

# Online Job Portal Web-Application

Computing Lab Assignment 4

Phase-I Report

MASTER OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

in

INFORMATION SECURITY

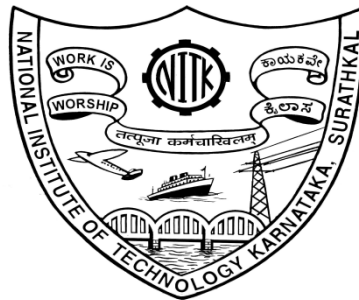
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# Chapter 1

## Introduction

### 1.1 Description

Some of the old ways of recruitment are advertisements in newspapers, posters, televisions, job fairs in college etc. But these old fashioned ways are tedious and time consuming, from handling printed resumes and keeping a track of them, processing them and then shortselecting and calling the desired candidate for interviews is a lot of work. But with the advancement in technology and evolution of the internet things have changed.

Our online job search portal web application comes to rescue at this point where a lot of meaningful time can be saved as well as the cost of advertisements. This project is aimed at the development of an Online Job Search Portal for providing the placement details for job seekers. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided after the prerequisite registration. Job Seekers after signing up should be able to upload their information in the form of a CV and the creation of a profile. Company representatives or recruiters can also register and may also access/search any information put up by job aspirants.

Nowadays, we know that searching for jobs is a difficult task in proficient areas. The portal is developed for providing a simple and effective job searching method. With the help of this portal, the job seeker can easily submit their resume/applications and get a lot of the job opportunities related to their profile in their interested field. Moreover, by this website the employers can also find a good and well qualified candidate as per suited to their needs.

## 1.2 Motivation

Applying for different jobs in a company by going to their website one by one is a lot of work. It's time consuming. We have failed to visit tons of job fairs happening around the country because of time constraints. We can't reach everywhere, we can't check out every job of our domain, by this we miss lots of opportunities. This is the problem with the recruiter also. They want the best for the role but provided limited candidates they have to settle with less. If more and more candidates with various specializations apply for a particular job then they can hire the best. There we feel a need for a platform where recruiters and job seekers can easily perform these tasks.

In this era of technology, there are several systems for different fields which serve as a common platform between client and service provider. For the education sector there are several startups which give a common stage to the teacher and student like Vedantu, Byju, Unacademy, Tata Studi etc. For food delivery there are many startups like Zomato, Swiggy etc. and in other fields we also have many startups but there is no popular platform for job seekers. This system will provide a common platform for recruiters and job seekers.

As the Indian market, there are ample opportunities for job portal sites, as more and more educated and skilled young people are coming out each and every year. Also, as the growth rate of India is zooming to be at a healthy rate over 7%, so it is a boom time for corporations also. So, more and more lucrative careers will be available for the job seekers. So, it is now the right period for the job portal sites to think out of the box, and to make most of the opportunities available.

## Chapter 2

# Business Requirements

Job Portals are like the meeting points for the recruiters as well as the job seekers where both aim at meeting their individual requirements. Job seekers try to find a job opportunity where they can apply their knowledge, acquire new skills and grow as a professional. On the other hand, recruiters try to fill their job openings with the right candidate who has the perfect aptitude and qualification to handle the responsibilities efficiently. Job portals are like a marketplace where the demand meets the supply.

### **Job Seekers :**

Job seekers should have their own profile page where they can change/update his information. A job seeker can apply to different jobs relevant to him. There should be a provision for him for uploading his resume. He should be notified when his resume is accepted by a company. He should have his own unique credentials. They can search for jobs, so provide a place where they can search for the jobs they are looking for.

### **Recruiter/Company :**

They also needed to have their own profile page, where they can write information about their company. They can see the profile of the job seeker who has applied for the certain job. Every job must enter a deadline and no job seeker can apply for the job after the deadline is passed. Also the job posting should be deleted after a few days of passing the deadline. Provide unique credentials for the company also. They have the ability to stop a job seeker from applying to the job posted by them.

### **Admin :**

Unique credentials. Can control job seekers as well as company behavior. Have the ability to block companies as well as job seekers.

The UI should be clean and classy. The alignment should be in a proper way. The UI should be responsive for laptop, tab and smartphone. Color selection needs to be done carefully. It should be easy to navigate through pages. User friendly UI is a must.

## 2.1 Software-Requirements

- Operating System: Windows
- Programming language: Python, HTML ,CSS, Javascript
- Frameworks: Django
- Database: SQL Server
- Web Browser: Firefox/Chrome/Edge/Safari

## 2.2 Hardware-Requirements

- Processor: Intel pentium and above versions
- RAM: 1 GB (further increase that as per requirement.)
- Processor Speed: 1.6GHZ and above
- Hard-disk: 20GB and above

## Chapter 3

# Context Diagram

A context diagram is a high-level kind of Data Flow Diagram. The chart is popular among business personnel and analysts because they are using it as an instrument to understand the environment and the critical factors that can affect our business negatively or positively. One great benefit of a system context diagram is its ability to analyse the detailed flow among the system and external components.

