

Abstract

#### **ABSTRACT**

Now-a-days the job market is so extensive that a variety of industries and companies are searching for right candidates and the prospective candidates are searching for right companies for growth opportunities. This purpose is served by most of the job portals on line. This is another job portal with an open environment for the job seekers and recruiters to meet on the same dais and know about each other so that the right candidate is placed in a right company.

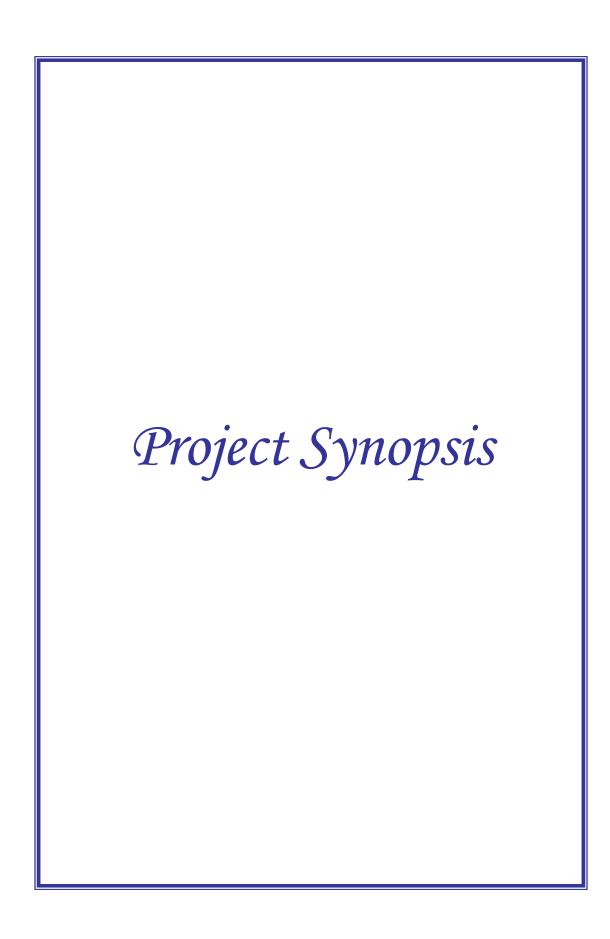
The aim of Job Portal is facilitate both the candidates seeking jobs as well as the employers looking for employees for their companies. In this online application, any job seeker can search for the available jobs at any moment with updated information. When he finds a job, he can post his application to the job on line. Employers can advertise the vacancies by taking the membership, logging in and posting the job information with the eligibility criteria for the jobs. This software establishes a direct connection between the employer and the job seeker.

A job seeker can directly visit this portal and view the jobs availability information along with downloading the required information. When he logs into the system, he would be able to upload his application and post walk-in details which he knows would be held by a company. This information helps other users very much to attend the same. Further, the user will be able to view the list of companies for which ha has already applied. This enables him to take a decision when he gets a call from a company and how much time elapsed since he has applied for the company.

A registered user will be able to get useful information regarding the placement papers and sample resumes which help him to create his own resume according to industry standards. Common interview questions and sample covering letters are also available online along with FAQ's which aid the candidate to pave his route into the job world.

A recruiter or employer can view some part of the information of job seekers initially. When the recruiter logs into the system, he would be able to view the user profiles separately along with uploading the information of newly created jobs and walk-ins. He can also see all the applications received for a particular job in response to his advertisement. Thus Job Miller is a common platform where corporate recruiters and job seekers come under the same roof.

**Technologies used:** J2SE, Servlets, JSP, JDBC and Java Script



#### **Current System Drawbacks:**

Doesn't provide effective and efficient services for different users of this system.

Doesn't provide secure and portable application

Doesn't provide all other related services under this portal

Doesn't provide the facility to the Job Seeker to track the job details to which he has applied for.

Doesn't provide Fast and efficient system

With the advent of new technology every task in modern life is being absorbed rapidly within the routine of human life. Such technologies are applied for various fields to improve the overall system performance to improve the productivity and popularity of the organization.

#### PROPOSED SYSTEM:

This product has been mainly designed to overcome some of the problems faced with the previous system. The main problem faced was unnecessary delay in generating the required information by all unnecessary fields into consideration.

It provides an efficient way to pass the information between different users to cater their needs. It is a Complete Portal for Job seekers and employers. It is an exclusive career portal aimed just for the service of job seekers. It is a common platform where corporate recruiters and job seekers come under roof. It is a one stop information clearing house about jobs and careers. Job Miller mainly aims on two kinds of users

#### **JobSeekers**

Search jobs, post your resume and access career info and download sample resumes, Papers of various recruiters and sample cover letters etc. and can upload any useful info.

#### **Employers**

Get instant access to today's most powerful hiring tools - post jobs, search resumes, screen candidates and streamline your entire hiring process.

#### **Advantages:**

- Faster and efficient system
- Wider range services available under one roof
- Highly Secure and Portable application
- Provides a facility for the Job Seekers to track their job details he has applied for
- Provides a facility for the Employer to search for required people very easily
- Provides efficient search mechanism using dynamic query generation

#### SOFTWARE REQUIREMENTS

Operating system : Windows
Language : Java1.6
Database : Oracle

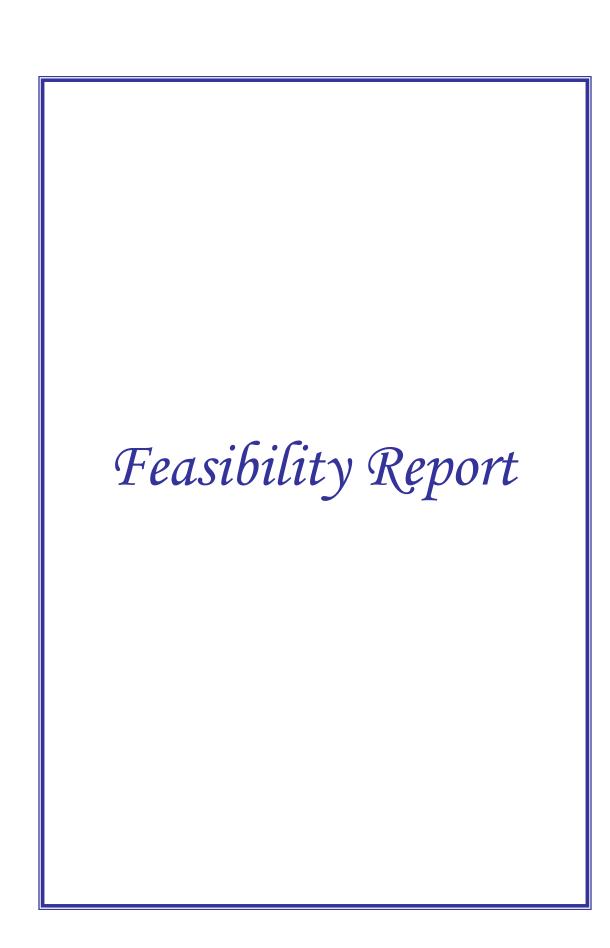
Server : Tomcat /web logic
Tool : Net beans/Eclipse

#### HARDWARE REQUIREMENTS

Processor : 2.4 GHz or Above

Ram : 1 GB

Hard Disk : minimum 80GB



#### **Feasibility Report**

#### **Technical Feasibility:**

The system is self-explanatory and does not need any extra sophisticated training. As the system has been built by concentrating on the Graphical User Interface Concepts, the application can also be handled very easily with a novice User. The overall time that is required to train the users upon the system is less than half an hour.

The System has been added with features of menu-driven and button interaction methods, which makes the user the master as he starts working through the environment. The net time the customer should concentrate is on the installation time.

#### **GUI's**

For the flexibility of the user, the interface has been developed in graphical user interface mode. The normal interface is applied through browser.

The GUI's at the top level has been categorized as:

- 1) JobSeeker Functions
- 2) Employer Functions
- 3) Guest user Functions

The **JobSeeker Functions** concentrates on the consistent information that is practically, pact of the organizational activities and which needs proper authentication for the data collection. This user can perform some tasks with out registering or with out enter into the application. He can able to search for the jobs in the site. He can able to download the information which is available for the jobseekers. He can able to view the walk-in details and can able to view the job details. The jobseeker can perform some tasks after enter into the application only. In any situation the jobseeker needs to change his password

then he can change on his own. He can view the details of his own profile and he can modify his details in his profile. He can view the details of jobs which are available in **6com**. He can view the details of all the walk-ins. The job seeker can add the new walk-in details. He can able to apply for the new jobs. He can view the details of all the applied jobs. He can be able to upload his information.

