

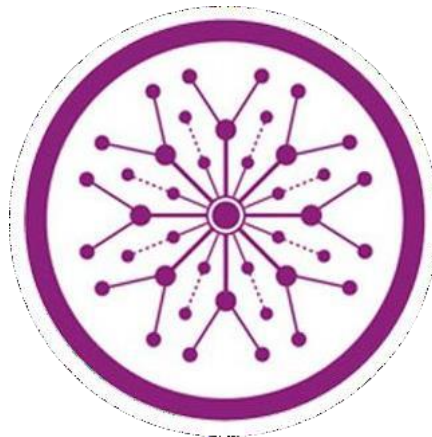
My Jobs Indeed

Final Year Project

Session 2019-2023

A project submitted in partial fulfillment of the degree

ofBS in Information Technology



Department of Information Technology

Faculty of Computer Science & Information Technology

The Superior University, Lahore

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My Jobs Indeed

Change Record

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APPROVAL

PROJECT SUPERVISOR

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PROJECT MANAGER

Comments: _____

Date: _____ Signature: _____

HEAD OF THE DEPARTMENT

Comments: _____

Date: _____ Signature: _____

Dedication

First of all, we dedicate our project to Allah Almighty

And to whom the world owes its existence

Muhammad (Peace Be upon Him)

This humble effort is dedicated to

Our beloved parents who brought us

To the level of excellence where we

Are studying today looking for most

Promising and gleaming future ahead

For which they scarified most of the

Time of their life

&

To our respected and genius teachers

Who guided us throughout academic career!

And all those people

Who have remembered us in their prayers!

A lot of thanks for all my teachers!

Acknowledgements

This Major Project would not have been possible without the help of many people. Hereafter, we would like to thank them for their help, support, and advice they have given us while working on the project. First, we would like to thank our Major Project guide, **Sir Ali Raza** for his guidance, help, and the many discussion sessions that gave us courage and enthusiasm to design and build this web application. We thank all the faculties of IT Dept, for their support and guidance. We extend our gratitude to HOD of IT department. Also, I would like to thank our FYP manager Mr. Javaid Iqbal. He will help us a lot to solve the error and give his precious time to us for the development of this project. Finally, we would like to thank our University, Superior university gold campus for this opportunity to work on this project

In the last but not the least, special gratitude with the deepest sense of respects to our parents whose love and affections kept us steep fast and enabled us to attain targets and goals of academic life. The authors are extremely indebted to their brothers and sisters whose constant encouragement provides us with the impetus that was necessary for attaining academic initiatives

Executive Summary

The main objective for developing this project is to provide an online job search portal for employees about opportunities in different companies. It can manage Job vacancies, Job details, Bio data, Call later etc. This system is very useful for users because they need to submit resumes through their account and all uploaded resumes are visible to other users and visitors who provide job opportunities. This project provides many features to manage all the data in very well manner. The students will be able to see the different jobs of different companies. They will be able to apply for the jobs posted by the different companies. The students will be aware of every job vacancy in any company and many students will be able to take advantage of this system. There will be proper maintenance/management of students and companies record. The online job portal system is a package to be used by the agencies to improved the business efficiency. The system provides jobs catalogue and information to the members and help them decide on the jobs to apply. The admin and employers can keep the jobs catalogue updated all time so that the job seekers get the job updated information updated all time

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Chapter 1

Introduction

Chapter 1: Introduction

This project Online Job Portal has been developed on PHP and MySQL. The main objective for developing this project is to provide an online job search portal for employees about opportunities in different companies. It can manage Job vacancies, Job details, Bio data, Call later etc. This system is very useful for users because they need to submit resumes through their account and all uploaded resumes are visible to other users and visitors who provide job opportunities. This project provides many features to manage all the data in very well manner. The students will be able to see the different jobs of different companies. They will be able to apply for the jobs posted by the different companies. The students will be aware of every job vacancy in any company and many students will be able to take advantage of this system. There will be proper maintenance/management of students and companies record.

1.1. Background

Viewing available jobs, or applying for the job at the agency can be done for which job seekers has to go to the agency and check the available jobs at the agency. Job seekers check the list of jobs available and apply the job. Then the agency will show available jobs for the job seeker for his qualifications and then updates the jobs database.

