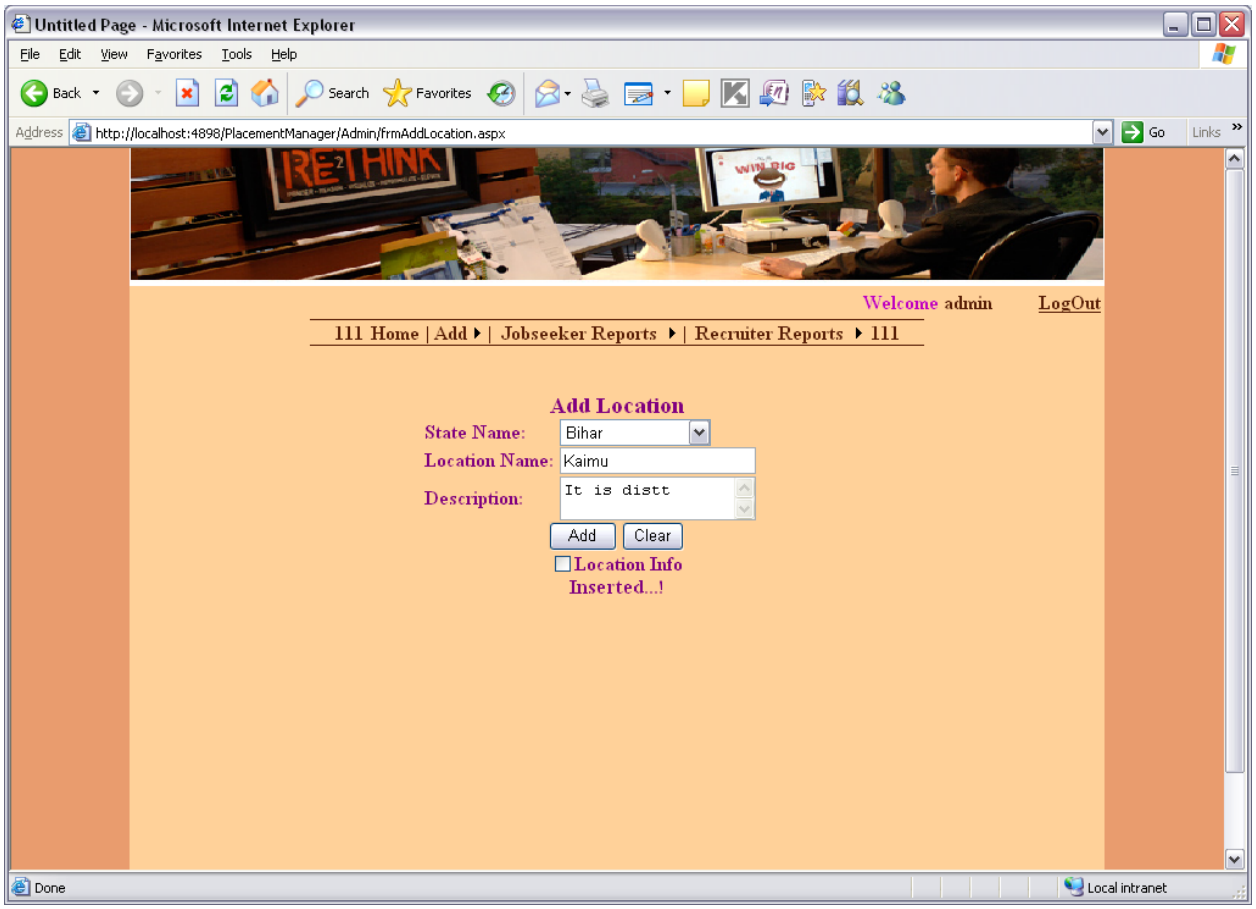

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAdminLogin.aspx
Go Links
Admin Login
* Fields Are Mandatory
User Name: *
Password: *
Home
Log In
© All Rights Reserved to www.placementmanager.com
Done
Local intranet

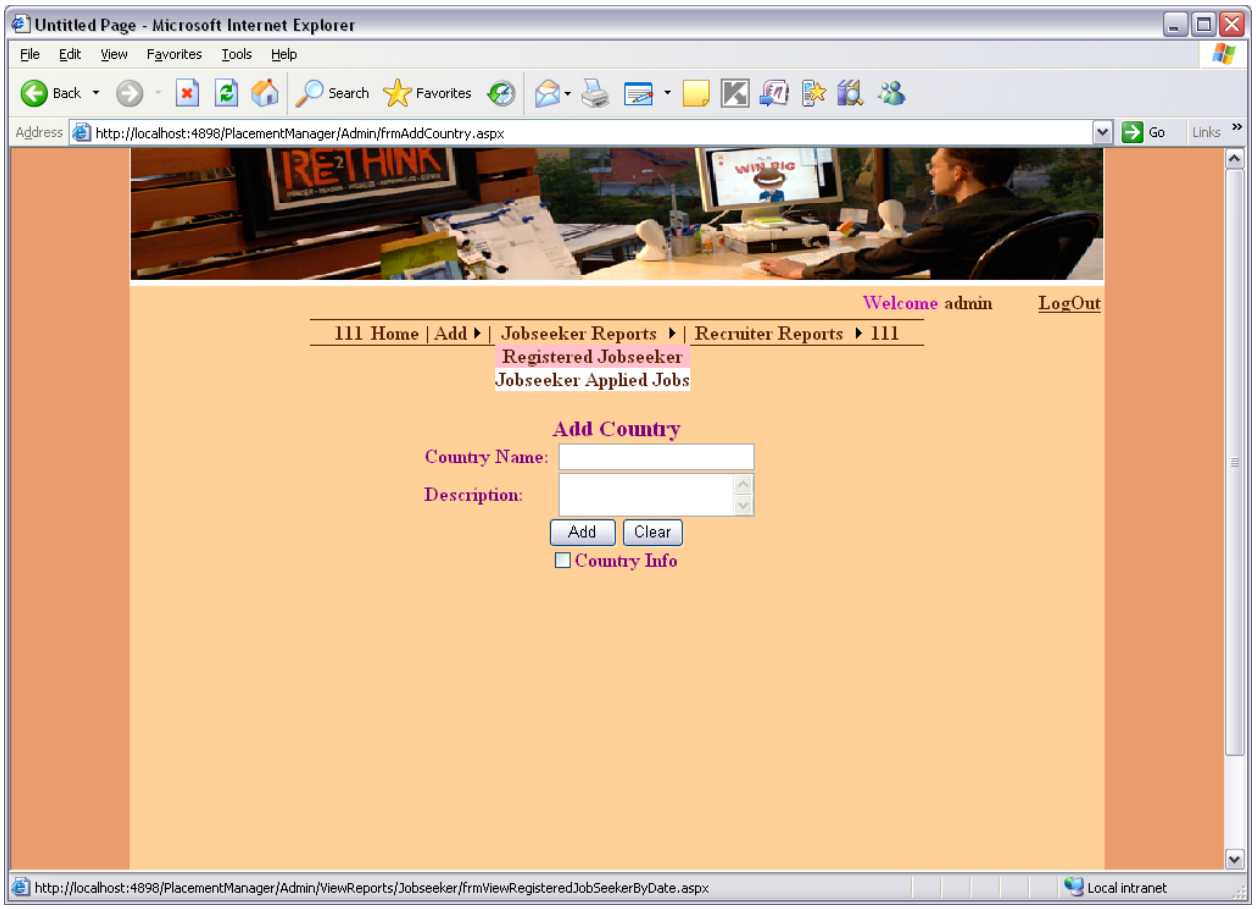

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAdminLogin.aspx
Go Links
RETHINK
WIN BIG
Admin Login
* Fields Are Mandatory
User Name: * admin
Password: * *****
Home
Log In
© All Rights Reserved to www.placementmanager.com
Done
Local intranet