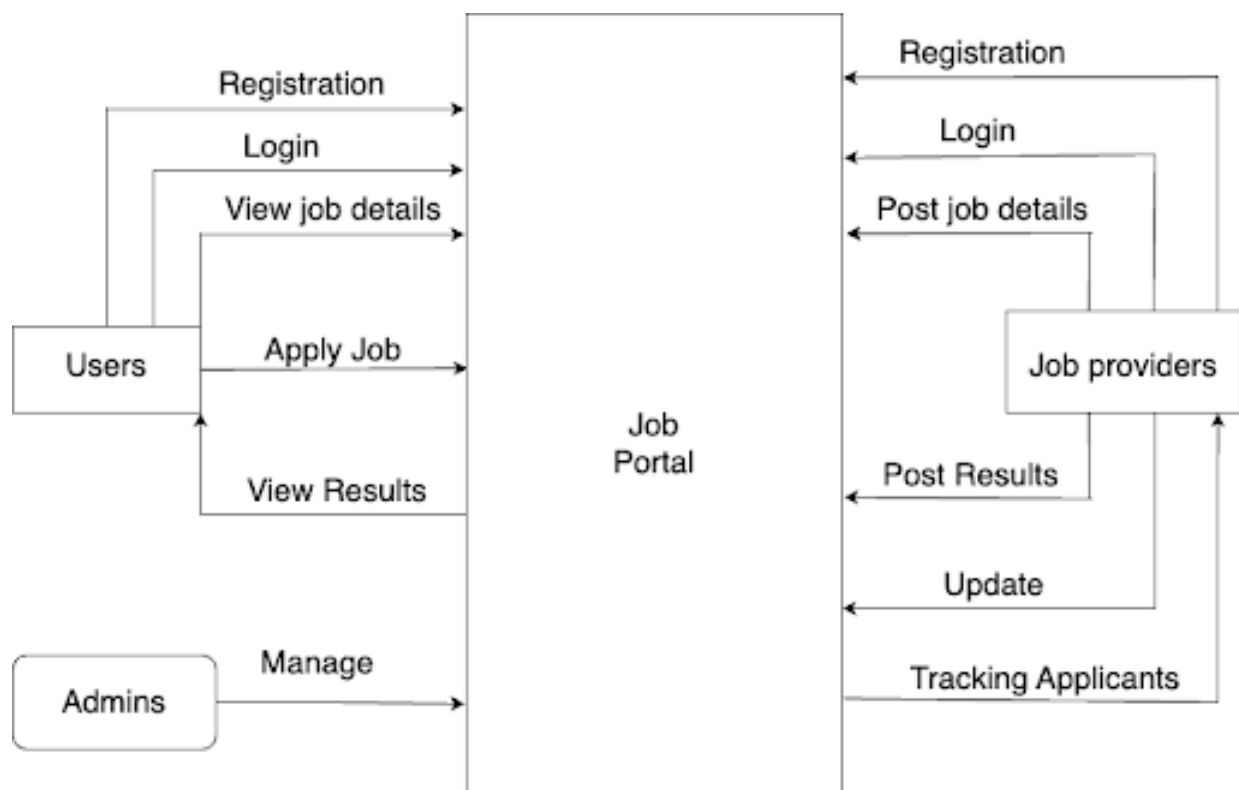


Figure 3.1: Context Diagram



## Chapter 4

# Data Analysis and Interpretation

### 4.1 E-R Diagram

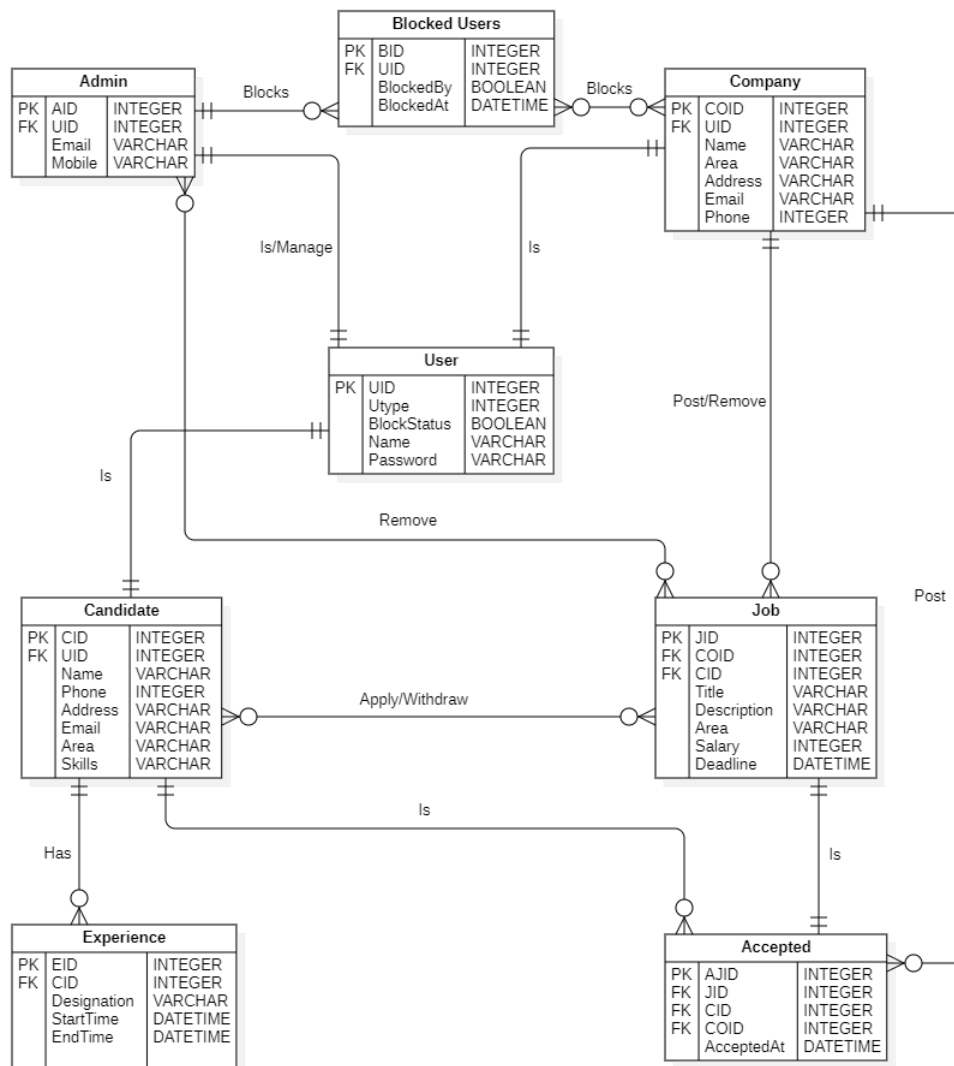


Figure 4.1: Entity-Relationship Diagram

ER Diagram stands for Entity Relationship Diagram (ERD) is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

UML Diagrams

## 4.2 UML Diagrams

UML (Unified Modeling Language) is one of the methodologies used in system analysis to understand, clarify and organize system requirements. Use case diagram is used in UML, UML clearly shows various user activities in the system that every user can perform and functionalities.