The **Employer Functions** helps to perform some tasks without login. He can view the little information about the job seekers. He can be able to download the information. He can view the details of all the walk-ins. He can view the details of all the jobs. The employer can view the details of all the jobseekers and he can view the details of all the jobs and also he can post for the new jobs. After login only the employer can perform some tasks. In any situation he needs to change the password then he can change it. The employer can view his own profile and also he can view the all the jobseekers profiles. He can able to post for a new job. He can view the details of all the jobs which are available in **6com**. He can able to post new walk-in details. The employer can be able to upload the information. He can be able view the candidates resumes applied for jobs posted by him.

The **Guest User Functions** helps to perform some tasks on his own. He can able to search for the jobs. The guest user can download the information from the site. He can be able to view all the walk-in details. He can view the details of all the jobs which are available in **6com**. He can view the little information about jobseekers. If the guest user wants register in the site, then he can register. After registering into the site then he will be one of the jobseeker.

#### **Number of Modules**

The system after careful analysis has been identified to present itself with the following modules:

- 6com Module: This module provides user interface to add the new jobs in 6com. This module deals with the functionalities like Posting Jobs & Walk in details. This module also includes job search functionality which is very helpful for job seekers to search various jobs. Also provides facility to filter the jobs based on various filters like Location, Experience and Functional Area. Keyword search is also available. User can filter the results by specifying the criteria like 'any word', 'all words' and 'Exact Phrase'. This search engine uses Dynamic Queries to generate exact results. Functionality that allows registered Job seekers to apply for the selected jobs also included in this module.
- ➤ **Resumes Module**: This module deals with user registration and creation of user profile and uploading resume. Also allows users to update their details and change the uploaded resume. Registered users can login and view their profile and can edit it. In this module some model resumes are available and any of the user can use those resumes and they can download the resumes.
- Upload & Downloads module: This module allows users to download placement papers, sample resumes and cover letters, FAQs and other useful information. Also allows registered users to upload their own content to the server. This module keeps the data in a secure manner to avoid un authorized file access. In this module the user can upload any of the following things. Sample Resumes, Cover Letters, Placement Papers, FAQ's, Tutors, and all the information. Only the registered users can upload the above information. Otherwise it will show the message like "you are not the authorized person to deal this". Any of the user can download the information without taking any registration.

➤ Employer module: This module mainly deals with functionalities provided for the employers which include Employer registration, Posting of Job & Walk in details. View profiles of job seekers and view the resumes of candidates applied for various jobs posted by them. The employer is having some tasks to perform without login and some tasks to perform after login. The employer module can display all the job details. Only the employer user can post the new job. The employer user can view all the details of jobseekers when he was entered into his login. This module contains all the walk-in details.

#### **Feasibility Study:**

#### **Technical feasibility:**

The system is self-explanatory and does not need any extra sophisticated training. As the system has been built by concentrating on the Graphical User Interface Concepts, the application can also be handled very easily with a novice User. The overall time that is required to train the users upon the system is less than half an hour.

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#### Financial Feasibility

- i) Time Based: Contrast to the manual system management can generate any report just by single click. In manual system it is too difficult to maintain historical data which become easier in this system. Time consumed to add new records or to view the reports is very less compared to manual system. So this project is feasible in this point of view
- **ii) Cost Based:** No special investment need to manage the tool. No specific training is required for employees to use the tool. Investment requires only once at the time of installation. The software used in this project is freeware so the cost of developing the tool is minimal and hence the overall cost.

Analysis Report

#### **SRS Document**

#### **Intended Audience And Reading Suggestions**

The document is prepared keeping is view of the academic constructs of my Bachelors Degree / Masters Degree from university as partial fulfillment of my academic purpose the document specifies the general procedure that that has been followed by me, while the system was studied and developed. The general document was provided by the industry as a reference guide to understand my responsibilities in developing the system, with respect to the requirements that have been pin pointed to get the exact structure of the system as stated by the actual client.

The system as stated by my project leader the actual standards of the specification were desired by conducting a series of interviews and questionnaires. The collected information was organized to form the specification document and then was modeled to suite the standards of the system as intended.

#### **Document Conventions:**

The overall documents for this project use the recognized modeling standards at the software industries level.

- ER-Modeling to concentrate on the relational states existing upon the system with respect to Cardinality.
- The Physical dispense, which state the overall data search for the relational key whereas a transaction is implemented on the wear entities.

- Unified modeling language concepts to give a generalized blue print for the overall system.
- The standards of flow charts at the required states that are the functionality of the operations need more concentration.

#### Scope of The Development Project:

#### Database design

**Database Tables:** The total number of database tables that were identified to build the system is 5. The major part of the

#### **Database** is categorized as

- 1. Transactional components: The Transactional components are useful in recording the transactions made by the system. All the goods bookings, loadings, deliveries, demurrages and receivers etc information handled by these components
- **2. Data Dictionary components:** These components are used to store the major information like Employee details, branches details, routes details, vehicles information etc.
- **3. General components:** These components are used to store the general information like login information etc.

#### Role Of Oracle In Database

ORACLE is one of the many database services that plug into a client / server model. It works efficiently to manage resources, a database information, among the multiple clients requesting & sending.

#### Structured Query Language (SQL)

SQL is an inter-active language used to query the database and access data in database. SQL has the following features:

- 1. It is a unified language.
- 2. It is a common language for relational database
- 3. It is a non-procedural language.

#### **Introduction To Oracle**

ORACLE is a comprehensive operating environment that packs the power of a mainframe system into user microcomputer. It provides a set of functional programs that user can use as tools to build structures and perform tasks. Because application developed on oracle are completely portable to environment and then move it into a multi user platform. Users do not have to be an expert to appreciate ORACLE, but the better user understands the programmer, the more productivity and creativity you will use the tools it provides.

#### What is a Relational Database Management System

A relational database management system (RDBMS) can perform a wide array of tasks. It acts as a transparent interface between the physical storage and a logical presentation of data. It provides a set of more or less flexible and sophisticates tools for handling information. User can use this tool to:

- ✓ Define a database
- ✓ Query the database
- ✓ Add, edit and delete data
- ✓ Modify the structure of database
- √ Secure data from public access
- ✓ Communicate within the networks
- ✓ Export and Import data

Because it gives so much control over data, a relational DBMS can also save as the foundation for products that generate application and extract data.

A Database Management system may be called fully relational if it supports:

- 1. Relational Databases and
- 2. A language that is at least as powerful as the relational algebra



#### **Client Server**

#### Over view:

With the varied topic in existence in the fields of computers, Client Server is one, which has generated more heat than light, and also more hype than reality. This technology has acquired a certain critical mass attention with its dedication conferences and magazines. Major computer vendors such as IBM and DEC, have declared that Client Servers is their main future market. A survey of DBMS magazine reveled that 76% of its readers were actively looking at the client server solution.

Client server implementations are complex but the underlying concept is simple and powerful. A client is an application running with local resources but able to request the database and relate the services from separate remote server. The software mediating this client server interaction is often referred to as MIDDLEWARE.

The typical client either a PC or a Work Station connected through a network to a more powerful PC, Workstation, Midrange or Main Frames server usually capable of handling request from more than one client. However, with some configuration server may also act as client. A server may need to access other server in order to process the original client request.

The key client server idea is that client as user is essentially insulated from the physical location and formats of the data needs for their application. With the proper middleware, a client input from or report can transparently access and manipulate both local database on the client machine and remote databases on one or more servers. An added bonus is the client server opens the door to multi-vendor database access indulging heterogeneous table joins.

#### What is a Client Server

Two prominent systems in existence are client server and file server systems. It is essential to distinguish between client servers and file server systems. Both provide shared network access to data but the comparison dens there! The file

server simply provides a remote disk drive that can be accessed by LAN applications on a file by file basis. The client server offers full relational database services such as SQL-Access, Record modifying, Insert, Delete with full relational integrity backup/ restore performance for high volume of transactions, etc. the client server middleware provides a flexible interface between client and server, who does what, when and to whom.

#### Why Client Server

Client server has evolved to solve a problem that has been around since the earliest days of computing: how best to distribute your computing, data generation and data storage resources in order to obtain efficient, cost effective departmental an enterprise wide data processing. During mainframe era choices were quite limited. A central machine housed both the CPU and DATA (cards, tapes, drums and later disks). Access to these resources was initially confined to batched runs that produced departmental reports at the appropriate intervals. A strong central information service department ruled the corporation. The role of the rest of the corporation limited to requesting new or more frequent reports and to provide hand written forms from which the central data banks were created and updated. The earliest client server solutions therefore could best be characterized as "SLAVE-MASTER".

Time-sharing changed the picture. Remote terminal could view and even change the central data, subject to access permissions. And, as the central data banks evolved in to sophisticated relational database with non-programmer query languages, online users could formulate adhoc queries and produce local reports with out adding to the MIS applications software backlog. However remote access was through dumb terminals, and the client server remained subordinate to the Slave\Master.

#### User Interface Design

The entire user interface is planned to be developed in browser specific environment with a touch of Intranet-Based Architecture for achieving the Distributed Concept.