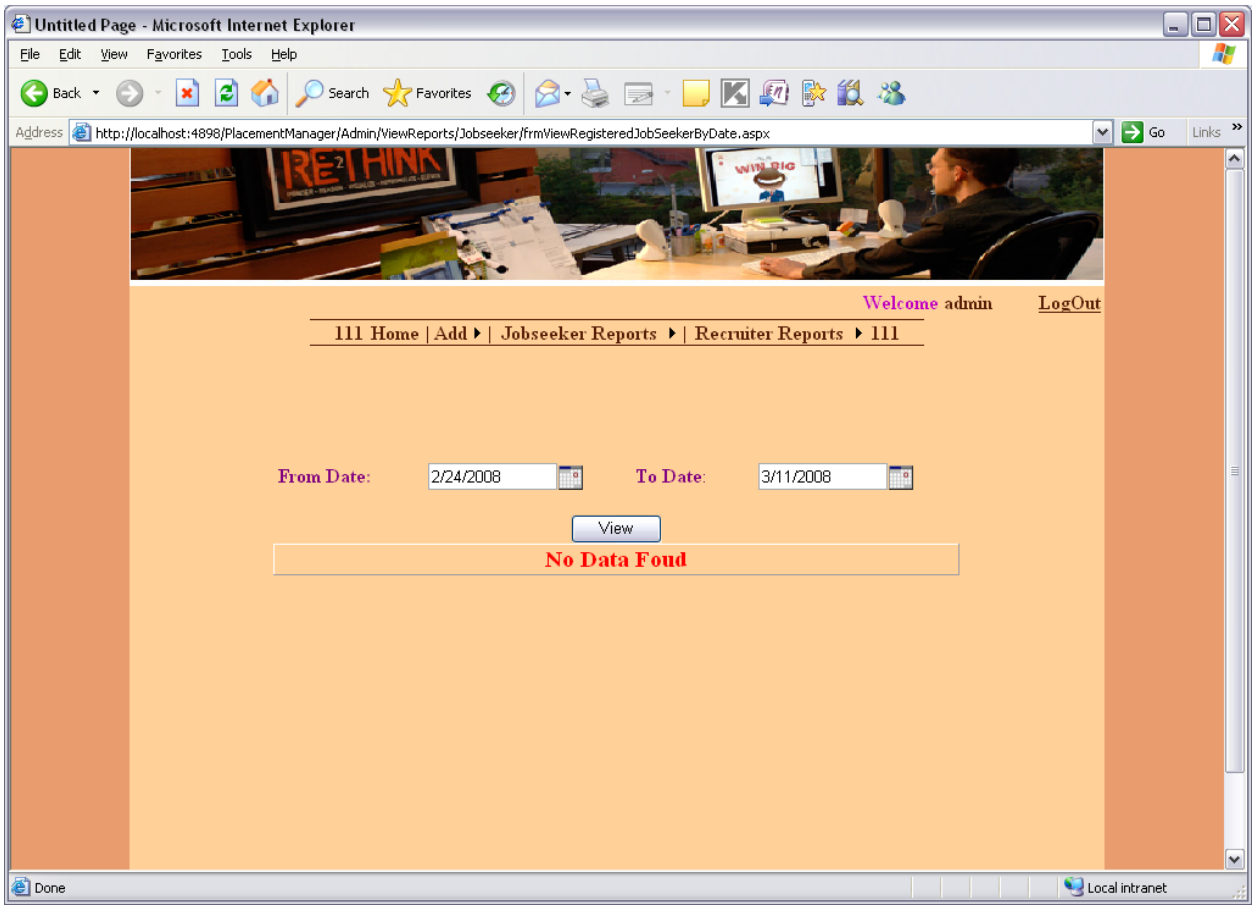

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAdminHome.aspx
Go Links
RETHINK
WIN BIG
Welcome admin LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports 111
Done
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAdminHome.aspx
Go Links
RE THINK
WIN BIG
Welcome admin
LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
Country
State
Location
Experience
Functional Area
Job Type
Qualification
Skills
http://localhost:4898/PlacementManager/Admin/frmAddCountry.aspx
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAddCountry.aspx
Go Links
Welcome admin LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
Add Country
Country Name: America
Description: NOthing
Add Clear
Country Info Inserted...!
Done
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAddLocation.aspx
Go Links
RE²THINK
WIN BIG
Welcome admin LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
Add Location
State Name: Bihar
Location Name: Kaimu
Description: It is distt
Add Clear
Location Info Inserted...!
Done
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/frmAddCountry.aspx
Go Links
RETHINK
WIN BIG
Welcome admin LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
Registered Jobseeker
Jobseeker Applied Jobs
Add Country
Country Name:
Description:
Add Clear
Country Info
http://localhost:4898/PlacementManager/Admin/ViewReports/Jobseeker/frmViewRegisteredJobSeekerByDate.aspx
Local intranet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File Edit View Favorites Tools Help
Back Search Favorites
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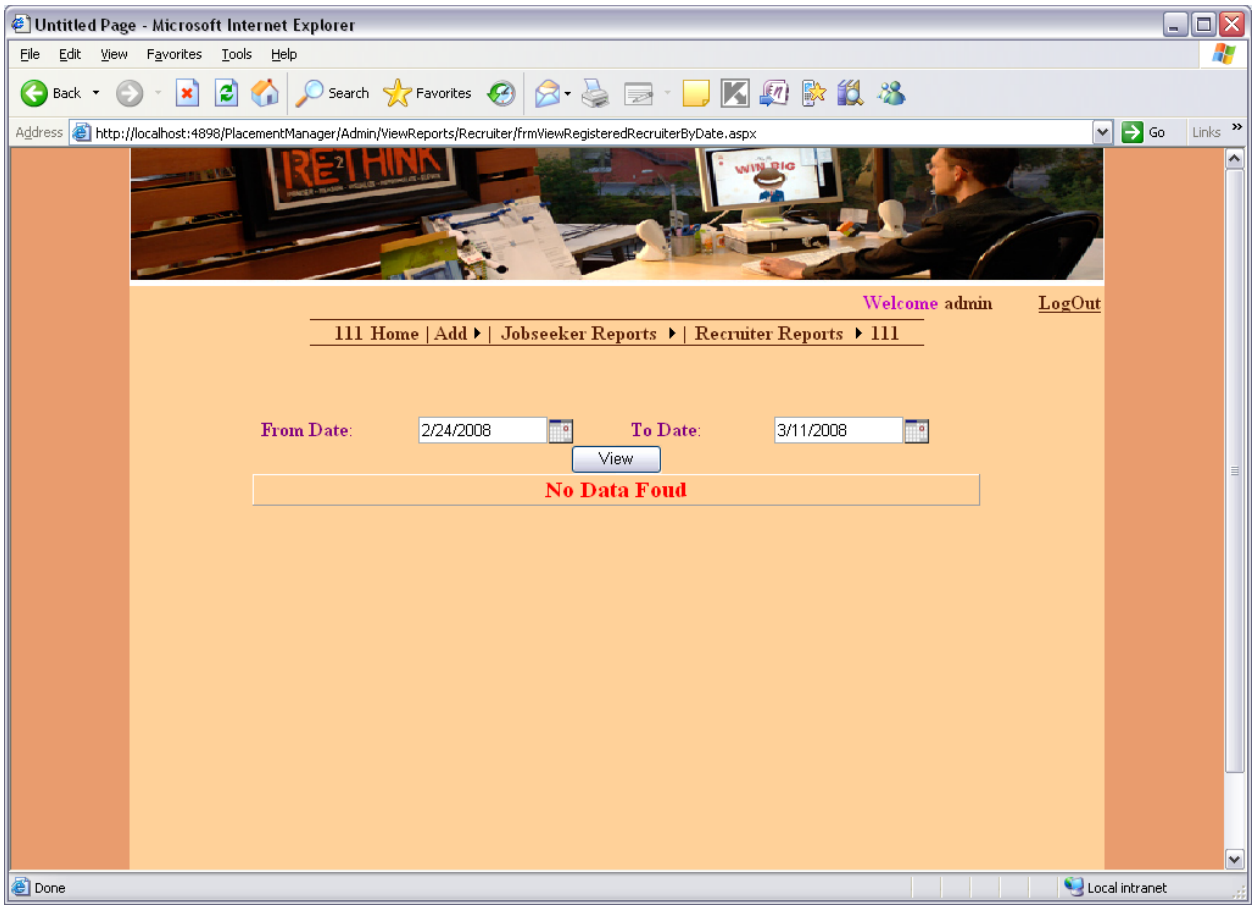
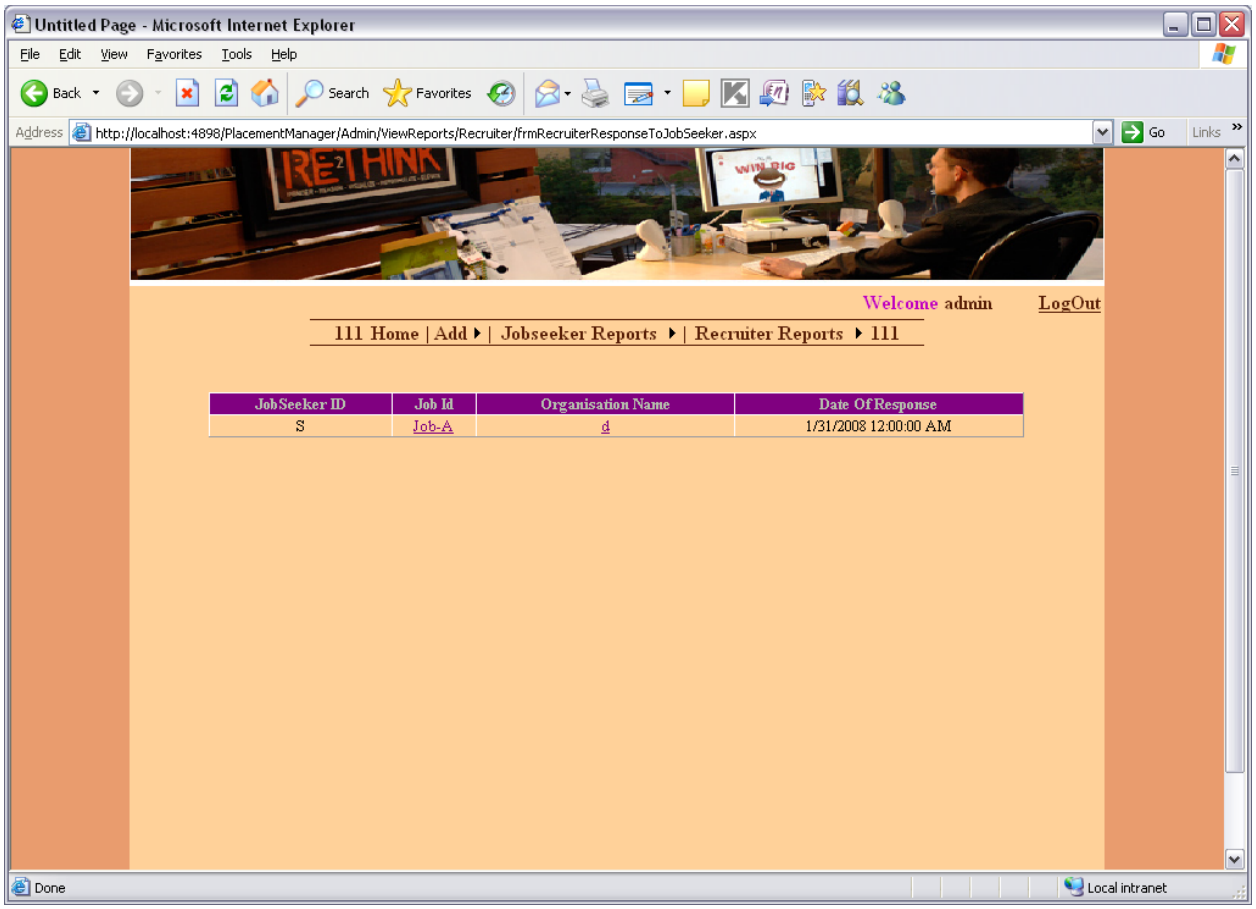
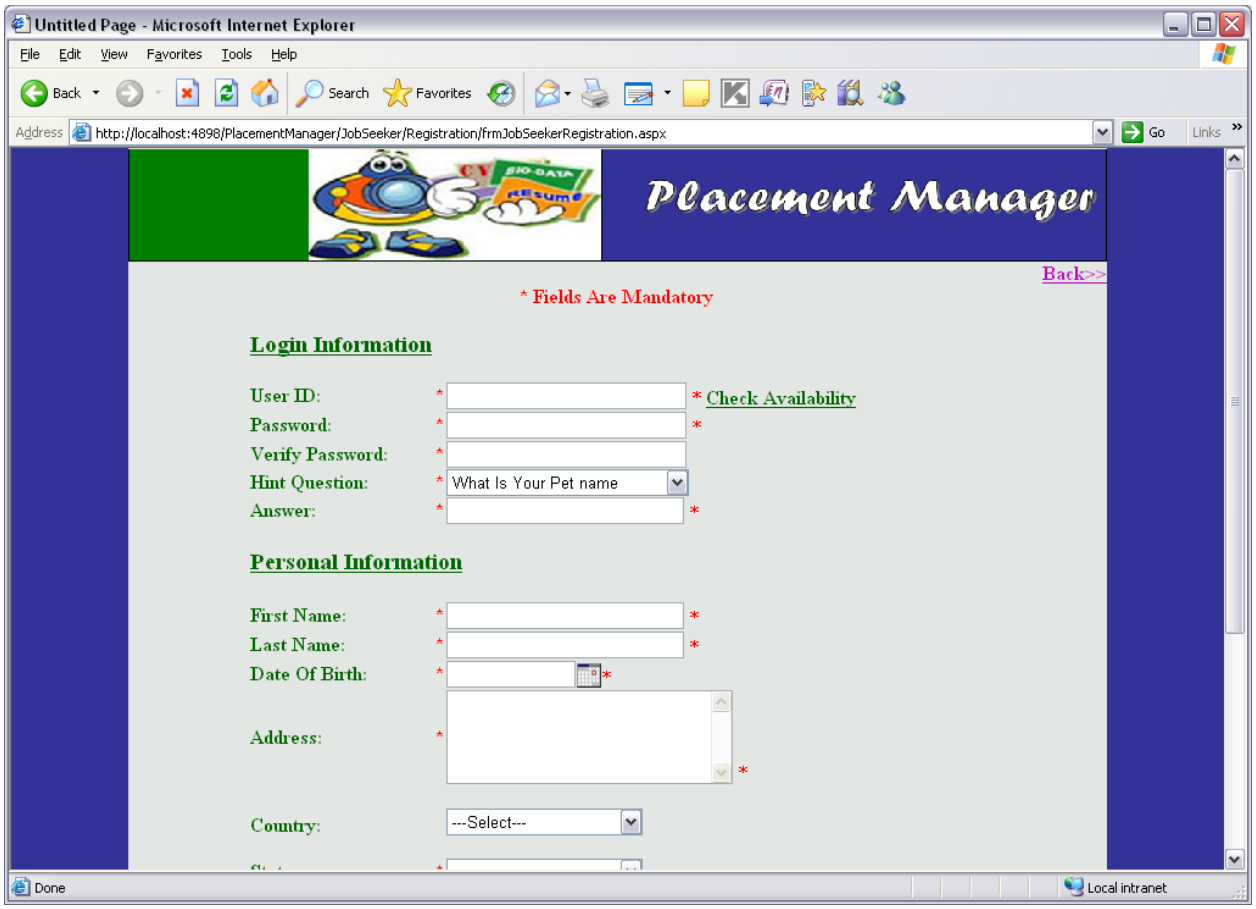
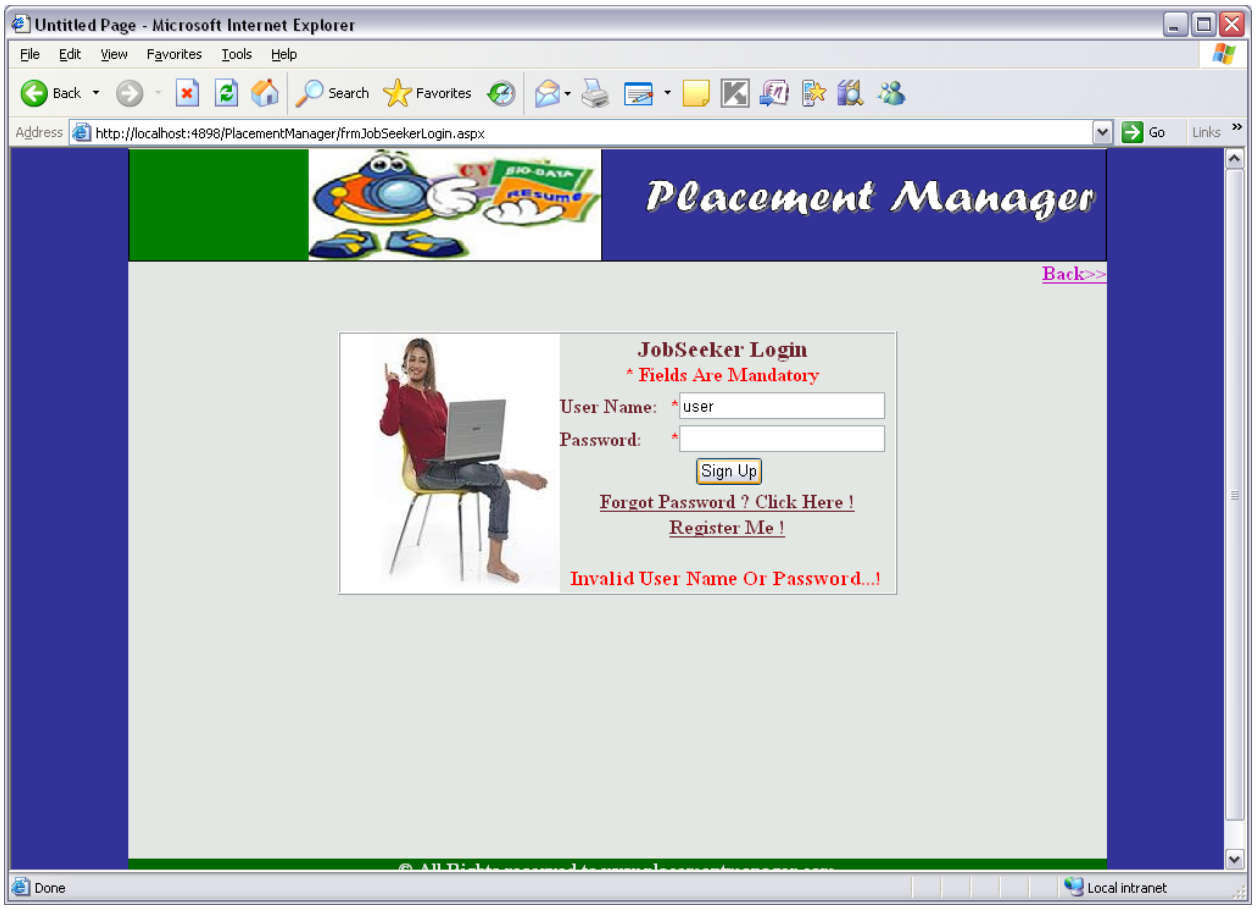
Go Links
RETHINK
WIN BIG
Welcome admin LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
From Date: 2/24/2008
To Date: 3/11/2008
View
No Data Foud
Done
Local intranet