### 4.2.1 Activity Diagrams

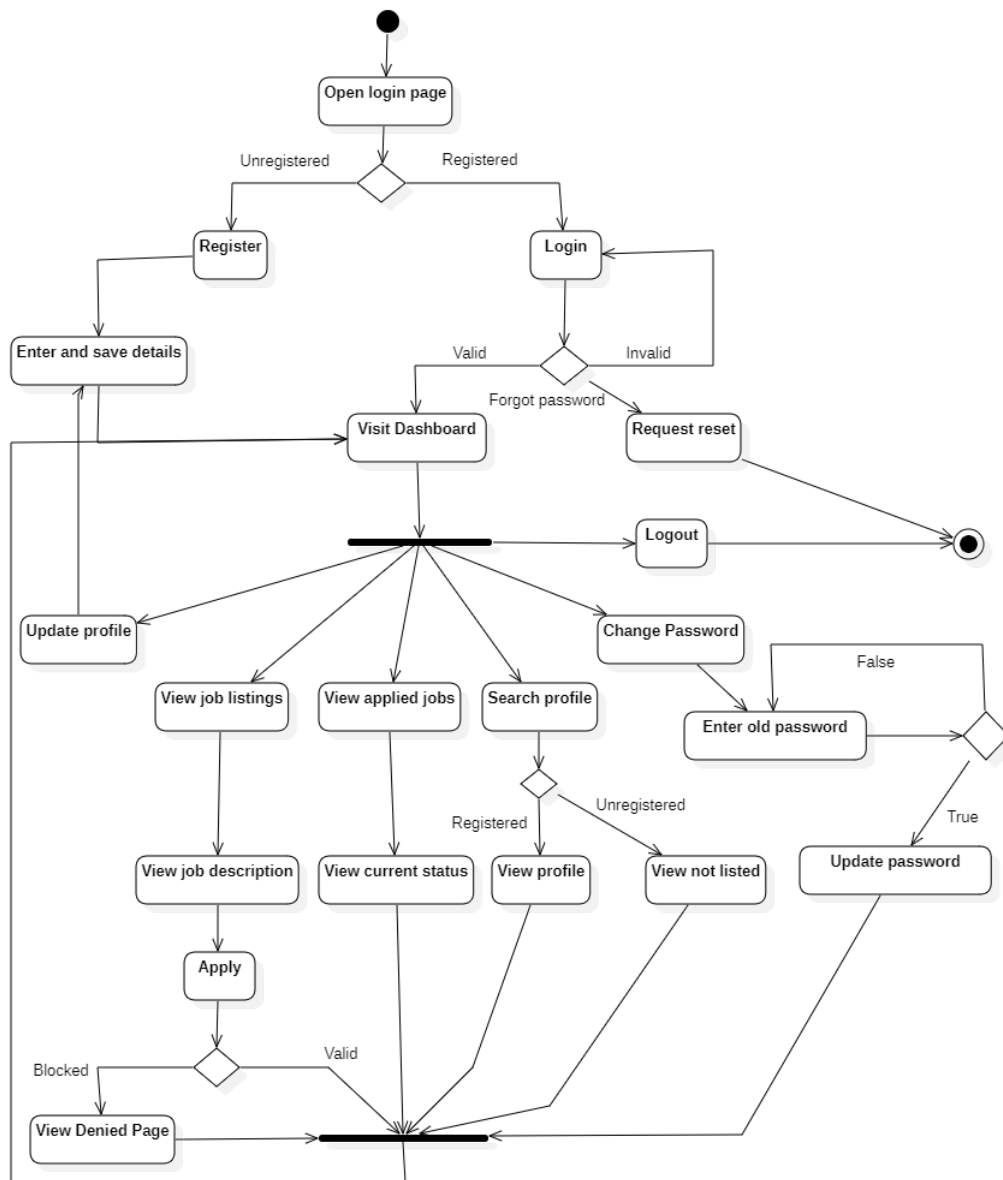


Figure 4.2: UML Activity-job-seekers Diagram

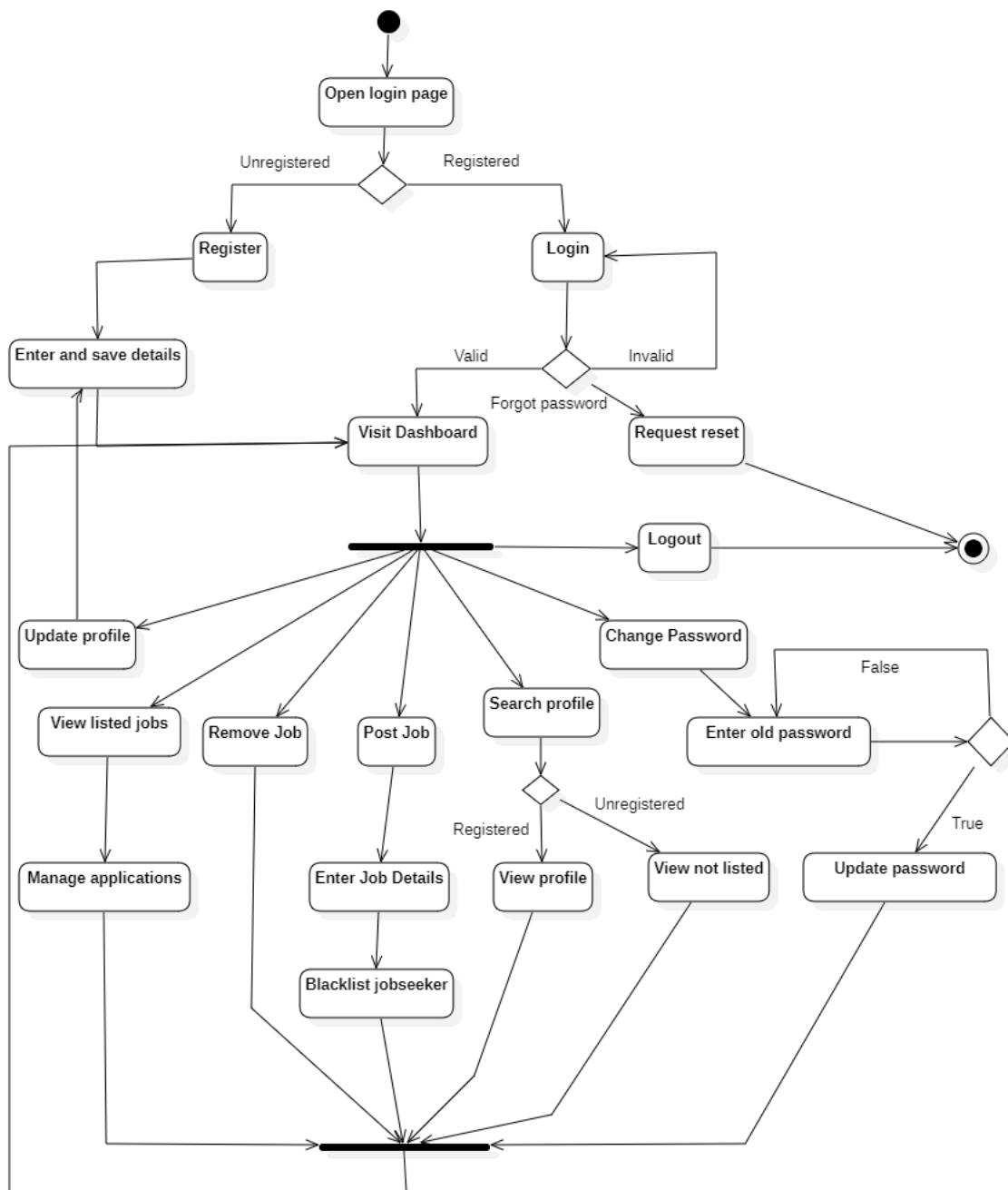


Figure 4.3: UML Activity-Employer Diagram

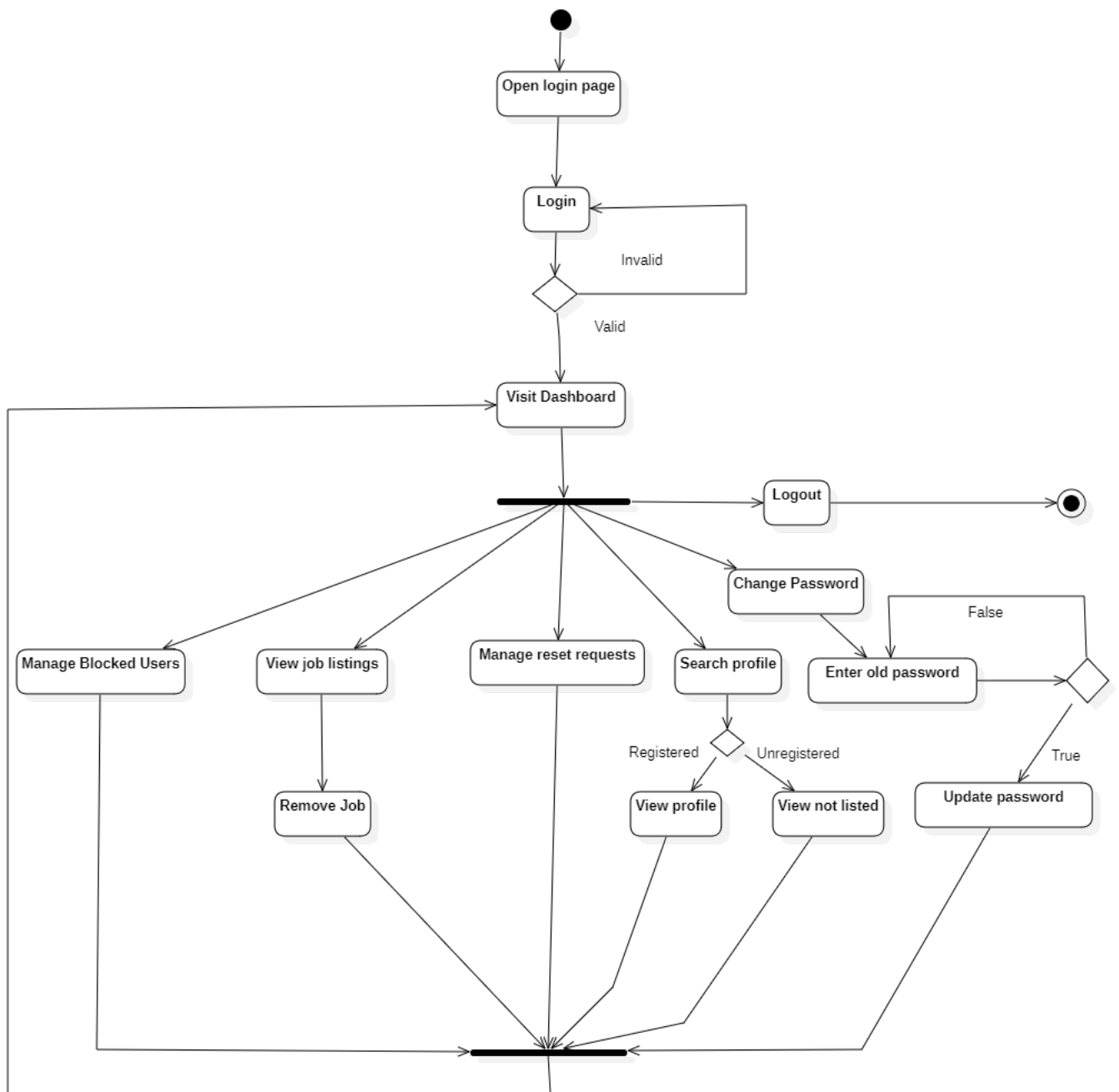


Figure 4.4: UML Activity-Admin Diagram

### 4.2.2 Class Diagram

The UML Class diagram is a graphical notation used to construct and visualize object-oriented systems. A class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the systems.