The browser specific components are designed by using the HTML standards, and the dynamism of the designed by concentrating on the constructs of the Java Server Pages.

#### **Communication or Database Connectivity Tier**

The Communication architecture is designed by concentrating on the Standards of Servlets and Enterprise Java Beans. The database connectivity is established by using the Java Data Base Connectivity.

The standards of three-tire architecture are given major concentration to keep the standards of higher cohesion and limited coupling for effectiveness of the operations.

# <u>Features of The Language Used</u> <u>About Java</u>

Initially the language was called as "oak" but it was renamed as "Java" in 1995. The primary motivation of this language was the need for a platform-independent (i.e., architecture neutral) language that could be used to create software to be embedded in various consumer electronic devices.

- > Java is a programmer's language.
- > Java is cohesive and consistent.
- > Except for those constraints imposed by the Internet environment, Java gives the programmer, full control.

Finally, Java is to Internet programming where C was to system programming.

#### **Importance of Java to the Internet**

Java has had a profound effect on the Internet. This is because; Java expands the Universe of objects that can move about freely in Cyberspace. In a network, two categories of objects are transmitted between the Server and the Personal computer. They are: Passive information and Dynamic active programs. The Dynamic, Self-executing programs cause serious problems in the areas of

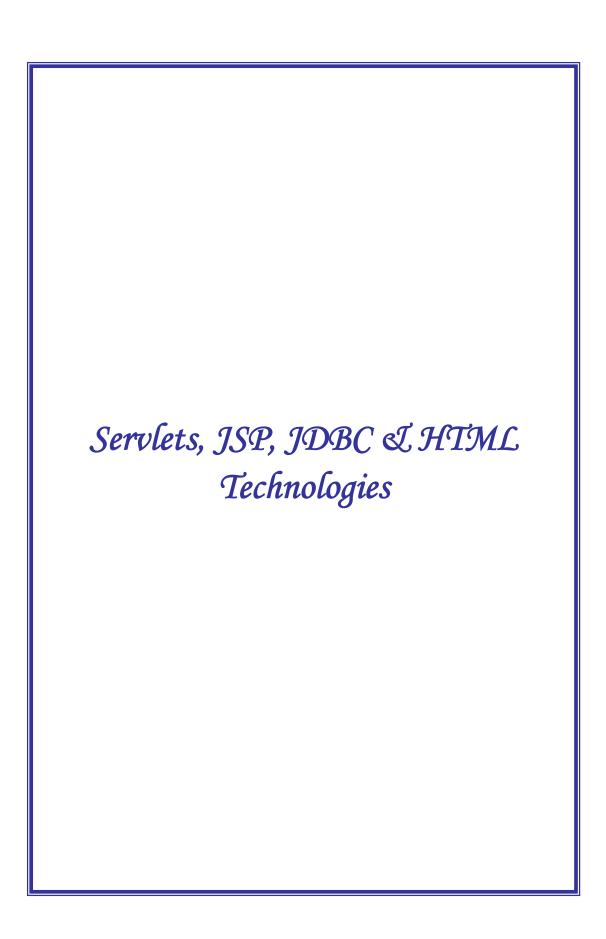
Security and probability. But, Java addresses those concerns and by doing so, has opened the door to an exciting new form of program called the Applet.

Java can be used to create two types of programs

**Applications** and **Applets**: An application is a program that runs on our Computer under the operating system of that computer. It is more or less like one creating using C or C++. Java's ability to create Applets makes it important. An Applet is an application designed to be transmitted over the Internet and executed by a Java –compatible web browser. An applet is actually a tiny Java program, dynamically downloaded across the network, just like an image. But the difference is, it is an intelligent program, not just a media file. It can react to the user input and dynamically change.

#### **Compilation of code**

When you compile the code, the Java compiler creates machine code (called byte code) for a hypothetical machine called Java Virtual Machine (JVM). The JVM is supposed to execute the byte code. The JVM is created for overcoming the issue of portability. The code is written and compiled for one machine and interpreted on all machines. This machine is called Java Virtual Machine.



#### <u>SERVLETS</u>

#### <u>Introduction</u>

The Java web server is JavaSoft's own web Server. The Java web server is just a part of a larger framework, intended to provide you not just with a web server, but also with tools. To build customized network servers for any Internet or Intranet client/server system. Servlets are to a web server, how applets are to the browser.

#### **About Servlets**

Servlets provide a Java-based solution used to address the problems currently associated with doing server-side programming, including inextensible scripting solutions, platform-specific APIs, and incomplete interfaces.

Servlets are objects that conform to a specific interface that can be plugged into a Java-based server. Servlets are to the server-side what applets are to the client-side - object byte codes that can be dynamically loaded off the net. They differ from applets in that they are faceless objects (without graphics or a GUI component). They serve as platform independent, dynamically loadable, plugable helper byte code objects on the server side that can be used to dynamically extend server-side functionality.

For example, an HTTP Servlets can be used to generate dynamic HTML content. When you use Servlets to do dynamic content you get the following advantages:

- They're faster and cleaner than CGI scripts
- They use a standard API (the Servlets API)
- > They provide all the advantages of Java (run on a variety of servers without needing to be rewritten).

#### **Advantages of the Servlet API**

One of the great advantages of the <u>Servlet API</u> is protocol independence. It assumes nothing about:

- > The protocol being used to transmit on the net
- > How it is loaded
- The server environment it will be running in

These qualities are important, because it allows the Servlet API to be embedded in many different kinds of servers. There are other advantages to the Servlet API as well. These include:

- > It's extensible you can inherit all your functionality from the base classes made available to you.
- > it's simple, small, and easy to use.

#### **Purpose**

The generated application is the first version upon the system. The overall system is planned to be in the formal of distributed architecture with homogeneous database platform. The major objective of the overall system is to keep the following components intact.

♦System consistency♦System integrity♦ Overall security of data♦ Data reliability and Accuracy♦ User friendly name both at administration and user levels♦ Considering the fact of generality and clarity ♦To cross check that the system overcomes the hurdles of the version specific standards

#### **Database Tables:**

**Application details:** This table holds the application details of jobs applied by job seekers

**Contact information:** Holds the contact information of registered users

Educational details: Holds the Educational information of registered users

Interview details: Holds the details of posted jobs by employers

**Login:** Holds Login details like user id , password and authentication information of registered users.

**Personal information:** Holds the personal information like date of birth of registered users

**Professional information:** Holds the professional information like experience, functional area etc of registered users

**Uploads:** This table is used to store the details of files uploaded by registered users.

**Walk in details:** This table holds the details of walk ins posted by the recruiters , other job seekers.

Few database table mock-up designs.

# > Applicationdetails

Field Name	Data Type	Size
APPLICATION ID	VARCHAR	20
USER ID	VARCHAR	20
JOB ID	VARCHAR	20
APPLICATION DATE	DATE	
STATUS	VARCHAR	20

# > Contactinformation

Field Name	Data Type	Size
CONTACT ID	VARCHAR	20
USER ID	VARCHAR	20
FIRST NAME	VARCHAR	100
LAST NAME	VARCHAR	100
EMAIL	VARCHAR	200
CONTACT NUMBER	VARCHAR	100
CURRENT LOCATION	VARCHAR	100
ADDRESS	VARCHAR	200

### > Educationaldetails

Field Name	Data Type	Size
EDUCATIONAL ID	VARCHAR	20
USER ID	VARCHAR	20
BASIC QUALIFICATION	VARCHAR	200
PERCENTAGE BQ	VARCHAR	200
YEAR OF PASS BQ	VARCHAR	200
UNIVERSITY BQ	VARCHAR	200
POSTGRADUATION	VARCHAR	200
PERCENTAGE	VARCHAR	200
YEAR OF PASS	VARCHAR	200
UNIVERSITY	VARCHAR	200

# > Employregistration

Field Name	Data Type	Size
USER ID	VARCHAR	200
PASSWORD	VARCHAR	200
EMPLOYEE NAME	VARCHAR	200
EMP NO	VARCHAR	200
COMPANY NAME	VARCHAR	200
CONTACT NO	VARCHAR	200
EMAIL ID	VARCHAR	200
DATE OF REGISTRATION	DATE	
COST	VARCHAR	200

#### > Interviewdetails

Field Name	Data Type	Size
INTERVIEWID	VARCHAR	20
JOB TITLE	VARCHAR	200
JOB DESCRIPTION	TINYTEXT	
ELIGIBILITY	VARCHAR	255
LOCATION	VARCHAR	255
APPLYBEFORE	DATE	
COMPANY NAME	VARCHAR	200
COMPANY PROFILE	TEXT	
EMAIL TO APPLY	VARCHAR	200
WEBSITE	VARCHAR	200
EXECUTIVE NAME	VARCHAR	200
ADDRESS	TINYTEXT	
TELEPHONE	INT	100
FAX	VARCHAR	200
DATE OF POSTING	DATE	
FUNCTIONAL AREA	VARCHAR	100
MIN EXPERIENCE	INT	10
MAX EXPERIENCE	INT	10