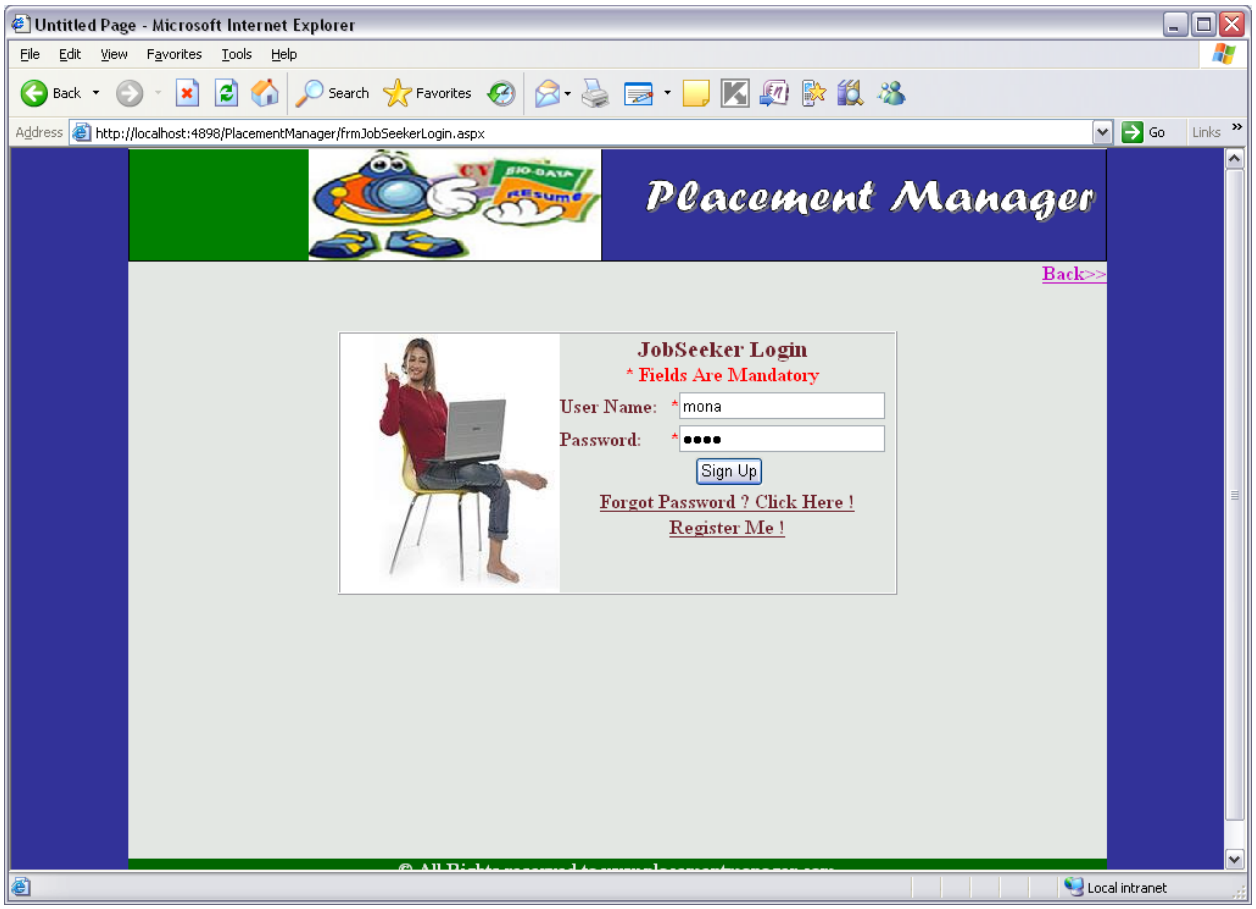

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/ViewReports/Recruiter/frmViewRegisteredRecruiterByDate.aspx
Go Links
RETHINK
WIN BIG
Welcome admin
LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
From Date:
2/24/2008
To Date:
3/11/2008
View
No Data Foud
Done
Local intranet

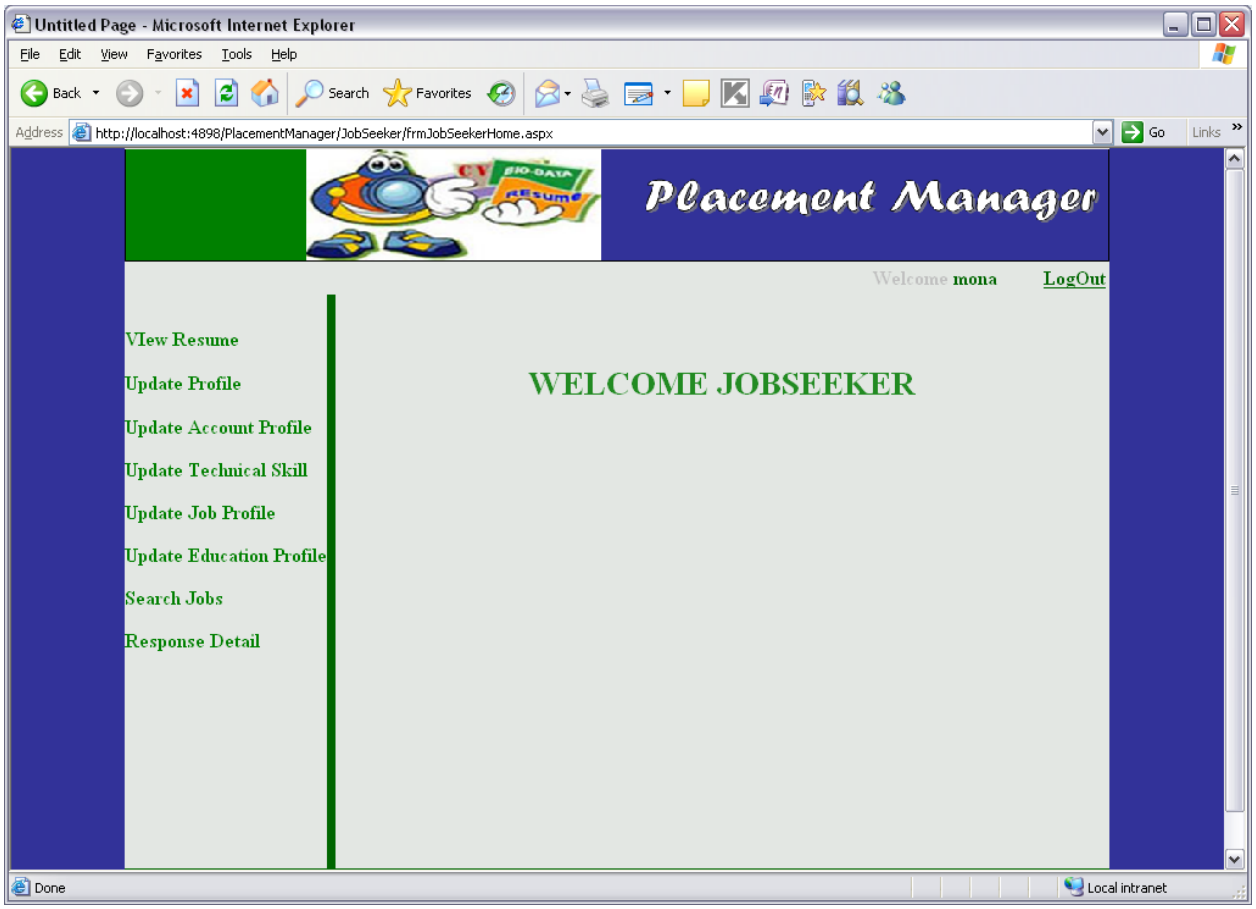

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Admin/ViewReports/Recruiter/frmRecruiterResponseToJobSeeker.aspx
Go Links
RETHINK
WIN BIG
Welcome admin
LogOut
111 Home | Add | Jobseeker Reports | Recruiter Reports | 111
JobSeeker ID
Job Id
Organisation Name
Date Of Response
S
Job-A
d
1/31/2008 12:00:00 AM
Done
Local intranet