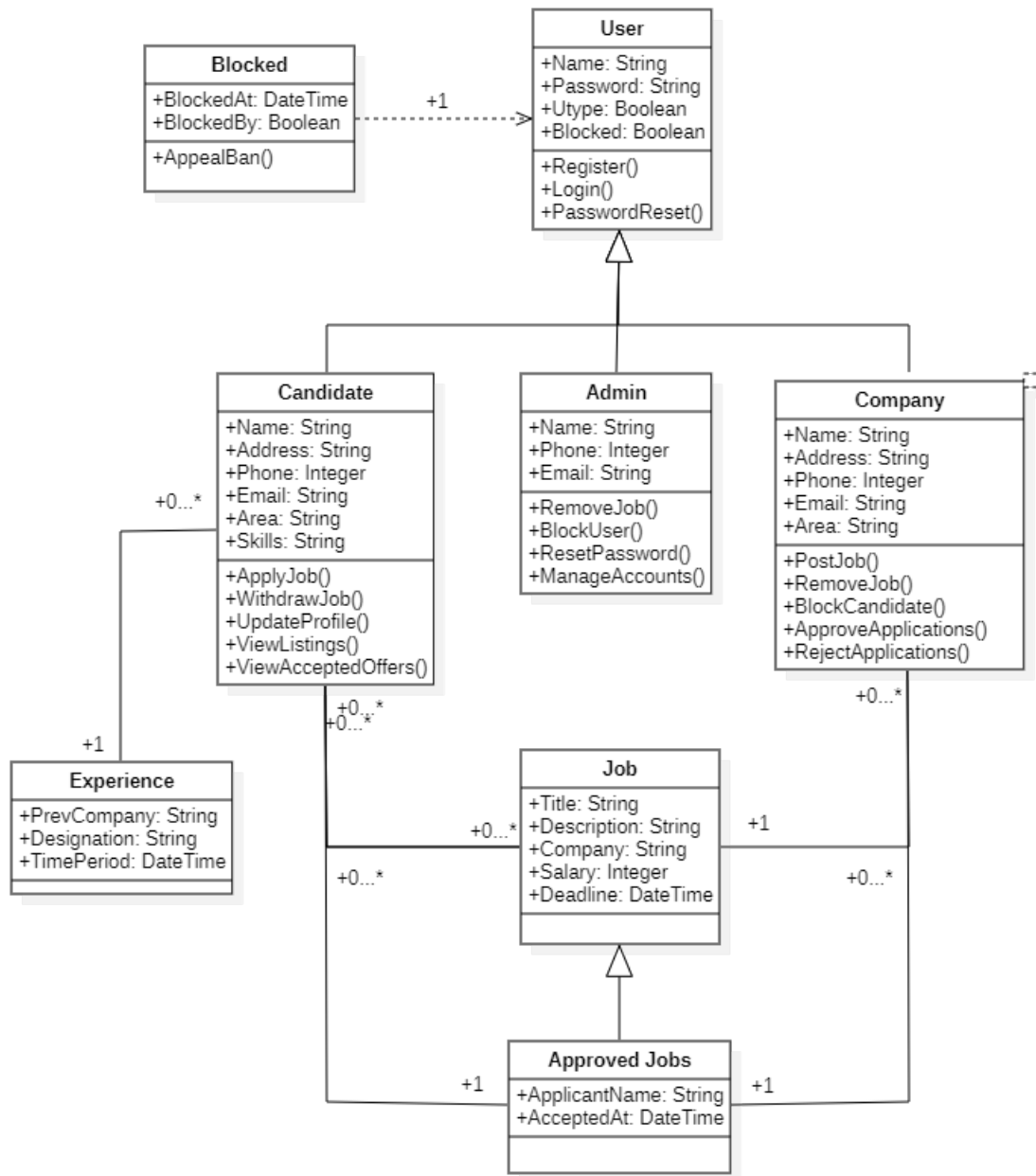


Figure 4.5: Class Diagram

## 4.3 Use Case Diagram

Use case diagram is a behavioral UML diagram type and frequently used to analyze various systems. They enable you to visualize the different types of roles in a system and how those roles interact with the system