1.2. Motivations and Challenges

The biggest advantage of a Job portal is that there is no fee for the job seeker. Websites like Monster.com thrive on the money that the companies pay to register with them. The job seeker just has to select the company he likes and apply to them. We can say that Online Job Search Portal act as a bridge of communication between organizations and applicants. With the evolution of technology and internet being the main source of information for the applicants, these job portals and have become an excellent method to reach wide range of audience.

1.3. Goals and Objectives

This system can be used as an Online Job Portal for the Placements providing to the un employees who are seeking for a job placement. Job Seeker logging into the system and he can 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 Job Seeker.

1.4. Literature Review/Existing Solutions

The existing system for job recruitment includes traditional methods like Employment agencies, advertising through newspapers, televisions and radios, college fairs etc., which are too slow and stressful. With the advancement of internet, jobseekers rely on the online job portals, which makes the job search efficient. Again, most of these are limited to the web/desktop applications, which requires jobseekers to have a laptop or desktop connected to internet and is not handy.

☐ Indeed.pk

☐ Rozee.pk

☐ Jobee.pk

☐ Glass door

1.5. Gap Analysis

The traditional methods like Employment agencies, advertising through newspapers, televisions and radios, college fairs etc., which are too slow and stressful.so that this platform will help the students and recruiters towards the easy hiring process.

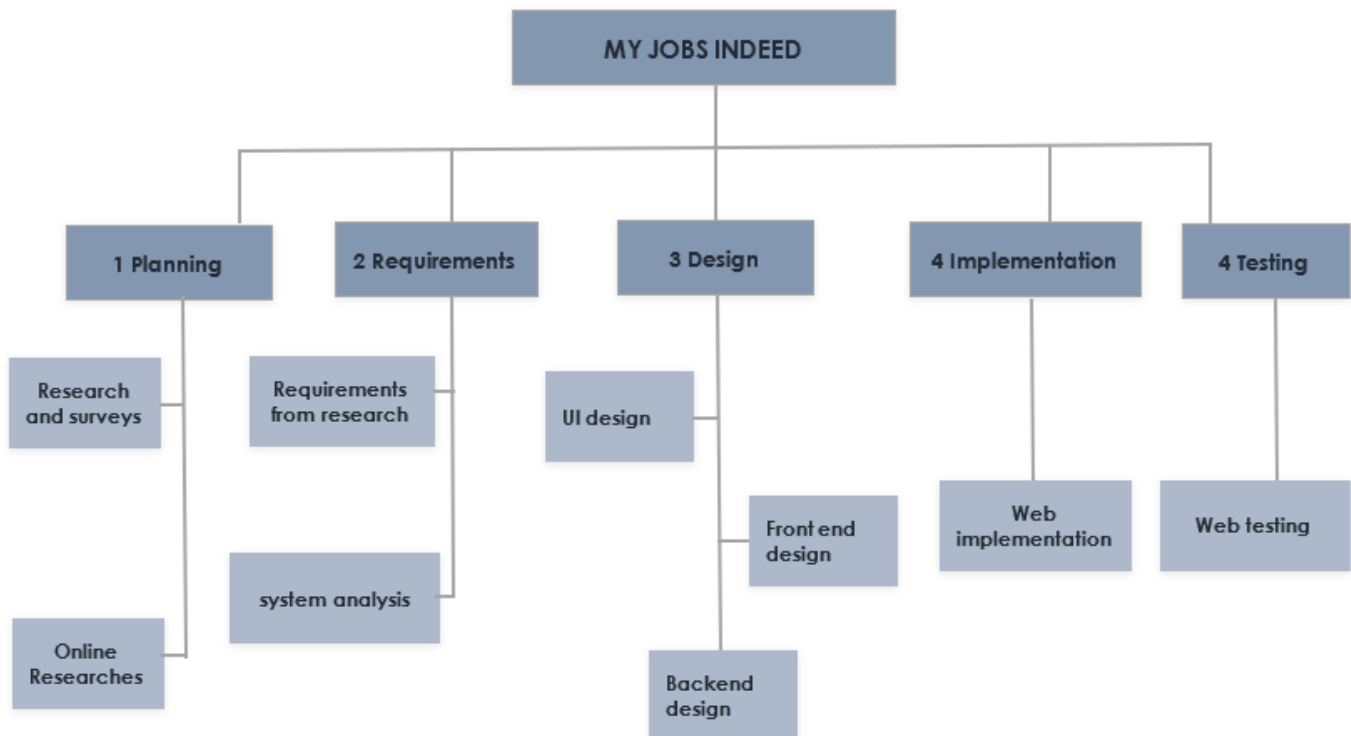
1.6. Proposed Solution

The project we will make “**my jobs indeed**” is necessarily a solution to a problem The main purpose of this system is to improve the process of the job placement and career counselling center. We will make an automated system for the students and the job placement center that will help both of them in a very effective way.