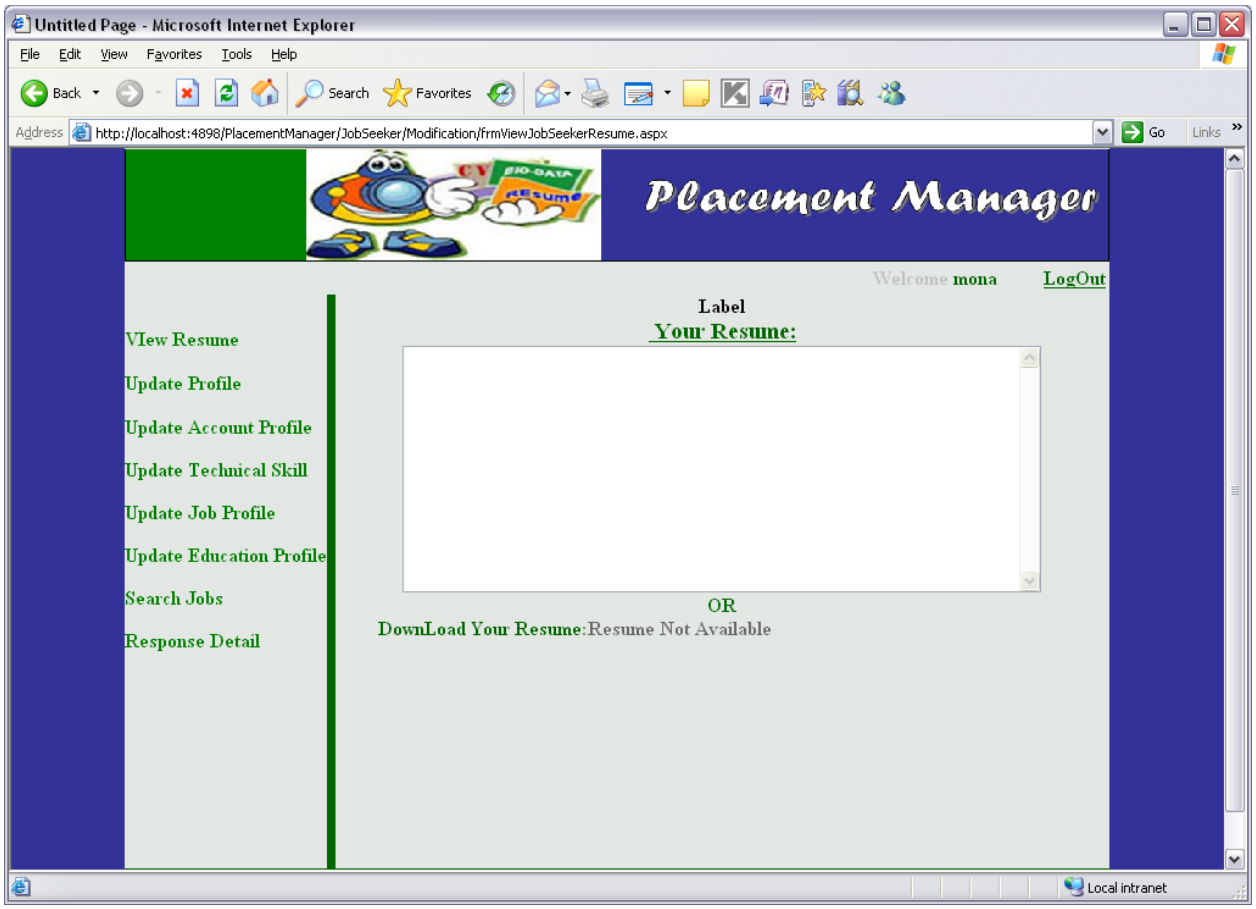
Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/frmLoginType.aspx
Go Links
Placement Manager
About Us
Contact Us
Feedback
Admin Login
Existing User
Job Seeker login
Recruiter Login
Local intranet

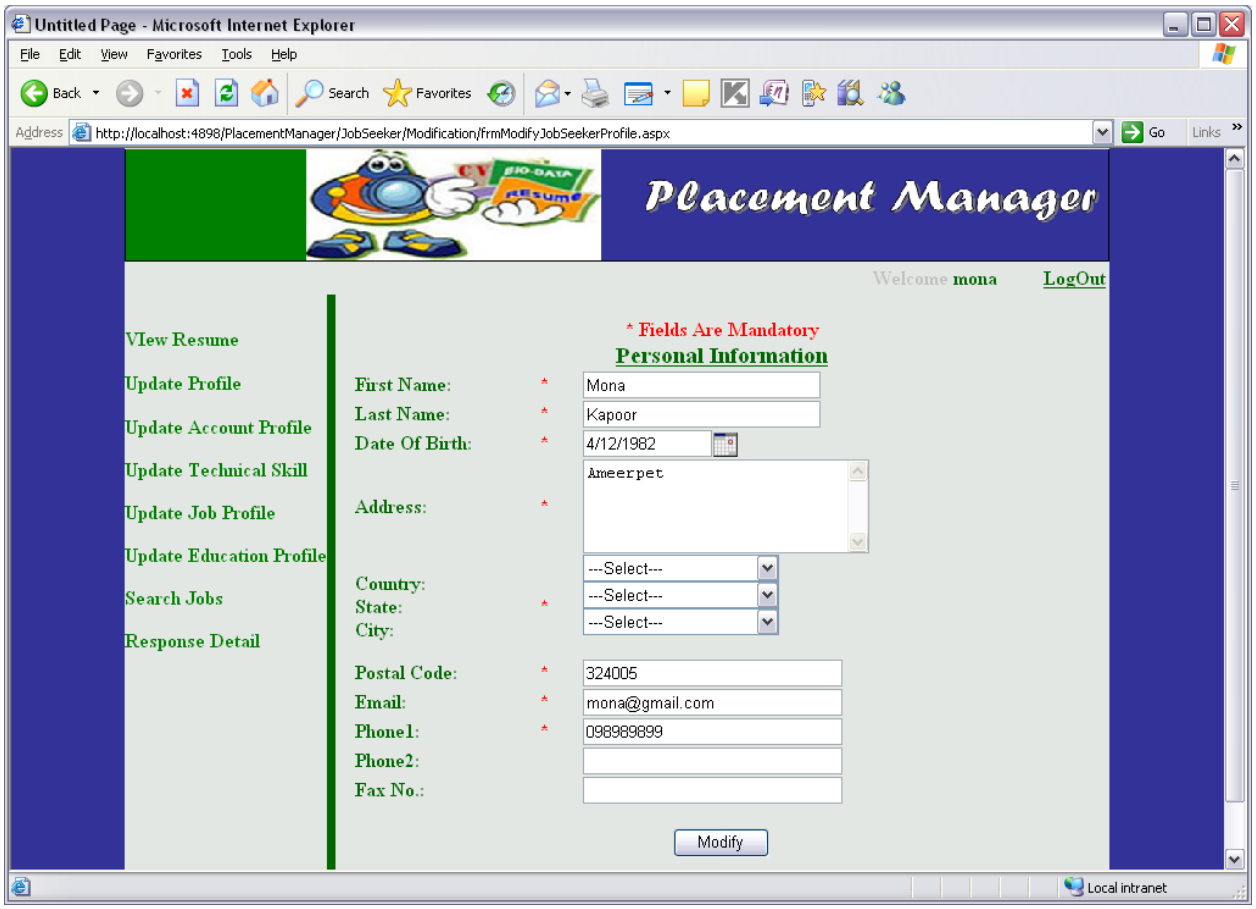

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/JobSeeker/Registration/frmJobSeekerRegistration.aspx
Go Links
Placement Manager
Back>>
* Fields Are Mandatory
Login Information
User ID: * * Check Availability
Password: * *
Verify Password: *
Hint Question: * What Is Your Pet name
Answer: * *
Personal Information
First Name: * *
Last Name: * *
Date Of Birth: * *
Address: * *
Country: ---Select---
Done
Local intranet

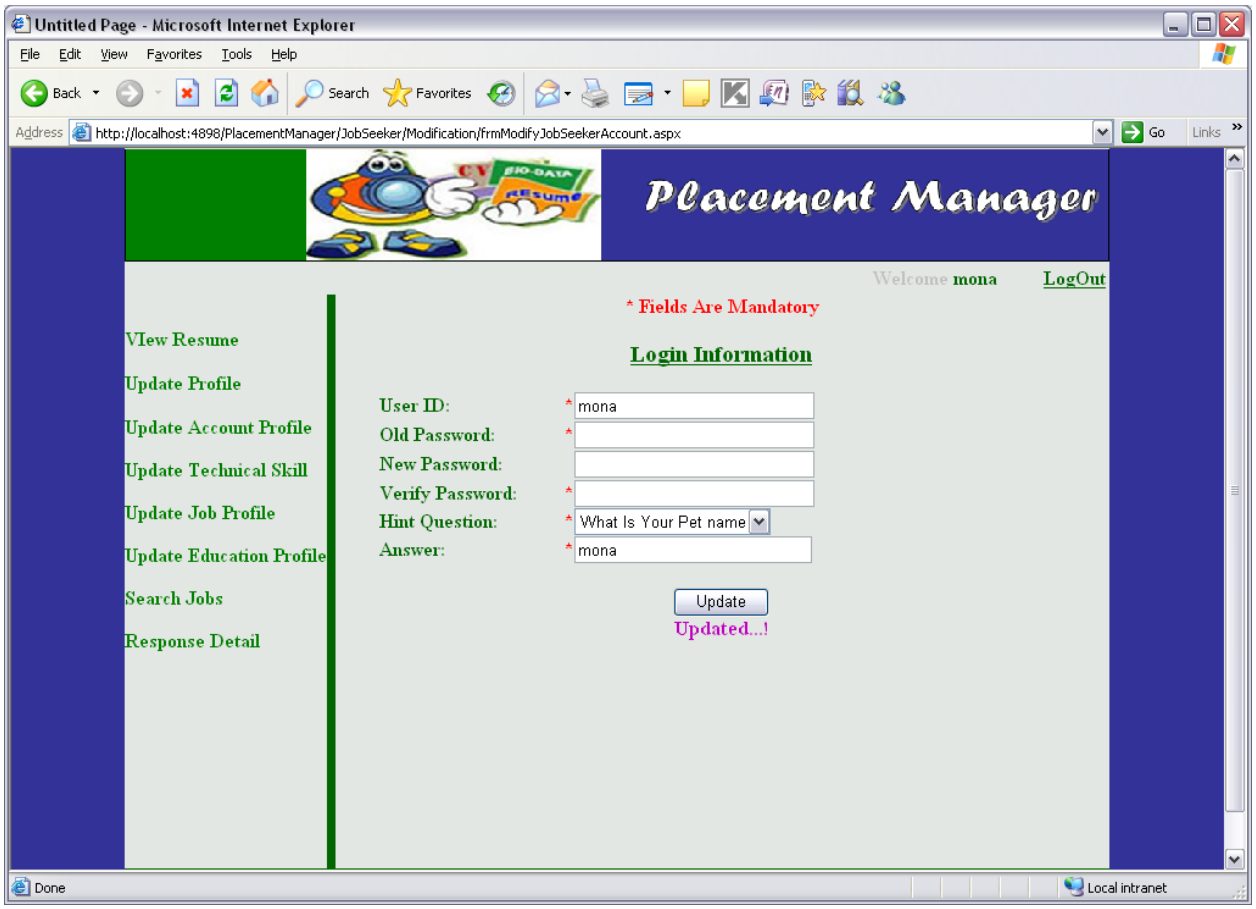

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/frmJobSeekerLogin.aspx
Go Links
Placement Manager
Back>>
JobSeeker Login
* Fields Are Mandatory
User Name: * user
Password: *
Sign Up
Forgot Password ? Click Here !
Register Me !
Invalid User Name Or Password...!
Done
Local intranet