# > Login:

Field Name	Data Type	Size
USER ID	VARCHAR	20
PASSWORD	VARCHAR	20
AUTH	INT	5

#### > Personalinformation:

Field Name	Data Type	Size
PERSONAL ID	VARCHAR	20
USER ID	VARCHAR	20
DATE OF BIRTH	DATE	
GENDER	VARCHAR	100

# > Professionalinformation:

Field Name	Data Type	Size
PROFESSIONAL ID	VARCHAR	20
USER ID	VARCHAR	20
TOTAL EXPERIENCE	DOUBLE	
ANNUAL SALARY	FLOAT	
FUNCTIONAL AREA	VARCHAR	200
COMPANY NAME	VARCHAR	200
KEY SKILLS	VARCHAR	200
RESUME TITLE	VARCHAR	200
RESUME PATH	VARCHAR	100
TEXT RESUME	TEXT	

# > Uploads:

Field Name	Data Type	Size
UPLOAD ID	VARCHAR	20
USER ID	VARCHAR	20
TITLE	VARCHAR	200
DATE	DATE	
CATEGORY	VARCHAR	255
DESCRIPTION	VARCHAR	255
CONTRIBUTOR	VARCHAR	255
FILE PATH	VARCHAR	100

# > Walkindetails:

Field Name	Data Type	Size
WALKIN ID	VARCHAR	20
JOB TITLE	VARCHAR	200
JOB DESCRIPTIION	TINYTEXT	
ELIGIBILITY	VARCHAR	200
LOCATION	VARCHAR	200
WALKINDATE	DATE	
WALKIN TIME	VARCHAR	200
COMPANY NAME	VARCHAR	200
COMPANY DESCRIPTION	TEXT	
ADDRESS	VARCHAR	254
WEBSITE	VARCHAR	254
EMAIL TO REGISTER	VARCHAR	254
FUNCTIONAL AREA	VARCHAR	100

# Design Document

#### **Design Document**

- The entire system is projected with a physical diagram which specifics the actual storage parameters that are physically necessary for any database to be stored on to the disk. The overall systems existential idea is derived from this diagram.
- 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 content level DFD is provided to have an idea of the functional inputs and outputs that are achieved through the system. The system depicts the input and out put standards at the high level of the systems existence.

#### **Data Flow Diagrams**

- This Diagram server two purpose.
  - $\begin{picture}(60,0)\put(0,0){\line(0,0){100}}\put(0,0)$
  - $\begin{picture}{ll} \begin{picture}(20,0) \put(0,0){\line(0,0){100}} \put$
- The Data flow diagram provides additional information that is used during the analysis of the information domain, and server as a basis for the modeling of functions.
- The description of each function presented in the DFD is contained is a process specifications called as PSPEC

#### **ER-Diagrams**

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

#### **Unified Modeling Language Diagrams**

- The unified modeling language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules.
- A UML system is represented using five different views that describe the system from distinctly different perspective. Each view is defined by a set of diagram, which is as follows.

#### **User Model View**

- i. This view represents the system from the users perspective.
- ii. The analysis representation describes a usage scenario from the end-users perspective.

#### Structural model view

- ◆ In this model the data and functionality are arrived from inside the system.
- This model view models the static structures.

#### **Behavioral Model View**

◆ It represents the dynamic of behavioral as parts of the system, depicting the interactions of collection between various structural elements described in the user model and structural model view.

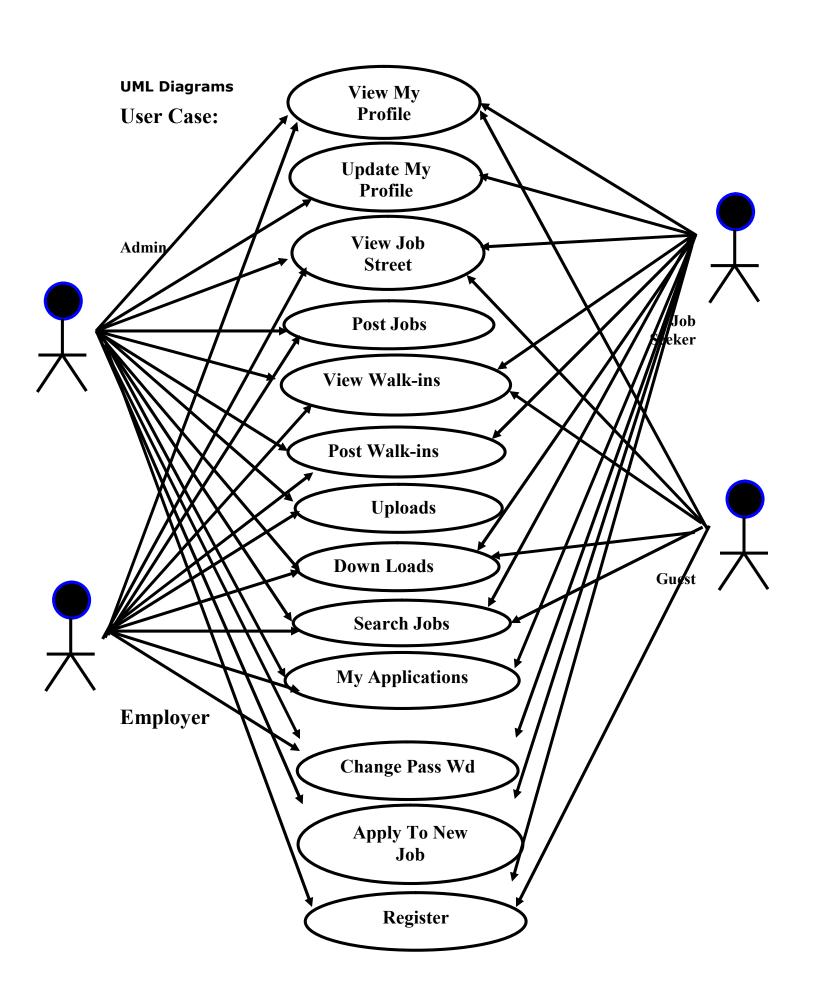
#### **Implementation Model View**

• In this the structural and behavioral as parts of the system are represented as they are to be built.

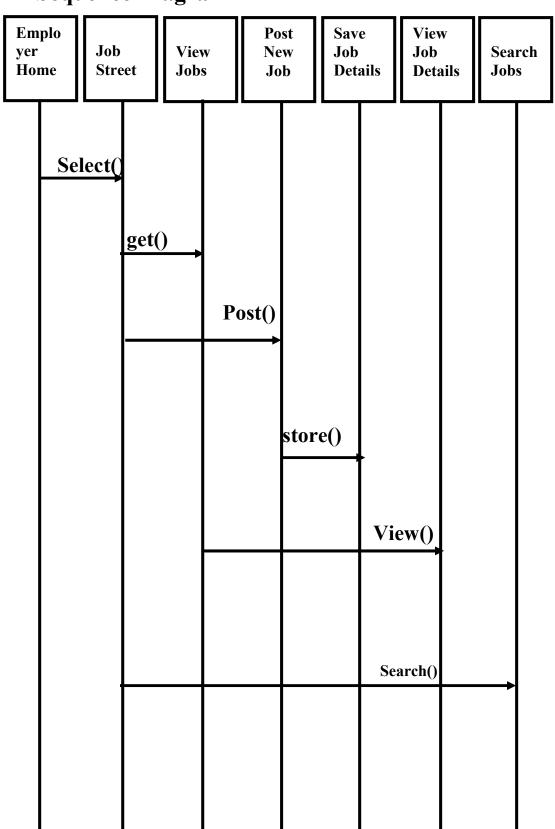
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#### **Environmental Model View**

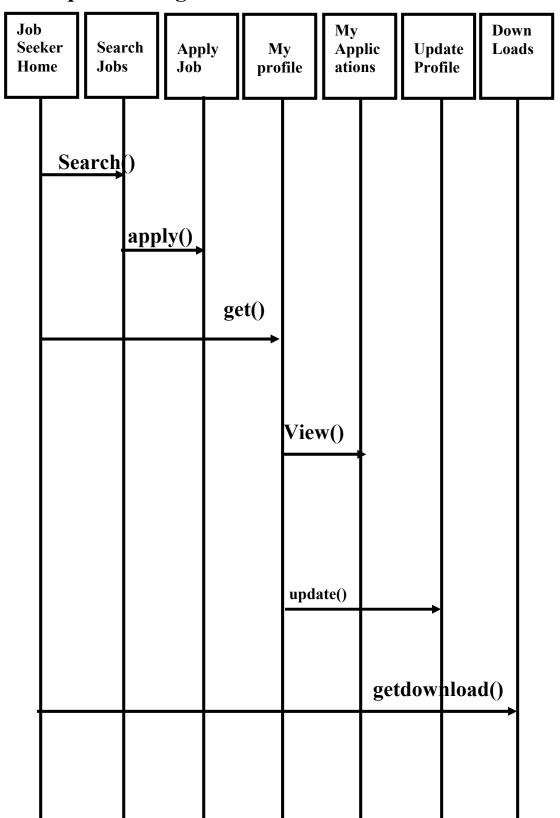
In this the structural and behavioral aspects of the environment in which the system is to be implemented are represented.