1.7. Project Plan

This is our plan that how our project will go through the different stages.

1.7.1. Work Breakdown Structure



1.7.2. Roles & Responsibility Matrix

WBS #	WBS Deliverable	Activity #	Activity to Complete the Deliverable	Duration (# of Days)	Responsible Team Member(s) & Role(s)
1	Planning	1		10 days	Sami, Ahmad, talha
2	Requirements gatherings	2		5 days	Ahmad, talha
3	analysis	3		10 days	Sami
4	Design ui ux	4		30 days	Ahmad
5	Front end web ui	5		50 days	Talha , Ahmad
6	Backend web	6		50 days	Sami
7	Testing	7		20 days	Ahmad , Sami
8	Documentation	8		25 days	Talha, Ahmad

Chapter 2

Software Requirement Specifications

Chapter 2: Software Requirement Specifications

2.1. Introduction

2.1.1. Purpose

This online system is used for social welfare. The website performance should be optimized, and response time should be minimized. This website can be used as an Online Job Portal for the Placements providing to the unemployed who are seeking for a job placement. Job Seeker logging into the system and he can should be able to upload their information in the form of a CV.

2.1.2. Document Conventions

This record is its degree is to portray the necessities of the Advertisement Management System and its affiliations. This report has been composed after the AMS and consider that future changes to this program ought to be incorporated into this prerequisites determination record for keeping up its helpful part. To the extent the program usage is concerned while it's not been actualized, this record can be utilized as manual for improvement of framework. CSS, VCSS property, descriptor, and pseudo-class names are specify by single quotes. Values are specifying by single quotes. Document language element names are in upper case Letters. Document language attribute names are in lower case letters and specify by Double quotes.

2.1.3. Intended Audience and Reading Suggestions

This website is highly scalable. Its purpose is to enable a sense of solidarity in the community. The app has a societal impact since its aim is to close the gap between the less fortunate people and the more unfortunate in terms of quality of life.

2.1.4. Product Scope

As of Pakistani market, there is ample opportunities for the job portal sites, as more and more number of educated and skilled young people are coming out each and every year. So, more and more number of 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

2.1.5. References

Literature review on online job portal

<https://ijarcce.com/upload/2017/may-17/IJARCCCE%2019.pdf>

2.2. Overall Description

2.2.1. Product Perspective

In the age of technology, the Internet has become the main source of information for jobseekers. Large corporations, Institutions, and universities include information on career Prospects on their websites. According to a survey, 70% of the workforce uses websites or portals on the Internet to Search for jobs in France. These websites or portals provide search engine to access information on job opportunities.

2.2.2. Product Functions

Our Job portal is free for any job seeker. Websites like Monster.com thrive on the money that the companies pay to register with them. The job seeker just has to select the company he likes and apply to them. Some of the features are as follow:

- Search resumes online.
- User-Friendly Interface
- Easy Registration
- Search Functionalities

- Job Alerts
- Job Saves
- RELIABLE CUSTOMER SERVICE
- Job Post

2.2.3. User Classes and Characteristics

➤ Registration

Employee or Employer can register with valid details like contact details, experience details, profile details.

➤ Search

Employee Can Search job according to their interest. And also apply for that job. Employer search candidates for their requirements using keyword. Employer also can communicate with employee for their any other query or information via send message.

➤ Job Post

Employer post job for their organization. And include job vacancy, salary details, working hours, designation details, experienced details.

➤ Manage Account

Employee can also delete his/her account anytime. Admin Can Manage Employee and Employer Details. Admin observed Users Action like job posting, candidate details false or not.

2.2.4. Operating Environment

This system will operate in browsers like Mozilla, Firefox, and Opera and for their different version also.

- It can be open on window, android and iPhone.

- The processor should be core 2 duo or above.
- The processor's speed should be 2.8 GHz or greater.
- Ram should be or greater than 512 MB.