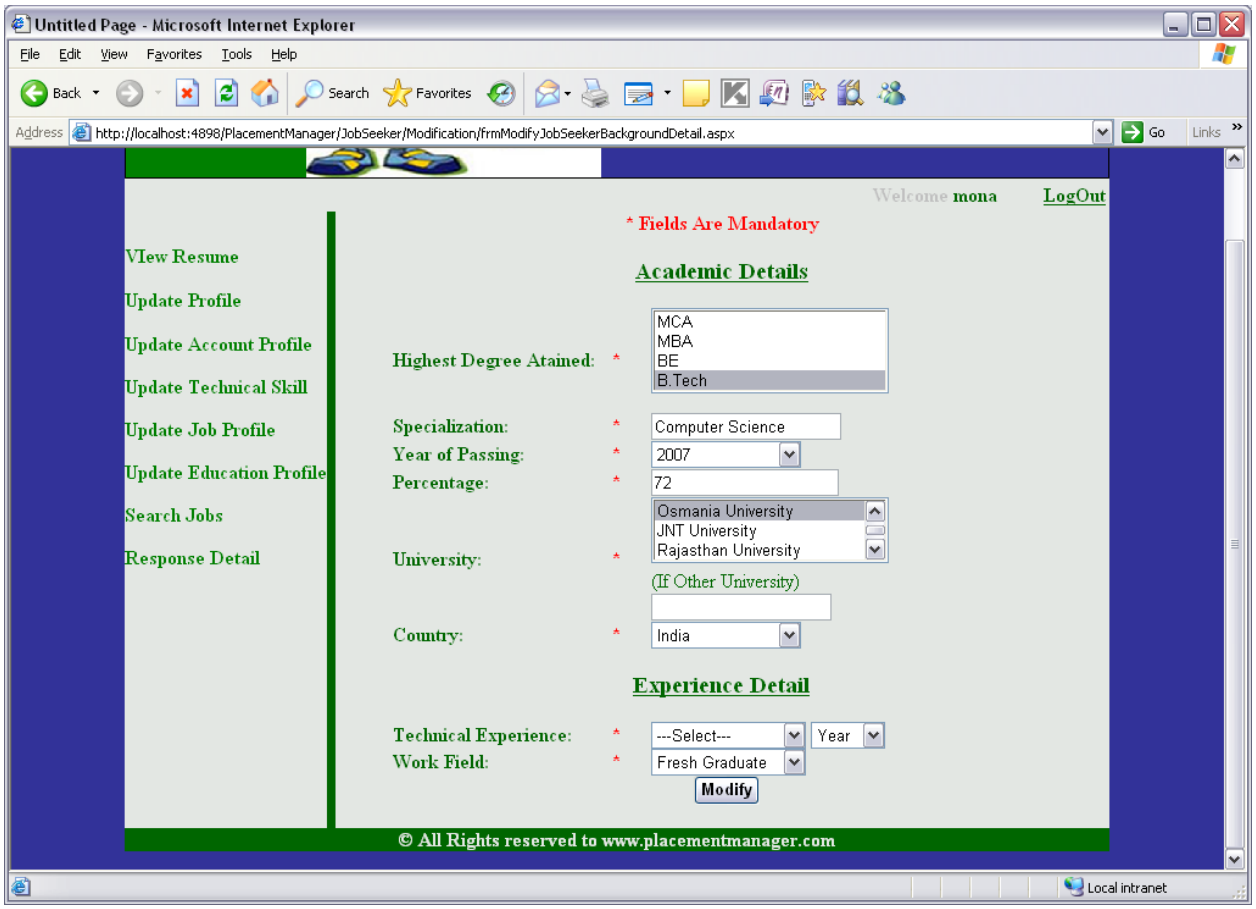

Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/frmJobSeekerLogin.aspx
Go Links
Placement Manager
Back>>
JobSeeker Login
* Fields Are Mandatory
User Name: *mona
Password: *
Sign Up
Forgot Password ? Click Here !
Register Me !
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/JobSeeker/frmJobSeekerHome.aspx
Go Links
Placement Manager
Welcome mona
LogOut
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
WELCOME JOBSEEKER
Done
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/JobSeeker/Modification/frmViewJobSeekerResume.aspx
Go Links
Placement Manager
Welcome mona
LogOut
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
Label
Your Resume:
OR
DownLoad Your Resume:Resume Not Available
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/JobSeeker/Modification/frmModifyJobSeekerProfile.aspx
Go Links
Placement Manager
Welcome mona
LogOut
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
* Fields Are Mandatory
Personal Information
First Name: * Mona
Last Name: * Kapoor
Date Of Birth: * 4/12/1982
Address: * Ameerpet
Country: ---Select---
State: * ---Select---
City: ---Select---
Postal Code: * 324005
Email: * mona@gmail.com
Phone1: * 098989899
Phone2:
Fax No.:
Modify
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/JobSeeker/Modification/frmModifyJobSeekerAccount.aspx
Go Links
Placement Manager
Welcome mona
LogOut
* Fields Are Mandatory
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
Login Information
User ID: * mona
Old Password: *
New Password:
Verify Password: *
Hint Question: * What Is Your Pet name
Answer: * mona
Update
Updated...!
Done
Local intranet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File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/JobSeeker/Modification/frmModifyJobSeekerBackgroundDetail.aspx
Go Links