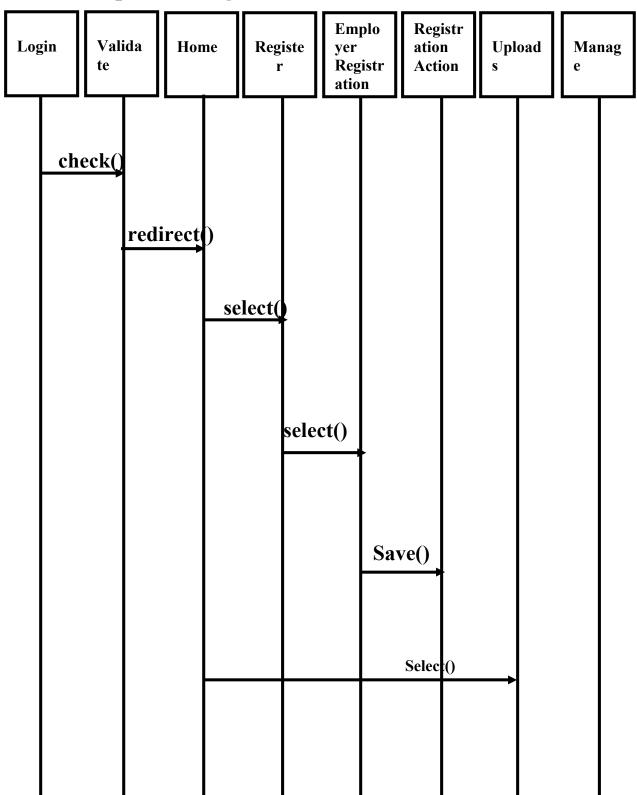
### **Sequence Diagram**

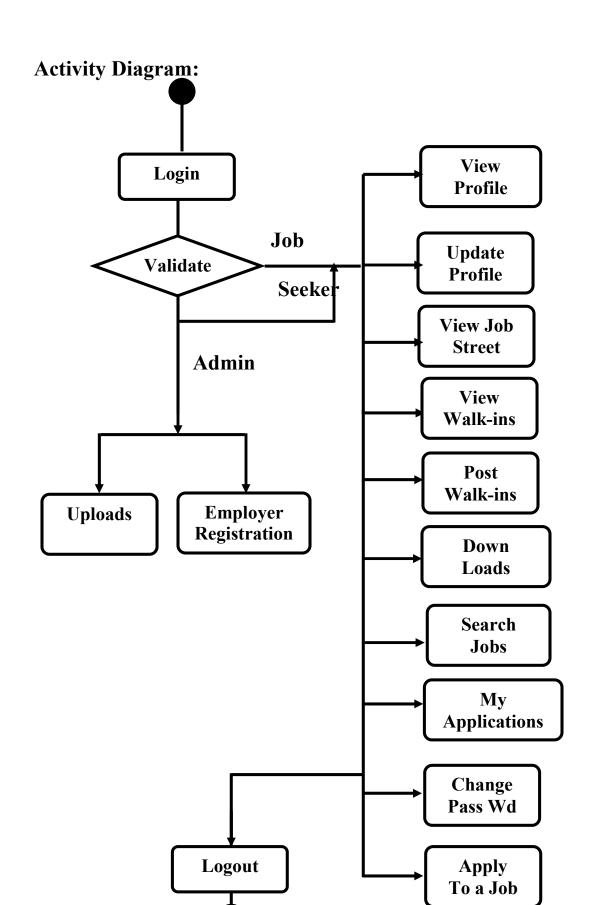


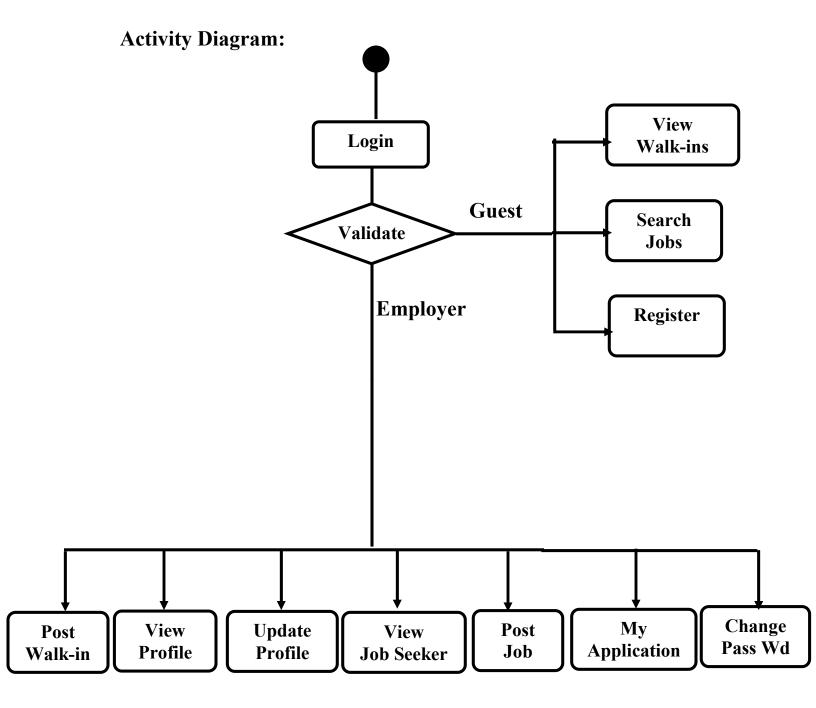
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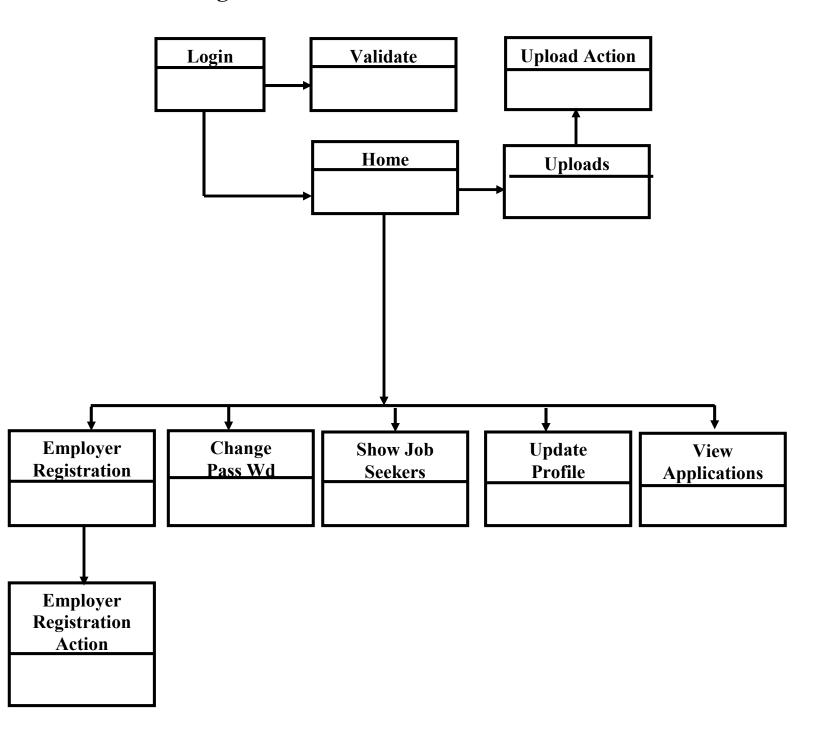
# **Sequence Diagram**



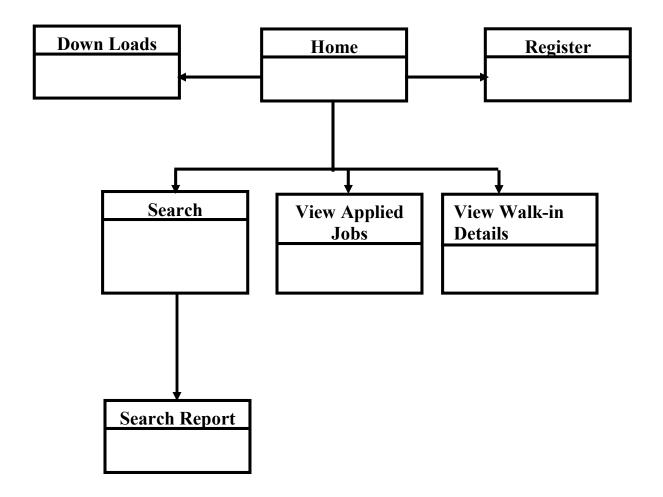




### **Class Diagrams:**



# **Class Diagram:**



#### **Program Design Language**

 The program design language is also called as structured English or pseudopodia. PDL is a generic reference for a design language PDL looks like a modern language. The difference between PDL and real programming language lies in the narrative text embedded directly within PDL statements.