2.2.5. Design and Implementation Constraints

There are the following design and implementation constraints that we should keep in our mind during developing of this website.

- This system is working for single server
- Limited to HTTP/HTTPS.
- Figma design to implement
- Using html and CSS for front-end.
- Attach database to the back-end used to manage the database specification
- Php for backend

2.2.6. Assumptions and Dependencies

There are the following design and implementation constraints that we should keep in our mind during developing of the application.

- This system is working for single server
- Limited to HTTP/HTTPS.
- Sketch or proto.io for prototyping the system
- XAMPP server for the local host
- MYSQL used for manage the database specification
- Operating system required for this application is windows kit Kat 4.0 android or any other higher version

2.3. External Interface Requirements

2.3.1. User Interfaces

➤ User Dashboard

This is User Home page. Every user can see how many post a job, recent add a job, Search a job and all social link etc.

➤ **Job List**

In this sector user see how many jobs add in this page and how many categories add in this jobs list page.

➤ **Search a Job**

If user can be, search a job in this sector. User can be find a job as a location, job name, job category etc.

➤ **Apply for the Job**

If user can be, see a job they need click in this page. User see this job add company name, Job Details, Location, Job Requirements etc.

2.3.2. Hardware Interfaces

The system requires the following hardware:

- RAM: 1 GB (further increase that as per requirement.)
- Hard Disk: 80 GB (further increase that as per requirement.)
- Display: 1024 * 768, True Type Color-32 Bit
- Mouse: Any Normal Mouse.
- Keyboard: Any window Supported Keyboard.

2.3.3. Software Interfaces

1. Database Server : Microsoft SQL Server
2. Web Server : Internet Information Server
3. Technologies : HTML ,CSS, JavaScript and php

2.3.4. Communications Interfaces

The Job portal system shall use the HTTP protocol for communication over the internet and for the intranet communication will be through TCP/IP protocol suite.

2.4. System Features

➤ 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 gave 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 condition 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.

➤ 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

2.4.1. System Feature 1

Registration

2.4.1.1 Description and Priority

If customer/user wants to buy the product then he/she must be registered, unregistered user can't able to use our auto generate LMS. For this purpose, user/customer will register to the system.

2.4.1.2 Stimulus/Response Sequences

- ☐ User first clicks on the button or link to initiate registration process.
- ☐ System prompts the user to fill out his/her first name, last name, address, email, and their password.
- ☐ User enters fields.
- ☐ System validates the user's information.
- ☐ System creates a new account for the user.

2.4.1.3 Functional Requirements

Register

Actor

Un-registered user

Pre-conditions

- ☐ Fill to sign up form for registration
- ☐ User must open the registration page

Basic flow

- ☐ User wants to register for the particular application
- ☐ User must provide all required information

Alternate flows

- ☐ User don't open the register page

Post conditions

- ☐ User registered successfullyREQ-SF1-3:

2.4.2. System Feature 2

Login of User

2.4.2.1 Description and Priority

This feature used by the user to login into system. A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed entering the system

2.4.2.2 Stimulus/Response Sequences

- User clicks on the button or link to initiate the login process.
- System prompts the user for his/her email and password.
- System verifies the information.
- System displays account home page to the user.
- User clicks the button or link in order to initiate logout process.

2.4.2.3 Functional Requirements

REQ-SF2-1: Username and password will be provided after user registration is confirmed.

REQ-SF2-2: Password should be hidden from others while typing it in the field.

2.4.3. System Feature 3

Logout

2.4.3.1 Description and Priority

It is medium priority feature of a system because without logout anyone can access user's account.

2.4.3.2 Stimulus/Response Sequences

- ☒ User must be login
- ☒ User must enter correct information otherwise not registered
- ☒ Connection with server through PC, mobile laptop etc
- ☒ Quality, security

2.4.3.3 Functional Requirements

- ☒ User must be login

- ☒ User must enter correct information otherwise not registered
- ☒ Connection with server through PC, mobile laptop etc.
- ☒ Quality, security

2.4.4 System Feature 4

Search

2.4.4.1 Description and Priority

It is medium priority feature of a system with which users can search for jobs.