Welcome mona
LogOut
* Fields Are Mandatory
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
Academic Details
Highest Degree Atained: *
MCA
MBA
BE
B.Tech
Specialization: *
Computer Science
Year of Passing: *
2007
Percentage: *
72
University: *
Osmania University
JNT University
Rajasthan University
(If Other University)
Country: *
India
Experience Detail
Technical Experience: *
---Select---
Year
Work Field: *
Fresh Graduate
Modify
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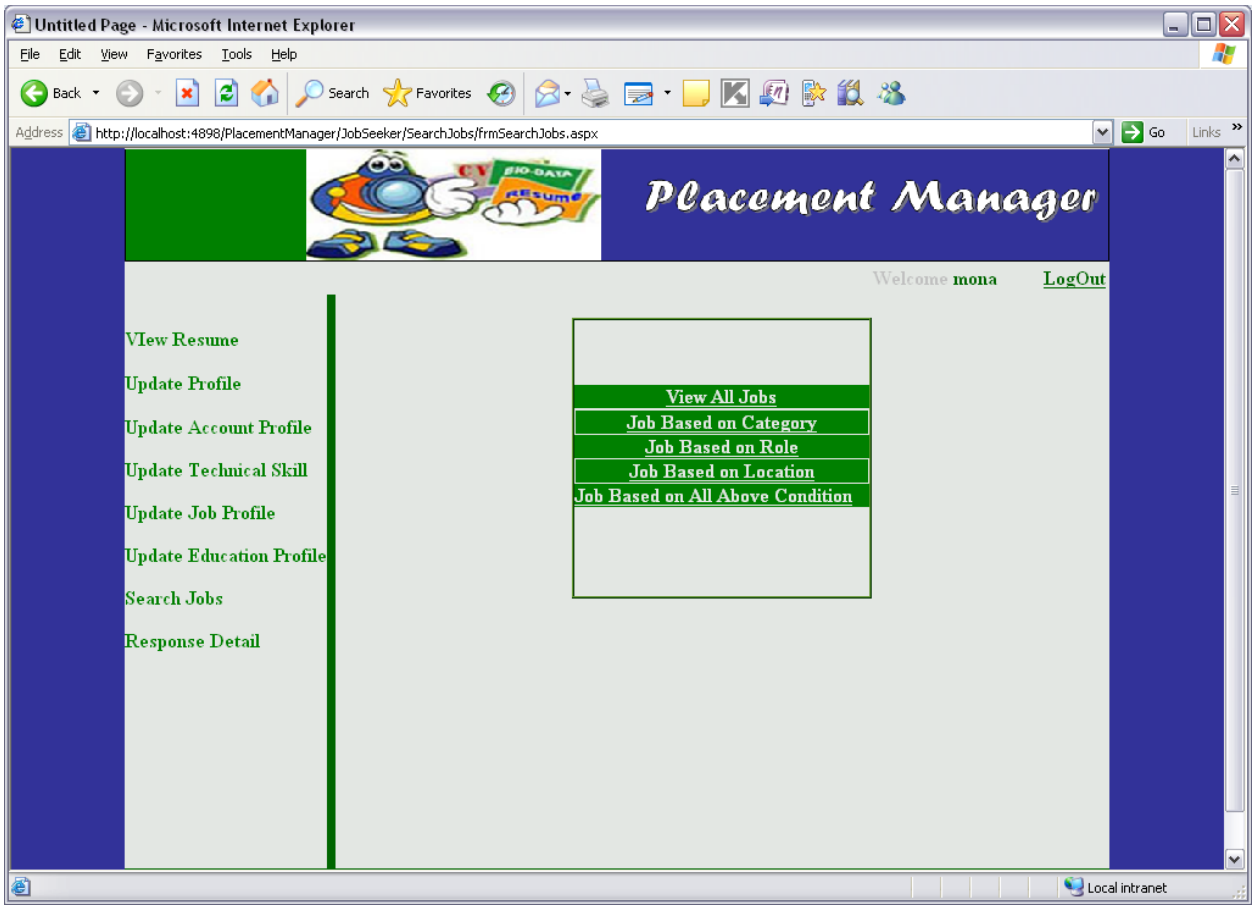
Local intranet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File Edit View Favorites Tools Help
Back Search Favorites
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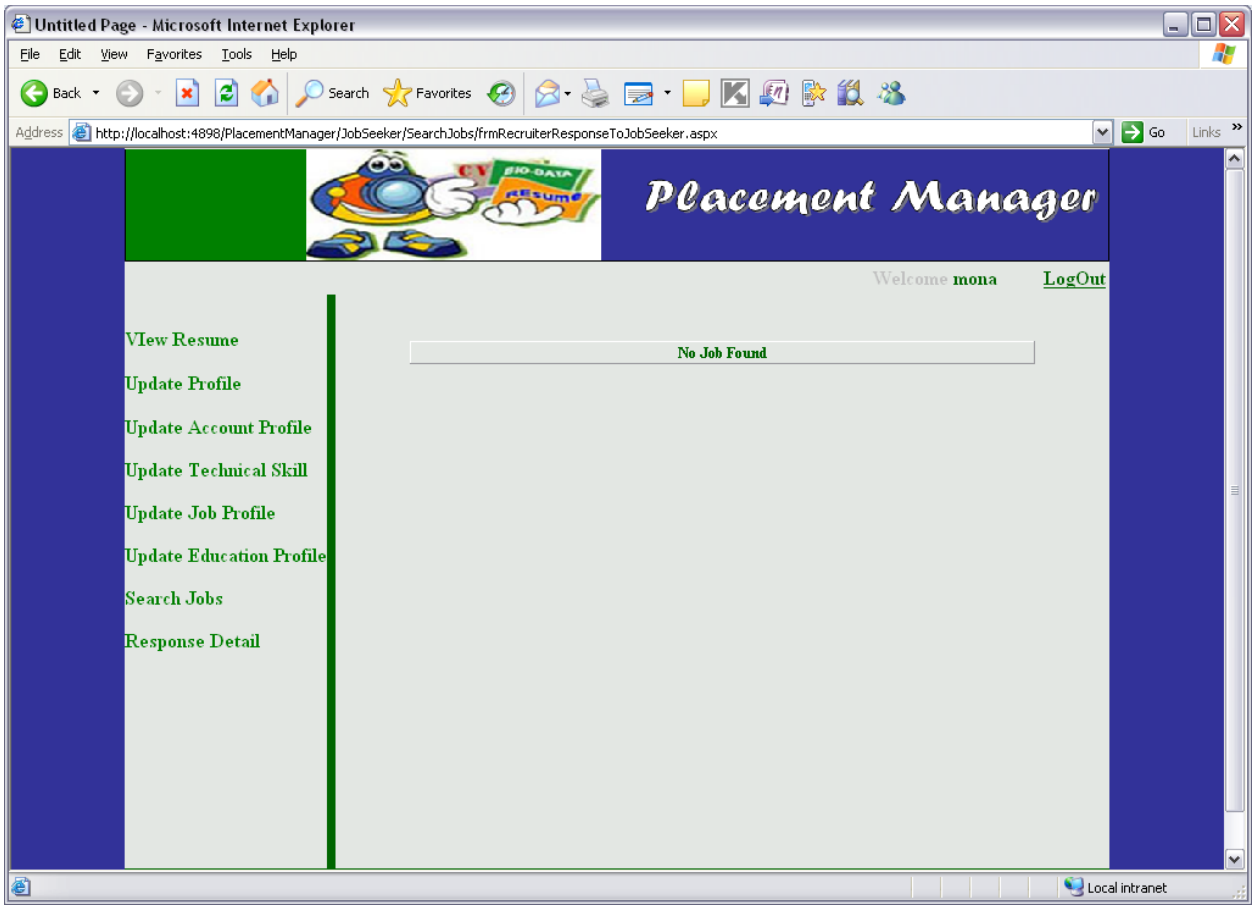
Go Links
Placement Manager
Welcome mona
LogOut
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
View All Jobs
Job Based on Category
Job Based on Role
Job Based on Location
Job Based on All Above Condition
Local intranet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File Edit View Favorites Tools Help
Back Search Favorites
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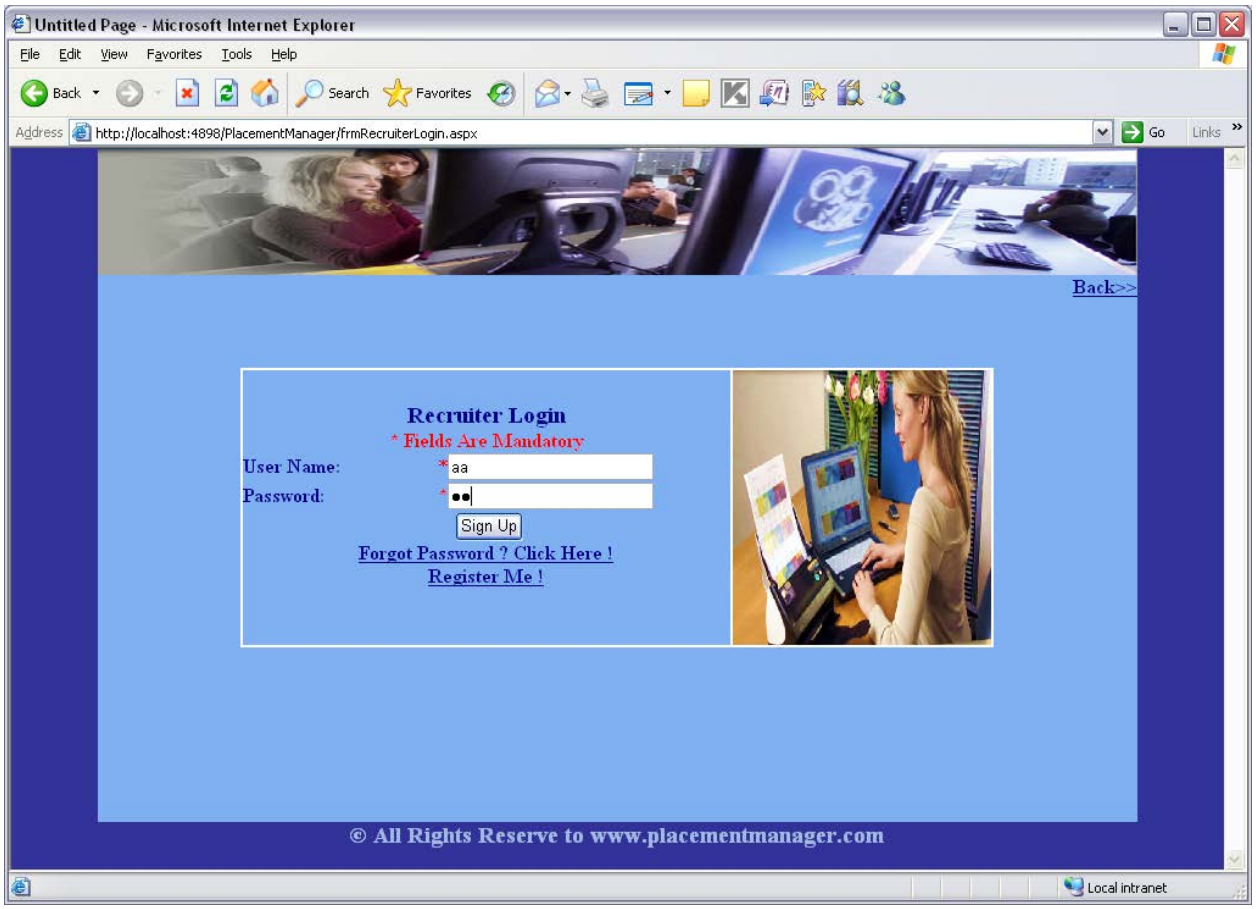
Go Links
Placement Manager
Welcome mona
LogOut
VIew Resume
Update Profile
Update Account Profile
Update Technical Skill
Update Job Profile
Update Education Profile
Search Jobs
Response Detail
No Job Found
Local intranet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File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/frmRecruiterLogin.aspx
Go Links
Back>>
Recruiter Login
* Fields Are Mandatory
User Name: * aa
Password: * ••
Sign Up
Forgot Password ? Click Here !
Register Me !
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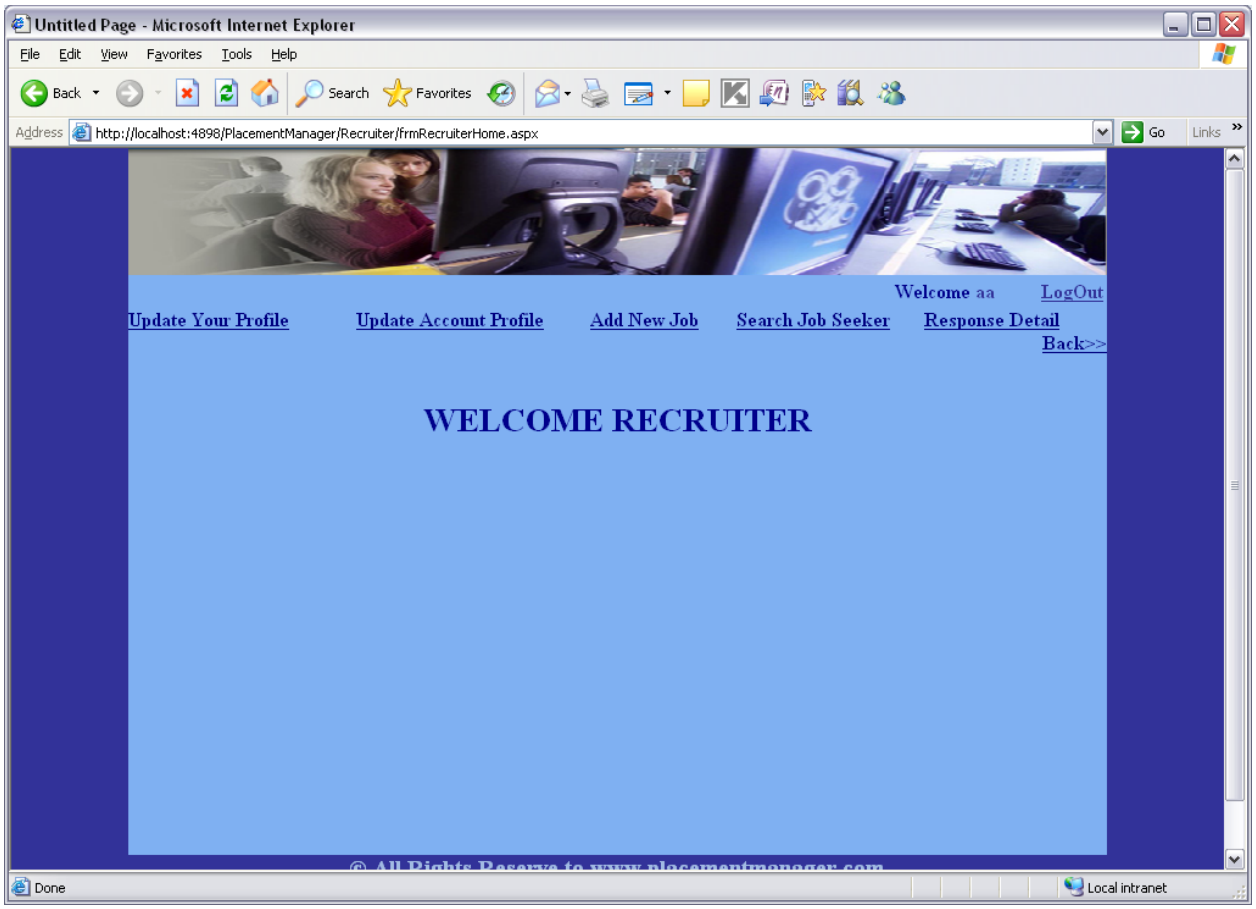
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Recruiter/frmRecruiterHome.aspx