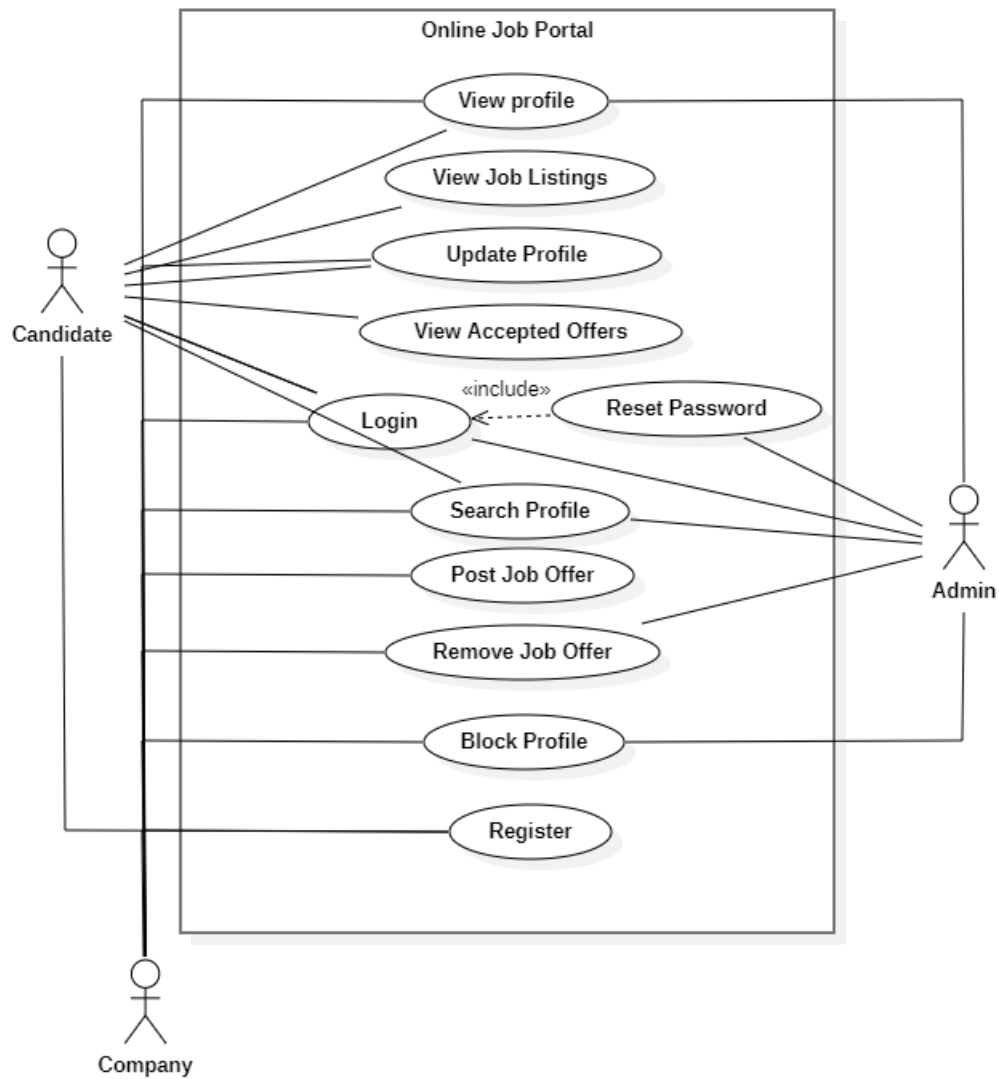


Figure 4.6: Use Case Diagram

## 4.4 Data Flow Diagram

A Data Flow Diagram (DFD) is a traditional way to visualize the information flows within a system. A neat and clear DFD can depict a good amount of the system requirements graphically. It can be manual, automated, or a combination of both.