2.4.4.2 Stimulus/Response Sequences

- Must go to search bar
- Search for the job

2.4.4.3 Functional Requirements

Search

Actor

- Employer
- Employee

Pre conditions

- User must enter job name in search box

Basic Flow

- User wants to search for a specific job

Alternate flows

- User would not apply for searching

Post conditions

- User search successfully

2.5 Nonfunctional Requirements

2.5.1 Performance Requirements

Response time: In 4-5 seconds, the home page had loaded.

Availability: 99.96% of the time, the website will be accessible.

Throughput: Orders per hour or page views per second.

Capacity: Maximum throughput that may be attained with respect to availability and reaction time.

2.5.2 Safety Requirements

Once admin delete record or user account the data of that user can't be retrieve. To handle this problem system gives warning before delete the record. Safety disclaimers will be given for both students and teachers. If any user has some problem while using the site, so he can contact via mail to website maintenance.

2.5.3 Security Requirements

Security is one of the major concerns of these days. Our system is based on following security parameters which are given below:

- This software keeps the information of students and teachers safe.
- User will be registered after verification of user data.
- Secure login and logout. If renter forget his account credential than he has to get new credential through his sign-up e-mail.
- Admin area will be secured.

2.5.4 Usability Requirements

This website should be easy to use and easy to learn how to operate.

2.5.5 Reliability Requirements

This software is reliable.

2.5.6 Maintainability/Supportability Requirements

Admin of the website will maintain the working of this software.

2.5.7 Portability Requirements

This product can be used on different devices like tablets, mobiles, laptops etc.

2.5.8 Efficiency Requirements

The loading speed of web pages onto a Clients web browser is quite good. The functionality of this software can be increased after development because documentation is available.

2.6 Domain Requirements

User must first register and login to perform any operations.