#### The characteristics required by a design language are:

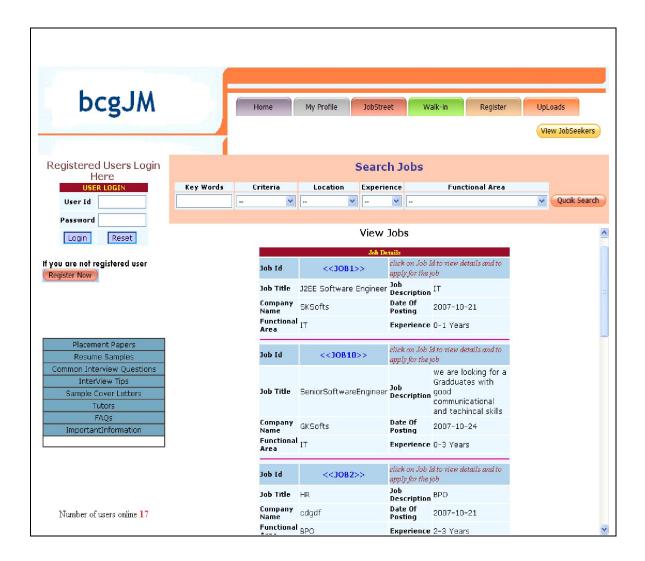
- > A fixed system of keywords that provide for all structured constructs date declaration and modularity characteristics.
- A free syntax of natural language that describes processing features.
- Date declaration facilities that should include both simple and complex data structures.
- > Subprogram definition and calling techniques that support various nodes of interface description.

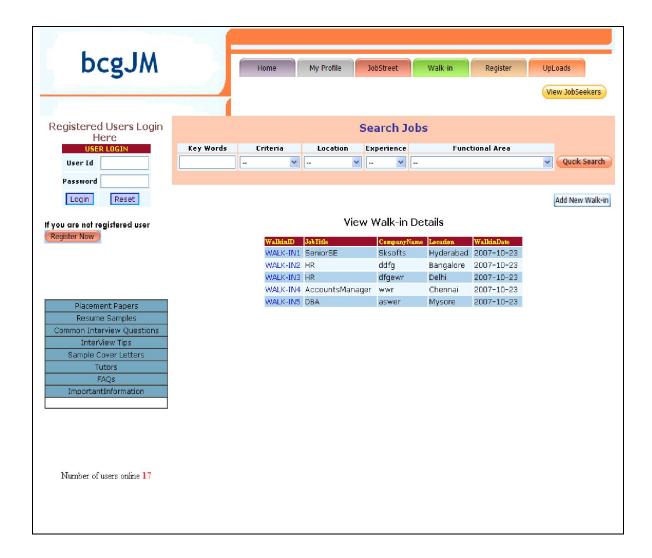
PDL syntax should include constructs for subprogram definition, interface description date declaration techniques for structuring, conditions constructs, repetition constructs and I/O constructs.

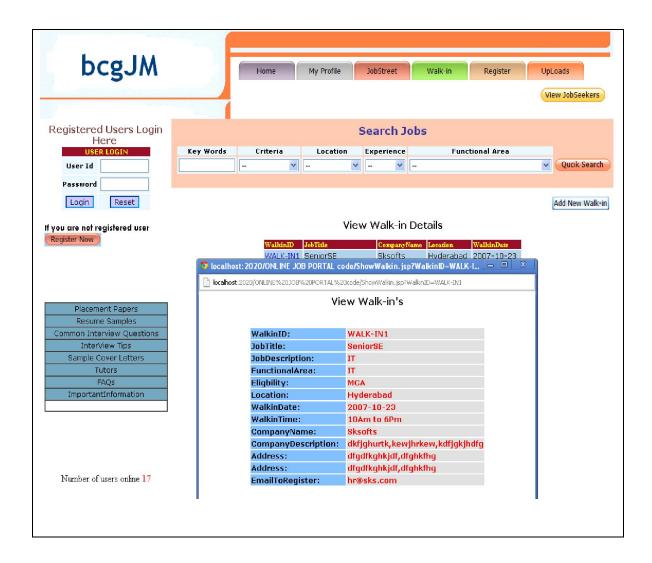
PDL can be extended to include keywords for multitasking and/or concurrent processing interrupt handling, interposes synchronization the application design for which PDL is to be used should dictate the final form for the design language.