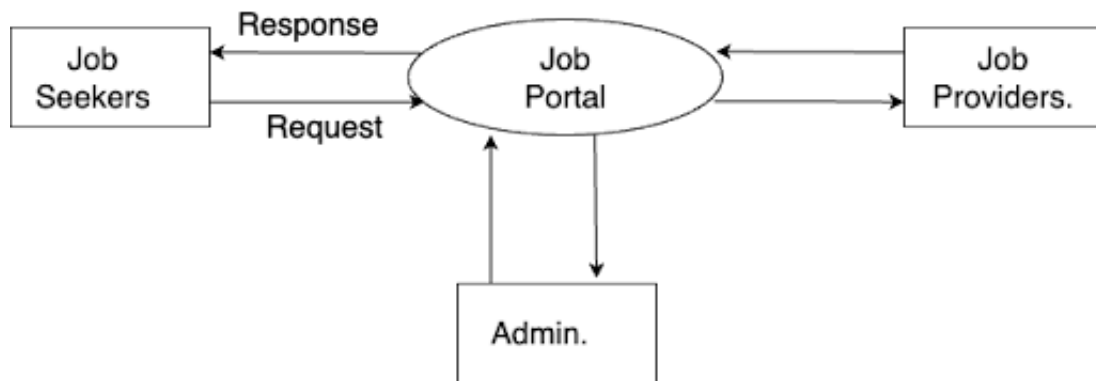


Figure 4.7: Leve 0 DFD

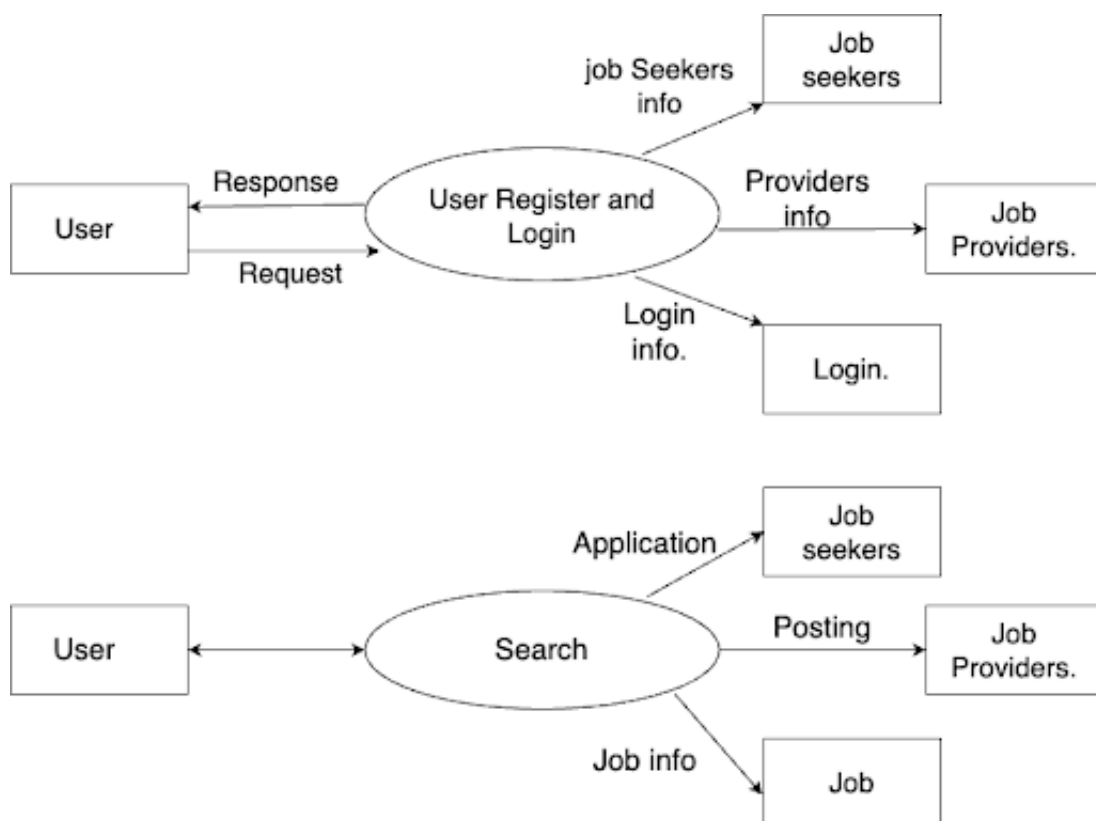


Figure 4.8: Leve 1 DFD



## Chapter 5

# Project plan

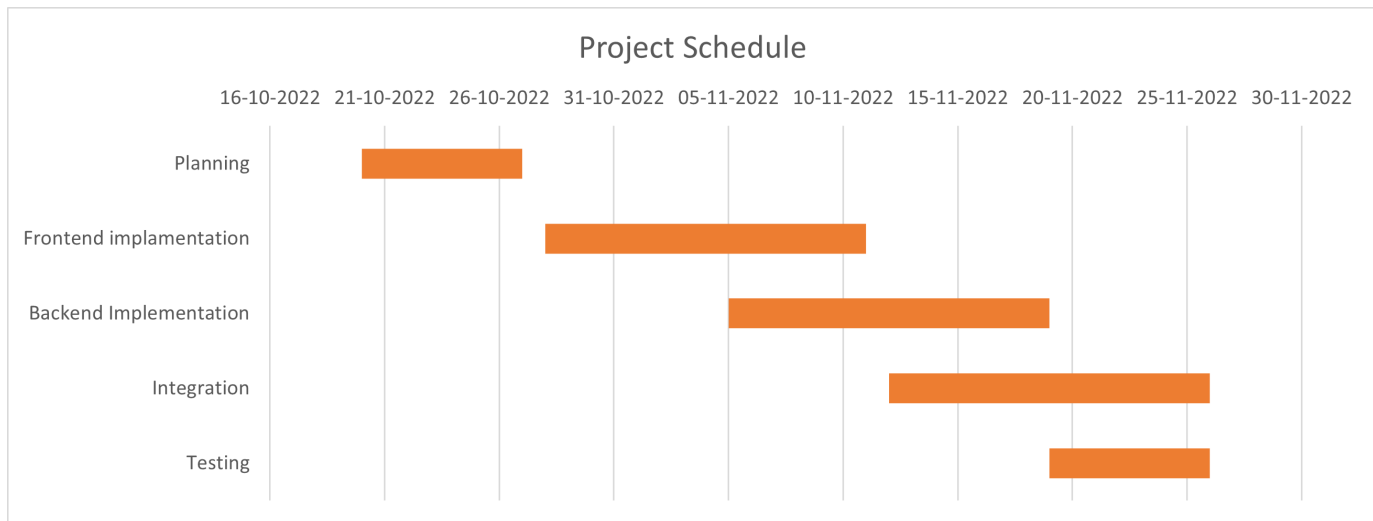


Figure 5.1: Schedule

**Week 1:** Introduction and description of the project. The project requirements are identified as per the requirements of the users. At the design view, the analyzed requirements are converted into graphical representations which consist of the Entity Relationship Diagram (ERD), UML diagrams, Use case diagram, Dataflow and Context diagrams.

**Weeks 2-3:** Analyze and setup environments, requirement gathering and fact-finding techniques are discussed. Work on the frontend begins with the designing of the web pages for all the three required modules i.e. admin, jobseekers and job providers. This consists of designing the interface with which the user will interact with the system.

**Weeks 3-4:** Working on building the backend for all the modules and designing the database with SQL. Integrating backend with frontend UI and database may also begin at this stage whereby the APIs are developed for communication of the different modules.

**Weeks 4-5:** Deployment and testing, in this we focus on deploying our project in heroku or cloud server and perform testing such as unit testing, integration and automation testing to ensure all the functional requirements are met and satisfied as per discussed in the user requirement.

The technologies used for construction of the frontend will consist of Hyper Text Markup Language (HTML) pages, using Cascading Style Sheets (CSS) for styling and Javascript (JS) for dynamic interaction with the user. Python Django will be used for integration of the frontend web pages with the backend databases. SQL will be used for creating databases for storing the various information given by the users during registration, which will be further used for implementing the different functionalities.

Division of tasks will be assigned as per required according to the needs and requirements of the current scenario. Flexibility must be ensured so that working on design and implementation of the proposed project will be carried out according to the schedule specified above. Assignment of tasks have been done as follows:

Frontend work will be handled by group members Raghvendra and Shashank while backend work by Roisan and Nirdosh. However, to ensure smooth delivery and progress, any issues faced will require the help of all members involved. Integration and testing will be performed by all since knowledge of both ends must be available for combining the overall work done.