Go Links
Welcome aa LogOut
Update Your Profile
Update Account Profile
Add New Job
Search Job Seeker
Response Detail
Back>>
WELCOME RECRUITER
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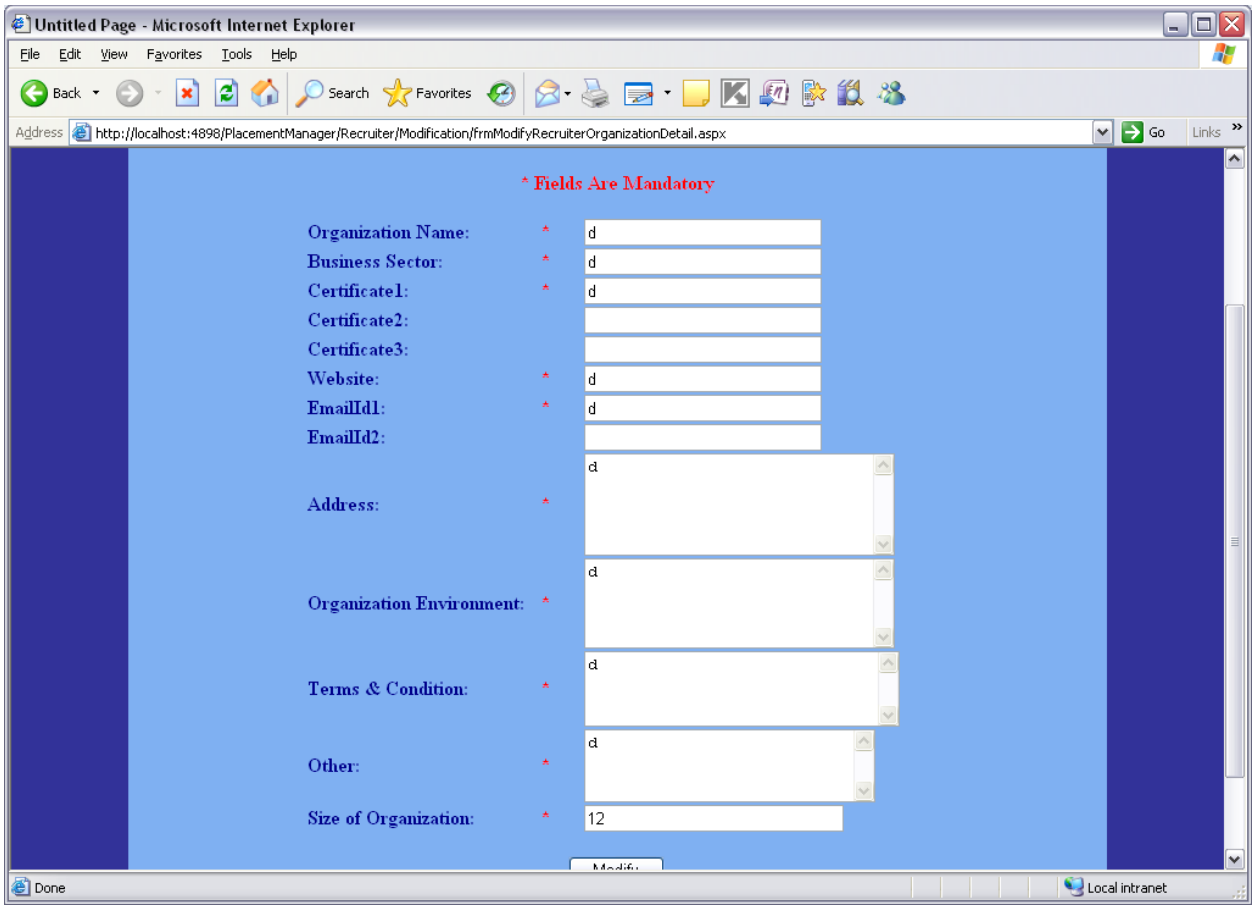
Done
Local intranet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Back Search Favorites
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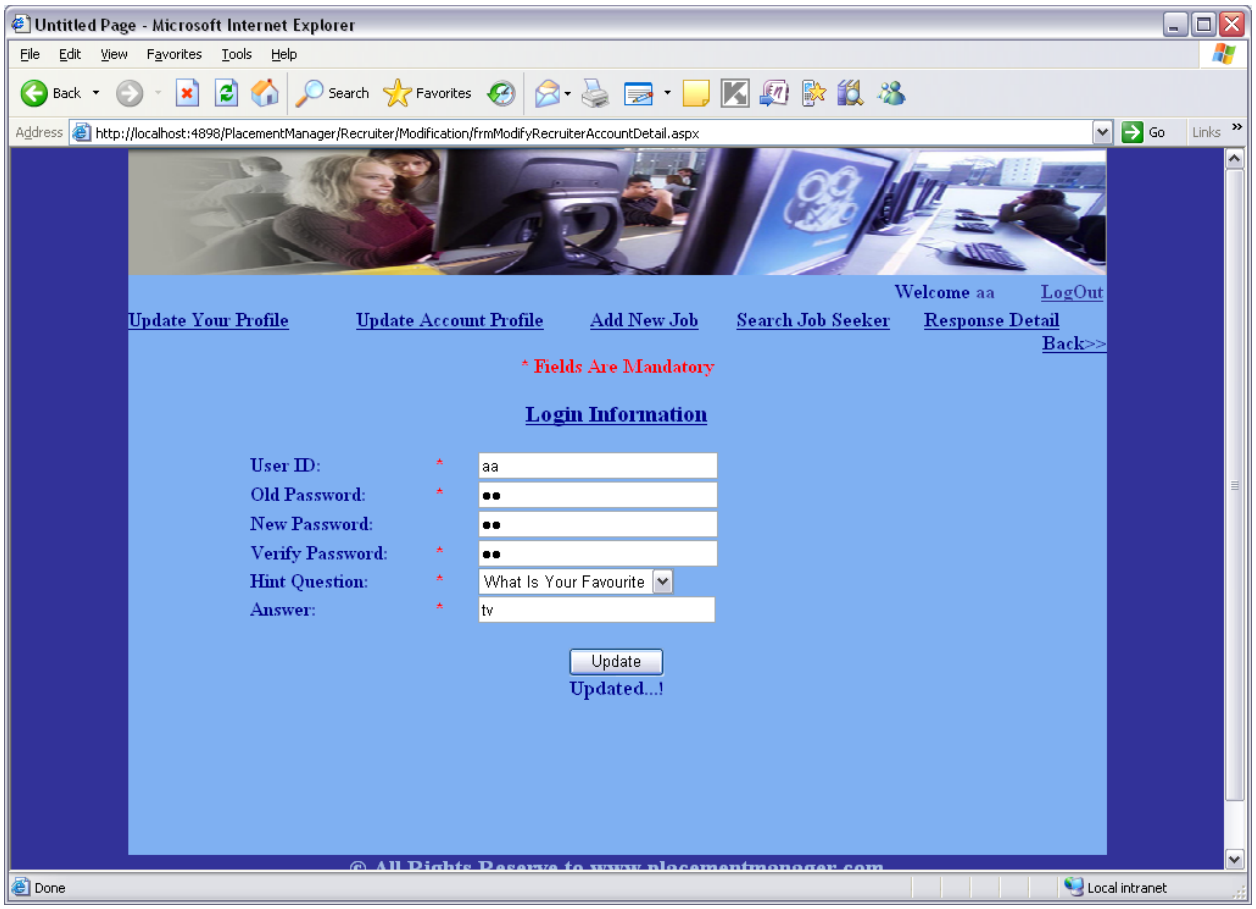
Go Links
* Fields Are Mandatory
Organization Name: * d
Business Sector: * d
Certificate1: * d
Certificate2:
Certificate3:
Website: * d
EmailId1: * d
EmailId2:
Address: * d
Organization Environment: * d
Terms & Condition: * d
Other: * d
Size of Organization: * 12
Done
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Recruiter/Modification/frmModifyRecruiterAccountDetail.aspx
Go Links
Welcome aa LogOut
Update Your Profile
Update Account Profile
Add New Job
Search Job Seeker
Response Detail
Back>>
* Fields Are Mandatory
Login Information
User ID: * aa
Old Password: * ●●
New Password: ●●
Verify Password: * ●●
Hint Question: * What Is Your Favourite
Answer: * tv
Update
Updated...!
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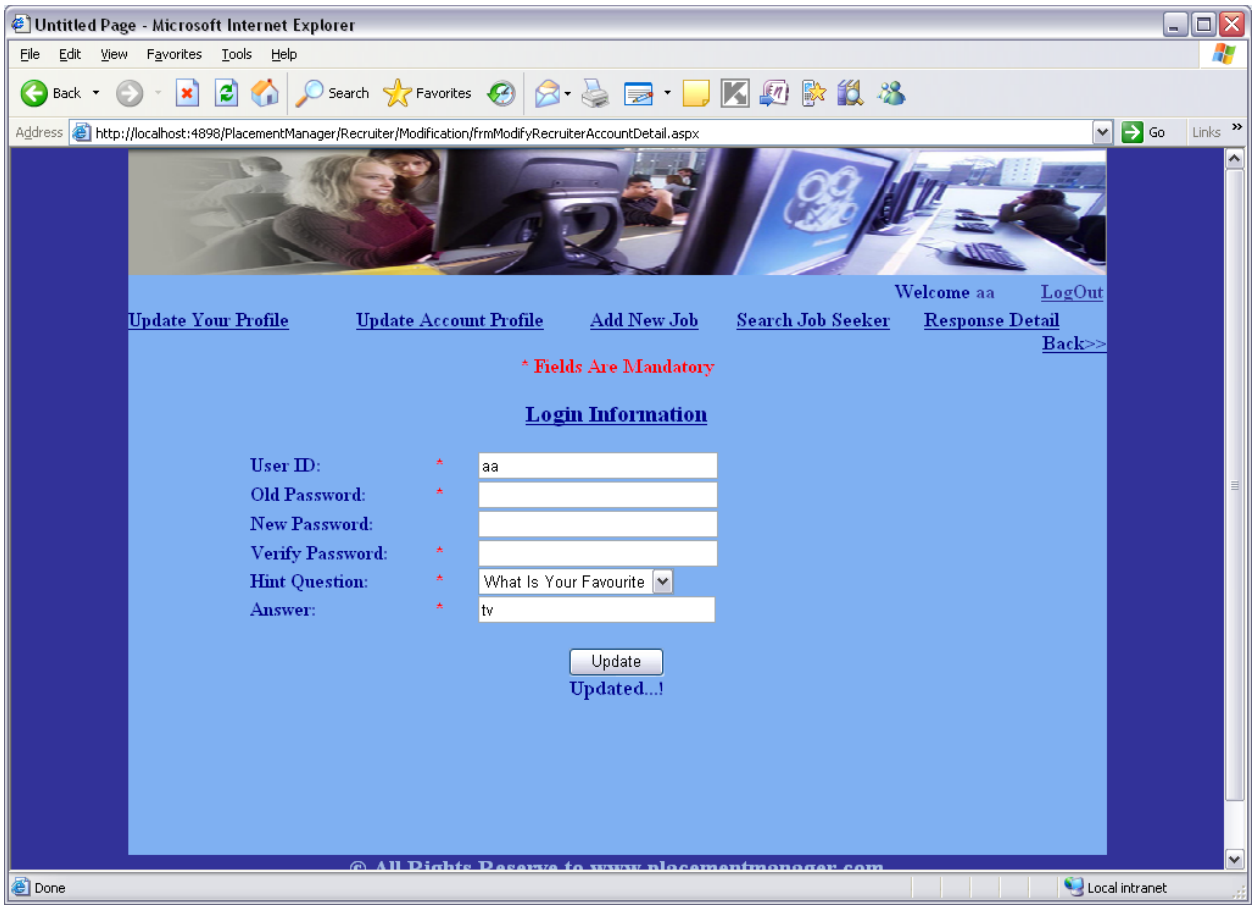
Done
Local intranet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File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Recruiter/Modification/frmModifyRecruiterAccountDetail.aspx
Go Links
Welcome aa LogOut
Update Your Profile
Update Account Profile
Add New Job
Search Job Seeker
Response Detail
Back>>
* Fields Are Mandatory
Login Information
User ID: * aa
Old Password: *
New Password:
Verify Password: *
Hint Question: * What Is Your Favourite
Answer: * tv
Update
Updated...!
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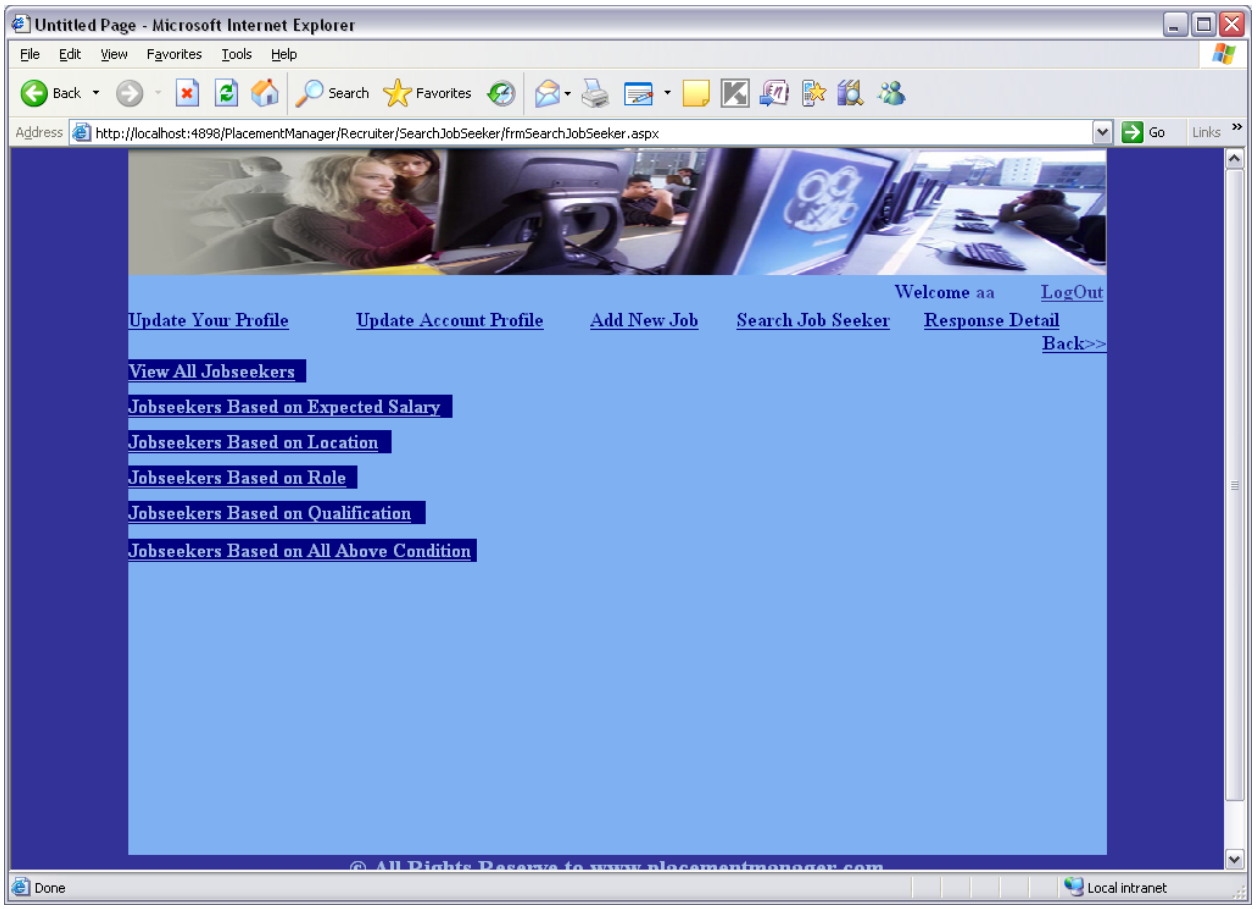
Done
Local intranet