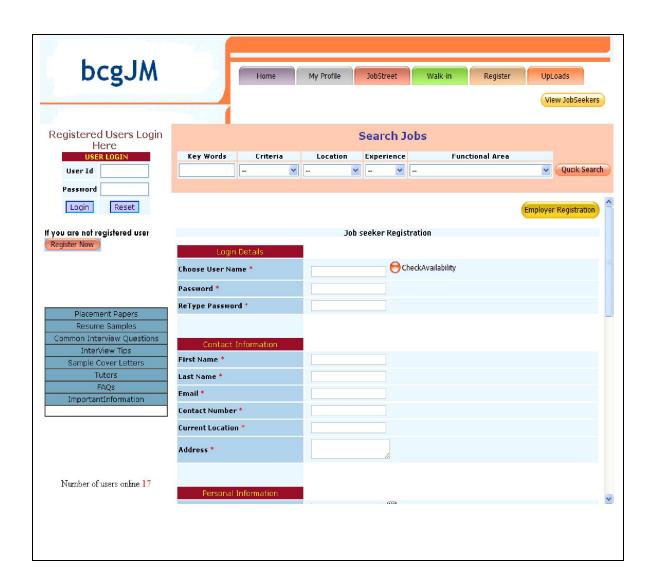
User Manual

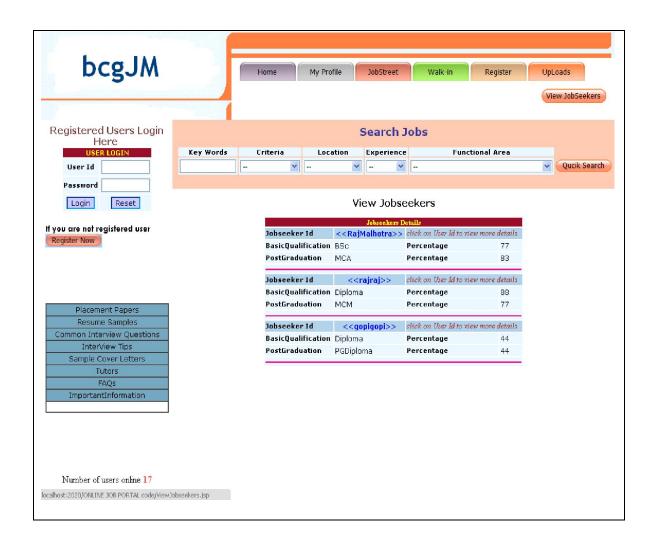
### **SCREENS**

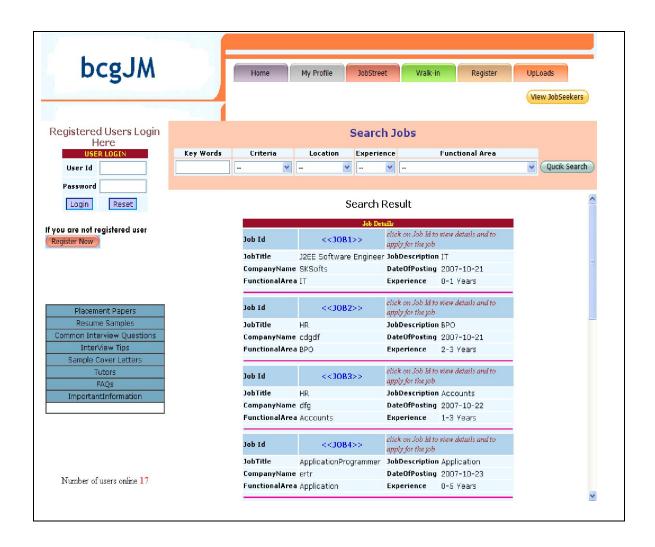


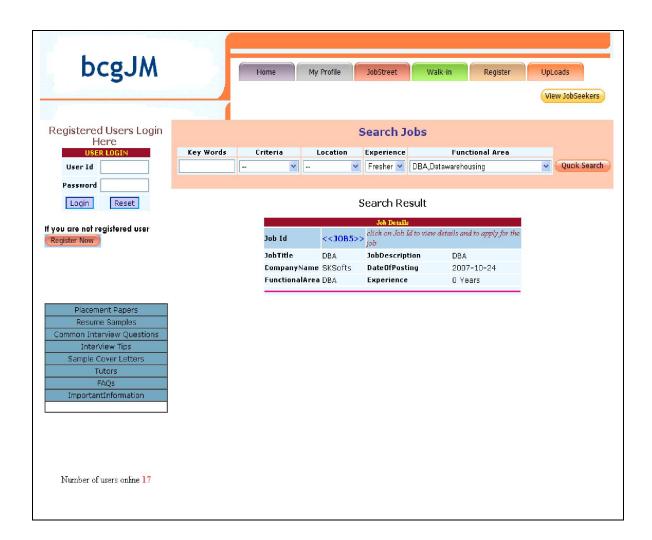


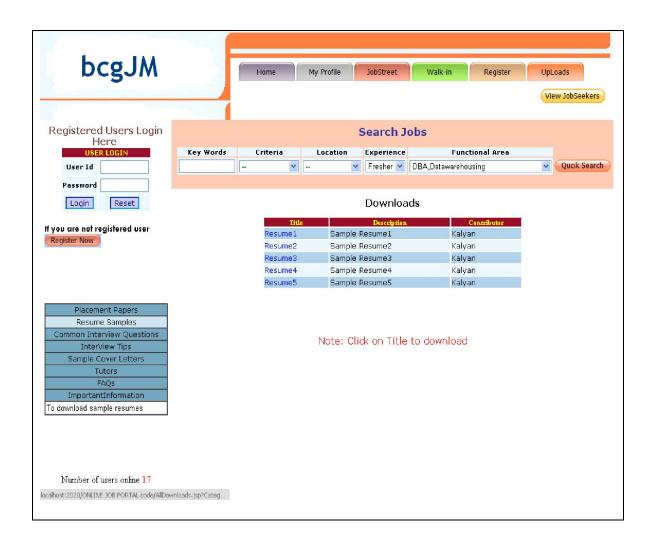


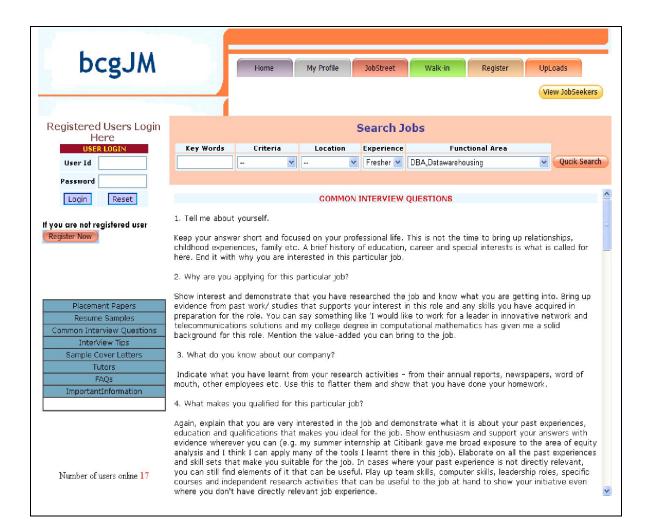


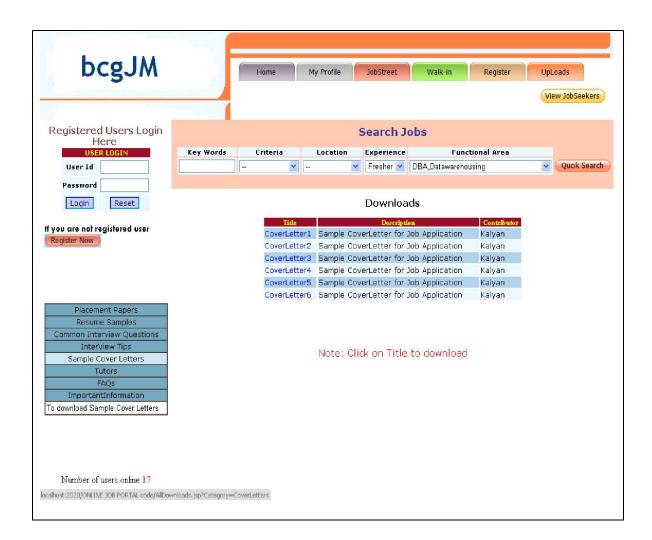


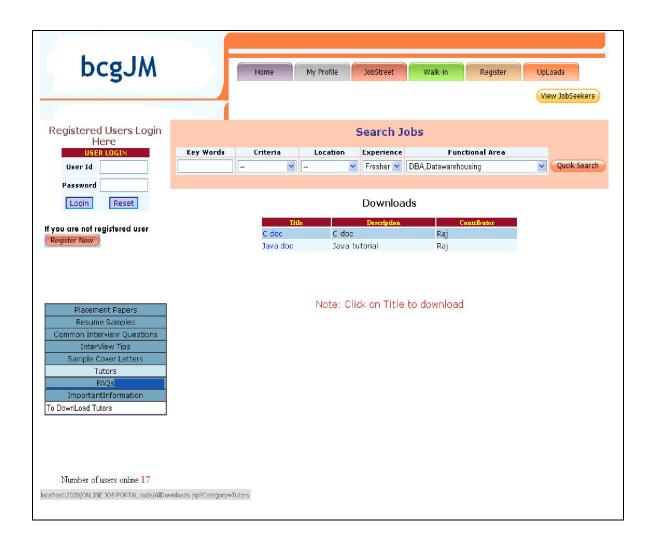


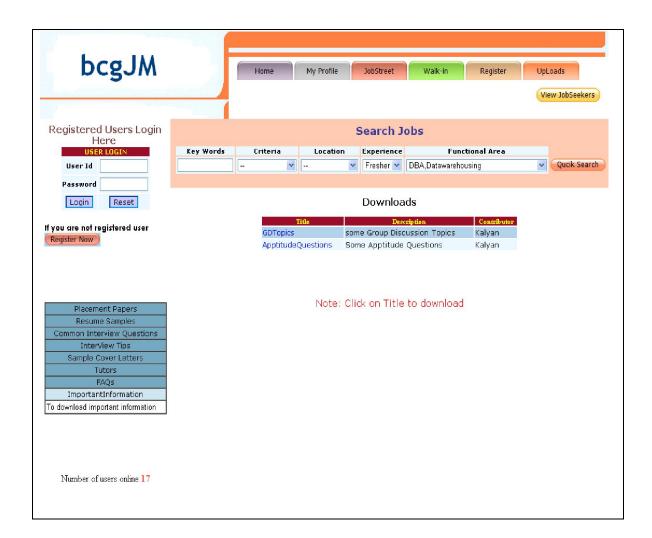


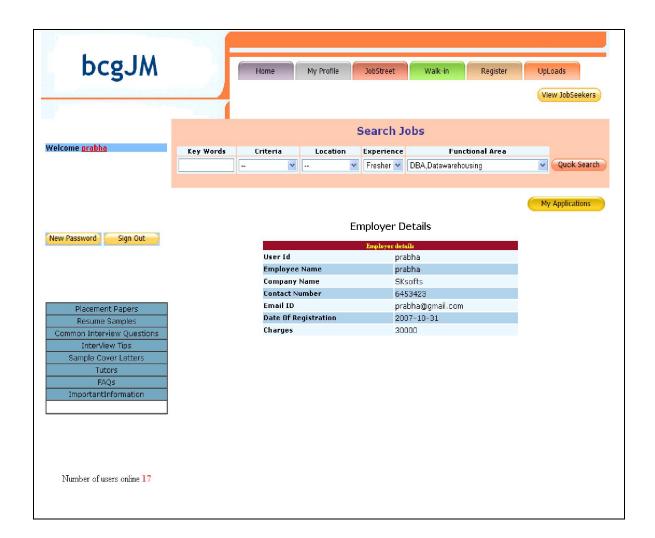


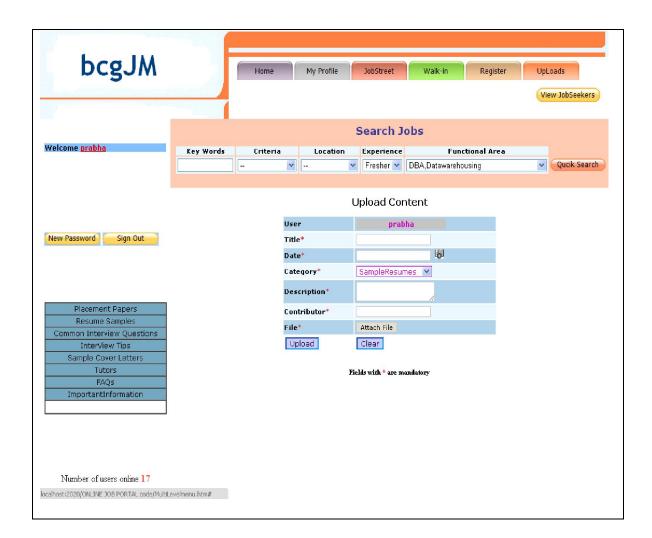


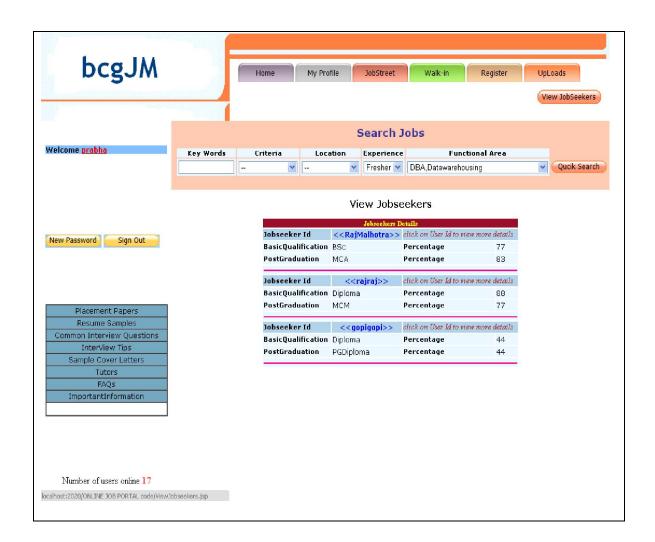


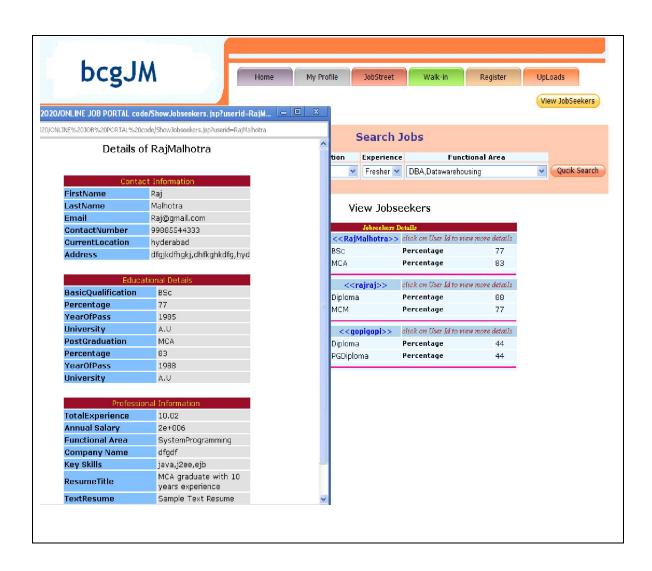


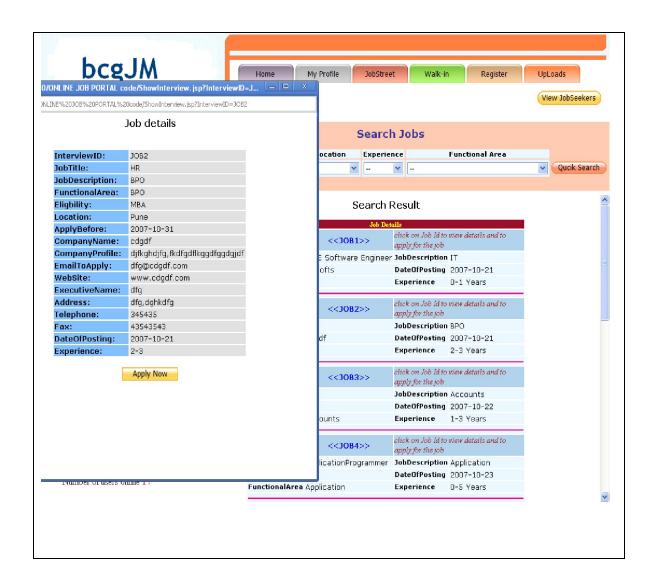












Testing A Debugging Strategies

#### Testing

Testing is the process of detecting errors. Testing performs a very critical role for quality assurance and for ensuring the reliability of software. The results of testing are used later on during maintenance also.

#### Psychology of Testing

The aim of testing is often to demonstrate that a program works by showing that it has no errors. The basic purpose of testing phase is to detect the errors that may be present in the program. Hence one should not start testing with the intent of showing that a program works, but the intent should be to show that a program doesn't work. Testing is the process of executing a program with the intent of finding errors.

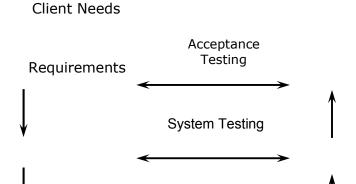
#### Testing Objectives

The main objective of testing is to uncover a host of errors, systematically and with minimum effort and time. Stating formally, we can say,

- > Testing is a process of executing a program with the intent of finding an error.
- > A successful test is one that uncovers an as yet undiscovered error.
- A good test case is one that has a high probability of finding error, if it exists.
- The tests are inadequate to detect possibly present errors.
- > The software more or less confirms to the quality and reliable standards.

#### Levels of Testing

In order to uncover the errors present in different phases we have the concept of levels of testing. The basic levels of testing are as shown below...



Design

Code

#### System Testing

The philosophy behind testing is to find errors. Test cases are devised with this in mind. A strategy employed for system testing is code testing.

#### Code Testing:

This strategy examines the logic of the program. To follow this method we developed some test data that resulted in executing every instruction in the program and module i.e. every path is tested. Systems are not designed as entire nor are they tested as single systems. To ensure that the coding is perfect two types of testing is performed or for that matter is performed or that matter is performed or for that matter is performed on all systems.

#### Types Of Testing

- Unit Testing
- Link Testing

#### **Unit Testing**

Unit testing focuses verification effort on the smallest unit of software i.e. the module. Using the detailed design and the process specifications testing is done to uncover errors within the boundary of the module. All modules must be successful in the unit test before the start of the integration testing begins.

In this project each service can be thought of a module. There are so many modules like Login, HWAdmin, MasterAdmin, Normal User, and PManager. Giving different sets of inputs has tested each module. When developing the module as well as finishing the development so that each module works without any error. The inputs are validated when accepting from the user.