Untitled Page - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost:4898/PlacementManager/Recruiter/SearchJobSeeker/frmSearchJobSeeker.aspx
Go Links
Welcome aa LogOut
Update Your Profile
Update Account Profile
Add New Job
Search Job Seeker
Response Detail
Back>>
View All Jobseekers
Jobseekers Based on Expected Salary
Jobseekers Based on Location
Jobseekers Based on Role
Jobseekers Based on Qualification
Jobseekers Based on All Above Condition
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Done
Local intranet

8. SYSTEM TESTING AND IMPLEMENTATION

8.1. INTRODUCTION

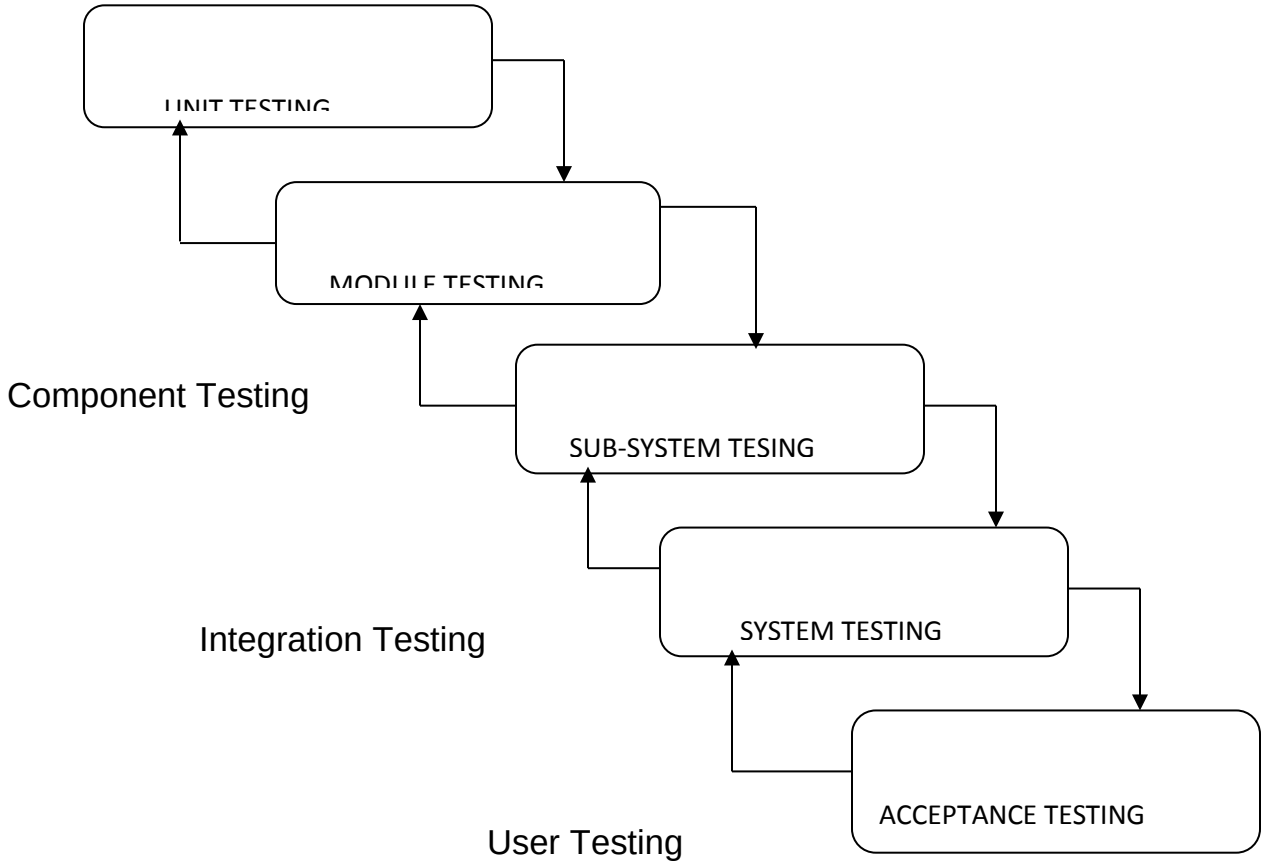
Software testing is a critical element of software quality assurance and represents the ultimate review of specification, design and coding. In fact, testing is the one step in the software engineering process that could be viewed as destructive rather than constructive.

A strategy for software testing integrates software test case design methods into a well-planned series of steps that result in the successful construction of software. Testing is the set of activities that can be planned in advance and conducted systematically. The underlying motivation of program testing is to affirm software quality with methods that can economically and effectively apply to both strategic to both large and small-scale systems.

8.2. STRATEGIC APPROACH TO SOFTWARE TESTING

The software engineering process can be viewed as a spiral. Initially system engineering defines the role of software and leads to software requirement analysis where the information domain, functions, behavior, performance, constraints and validation criteria for software are established. Moving inward along the spiral, we come to design and finally to coding. To develop computer software we spiral in along streamlines that decrease the level of abstraction on each turn.

A strategy for software testing may also be viewed in the context of the spiral. Unit testing begins at the vertex of the spiral and concentrates on each unit of the software as implemented in source code. Testing progress by moving outward along the spiral to integration testing, where the focus is on the design and the construction of the software architecture. Talking another turn on outward on the spiral we encounter validation testing where requirements established as part of software requirements analysis are validated against the software that has been constructed. Finally we arrive at system testing, where the software and other system elements are tested as a whole.



8.3. Unit Testing

Unit testing focuses verification effort on the smallest unit of software design, the module. The unit testing we have is white box oriented and some modules the steps are conducted in parallel.

1. WHITE BOX TESTING

This type of testing ensures that

- All independent paths have been exercised at least once
- All logical decisions have been exercised on their true and false sides
- All loops are executed at their boundaries and within their operational bounds
- All internal data structures have been exercised to assure their validity.

To follow the concept of white box testing we have tested each form .we have created independently to verify that Data flow is correct, All conditions are exercised to check their validity, All loops are executed on their boundaries.

2. BASIC PATH TESTING

Established technique of flow graph with Cyclamate complexity was used to derive test cases for all the functions. The main steps in deriving test cases were:

Use the design of the code and draw correspondent flow graph.

Determine the Cyclamate complexity of resultant flow graph, using formula:

V (G) =E-N+2 or

V (G) =P+1 or

V (G) =Number Of Regions

Where V (G) is Cyclamate complexity,

E is the number of edges,

N is the number of flow graph nodes,

P is the number of predicate nodes.

Determine the basis of set of linearly independent paths.

3. CONDITIONAL TESTING

In this part of the testing each of the conditions were tested to both true and false aspects. And all the resulting paths were tested. So that each path that may be generate on particular condition is traced to uncover any possible errors.

4. DATA FLOW TESTING: - This type of testing selects the path of the program according to the location of definition and use of variables. This kind of testing was used only when

some local variable were declared. The *definition-use chain* method was used in this type of testing. These were particularly useful in nested statements.

5. LOOP TESTING

In this type of testing all the loops are tested to all the limits possible. The following exercise was adopted for all loops:

- All the loops were tested at their limits, just above them and just below them.
- All the loops were skipped at least once.
- For nested loops test the inner most loop first and then work outwards.
- For concatenated loops the values of dependent loops were set with the help of connected loop.
- Unstructured loops were resolved into nested loops or concatenated loops and tested as above.

Each unit has been separately tested by the development team itself and all the input have been validated.

9. SYSTEM SECURITY

9.1. Introduction

The protection of computer based resources that includes hardware, software, data, procedures and people against unauthorized use or natural

Disaster is known as System Security.

System Security can be divided into four related issues:

- Security
- Integrity
- Privacy
- Confidentiality

SYSTEM SECURITY refers to the technical innovations and procedures applied to the hardware and operation systems to protect against deliberate or accidental damage from a defined threat.

DATA SECURITY is the protection of data from loss, disclosure, modification and destruction.

SYSTEM INTEGRITY refers to the power functioning of hardware and programs, appropriate physical security and safety against external threats such as eavesdropping and wiretapping.

PRIVACY defines the rights of the user or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair or excessive dissemination of information about it.

CONFIDENTIALITY is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection.9.2. SECURITY IN SOFTWARE

System security refers to various validations on data in form of checks and controls to avoid the system from failing. It is always important to ensure that only valid data is entered and only valid operations are performed on the system. The system employees two types of checks and controls:

CLIENT SIDE VALIDATION

Various client side validations are used to ensure on the client side that only valid data is entered. Client side validation saves server time and load to handle invalid data. Some checks imposed are:

- VBScript in used to ensure those required fields are filled with suitable data only. Maximum lengths of the fields of the forms are appropriately defined.
- Forms cannot be submitted without filling up the mandatory data so that manual mistakes of submitting empty fields that are mandatory can be sorted out at the client side to save the server time and load.
- Tab-indexes are set according to the need and taking into account the ease of user while working with the system.

SERVER SIDE VALIDATION

Some checks cannot be applied at client side. Server side checks are necessary to save the

system from failing and intimating the user that some invalid operation has been performed or the performed operation is restricted. Some of the server side checks imposed is:

- Server side constraint has been imposed to check for the validity of primary key and foreign key. A primary key value cannot be duplicated. Any attempt to duplicate the primary value results into a message intimating the user about those values through the forms using foreign key can be updated only of the existing foreign key values.
- User is intimating through appropriate messages about the successful operations or exceptions occurring at server side.
- Various Access Control Mechanisms have been built so that one user may not agitate upon another. Access permissions to various types of users are controlled according to the organizational structure. Only permitted users can log on to the system and can have access according to their category. User- name, passwords and permissions are controlled o the server side.

10. CONCLUSION

It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge of not only programming in ASP.NET and VB.NET web based application and no some extent Windows Application and SQL Server, but also about all handling procedure related with **"PROJECT NAME".** It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

BENEFITS:

The project is identified by the merits of the system offered to the user. The merits of this project are as follows: -

- It's a web-enabled project.
- This project offers user to enter the data through simple and interactive forms. This is very helpful for the client to enter the desired information through so much simplicity.
- The user is mainly more concerned about the validity of the data, whatever he is entering. There are checks on every stages of any new creation, data entry or updating so that the user cannot enter the invalid data, which can create problems at later date.

- Sometimes the user finds in the later stages of using project that he needs to update some of the information that he entered earlier. There are options for him by which he can update the records. Moreover there is restriction for his that he cannot change the primary data field. This keeps the validity of the data to longer extent.
- User is provided the option of monitoring the records he entered earlier. He can see the desired records with the variety of options provided by him.
- From every part of the project the user is provided with the links through framing so that he can go from one option of the project to other as per the requirement. This is bound to be simple and very friendly as per the user is concerned. That is, we can sat that the project is user friendly which is one of the primary concerns of any good project.
- Data storage and retrieval will become faster and easier to maintain because data is stored in a systematic manner and in a single database.
- Decision making process would be greatly enhanced because of faster processing of information since data collection from information available on computer takes much less time then manual system.
- Allocating of sample results becomes much faster because at a time the user can see the records of last years.
- Easier and faster data transfer through latest technology associated with the computer and communication.
- Through these features it will increase the efficiency, accuracy and transparency,

LIMITATIONS:

- The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.
- Training for simple computer operations is necessary for the users working on the system.

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