In this application developer tests the programs up as system. Software units in a system are the modules and routines that are assembled and integrated to form a specific function. Unit testing is first done on modules, independent of one another to locate errors. This enables to detect errors. Through this errors resulting from interaction between modules initially avoided.

#### Link Testing

Link testing does not test software but rather the integration of each module in system. The primary concern is the compatibility of each module. The Programmer tests where modules are designed with different parameters, length, type etc.

#### Integration Testing

After the unit testing we have to perform integration testing. The goal here is to see if modules can be integrated proprerly, the emphasis being on testing interfaces between modules. This testing activity can be considered as testing the design and hence the emphasis on testing module interactions.

In this project integrating all the modules forms the main system. When integrating all the modules I have checked whether the integration effects working of any of the services by giving different combinations of inputs with which the two services run perfectly before Integration.

#### System Testing

Here the entire software system is tested. The reference document for this process is the requirements document, and the goal is to see if software meets its requirements.

Here entire 'bcgJM' has been tested against requirements of project and it is checked whether all requirements of project have been satisfied or not.

#### Acceptance Testing

Acceptance Test is performed with realistic data of the client to demonstrate that the software is working satisfactorily. Testing here is focused on external behavior of the system; the internal logic of program is not emphasized.

In this project 'Network Management Of Database System' I have collected some data and tested whether project is working correctly or not.

Test cases should be selected so that the largest number of attributes of an equivalence class is exercised at once. The testing phase is an important part of software development. It is the process of finding errors and missing operations and also a complete verification to determine whether the objectives are met and the user requirements are satisfied.

#### White Box Testing

This is a unit testing method where a unit will be taken at a time and tested thoroughly at a statement level to find the maximum possible errors. I tested step wise every piece of code, taking care that every statement in the code is executed at least once. The white box testing is also called Glass Box Testing.

I have generated a list of test cases, sample data. which is used to check all possible combinations of execution paths through the code at every module level.

#### **Black Box Testing**

This testing method considers a module as a single unit and checks the unit at interface and communication with other modules rather getting into details at statement level. Here the module will be treated as a block box that will take some input and generate output. Output for a given set of input combinations are forwarded to other modules.

#### Criteria Satisfied by Test Cases

- 1) Test cases that reduced by a count that is greater than one, the number of additional test cases that much be designed to achieve reasonable testing.
- 2) Test cases that tell us something about the presence or absence of classes of errors, rather than an error associated only with the specific test at hand.

Conclusions A Recommendations

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