Chapter 3

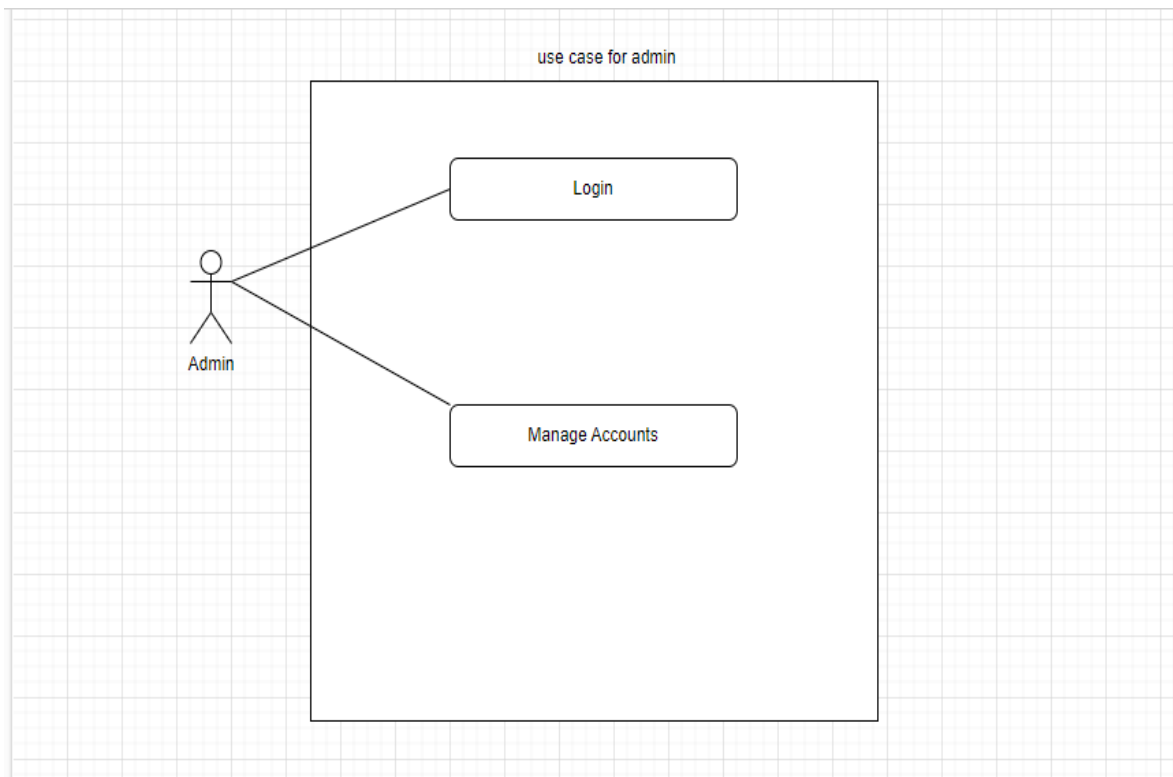
Use Case Analysis

Chapter 3: Use Case Analysis

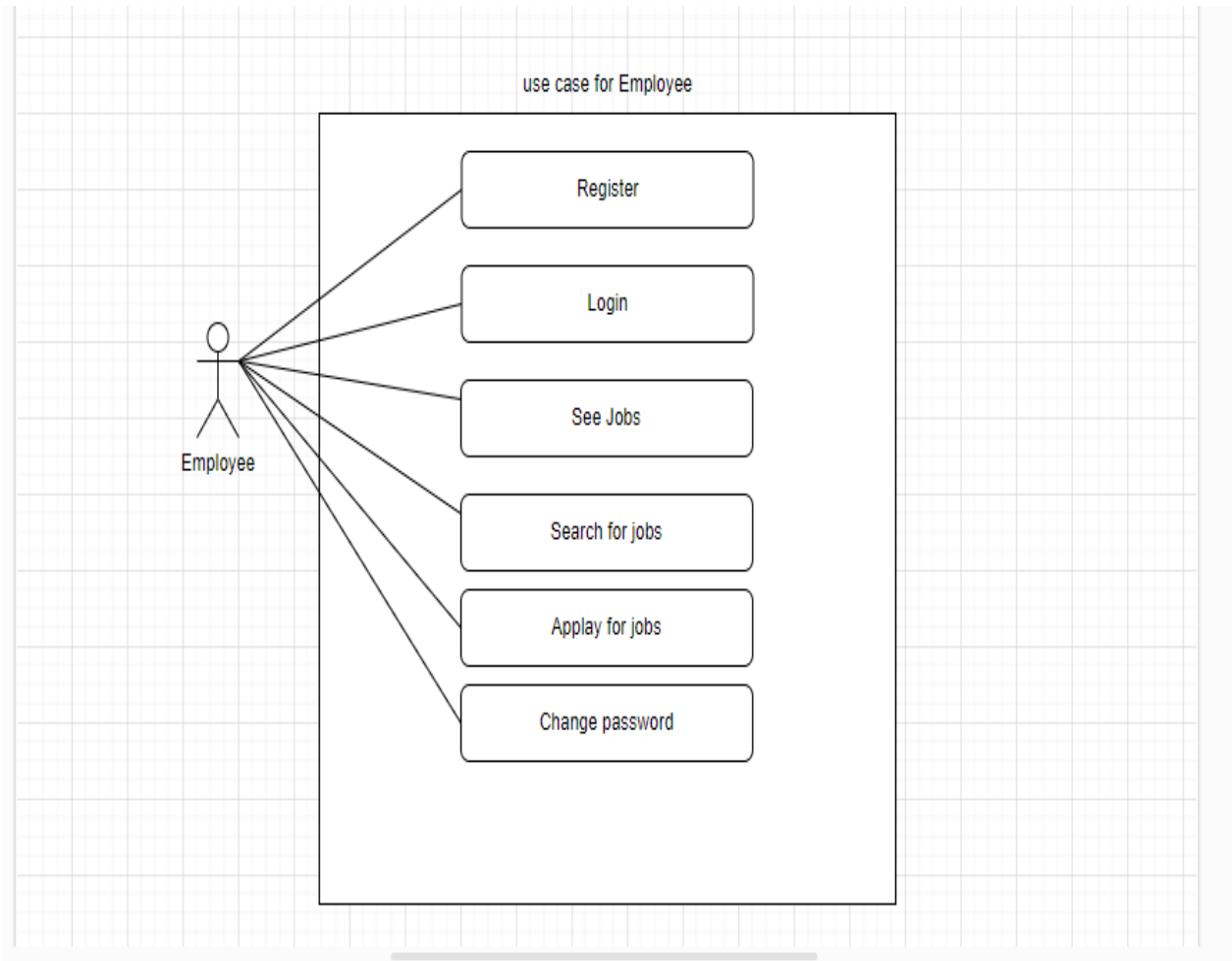
This chapter describe about system use cases and how the different actors are interacting with the system. This system is all about use case of system and role we assign and categorize the user of solution. We describe the all terms about the use case model and use case diagram of every role.

3.1. Use Case Model

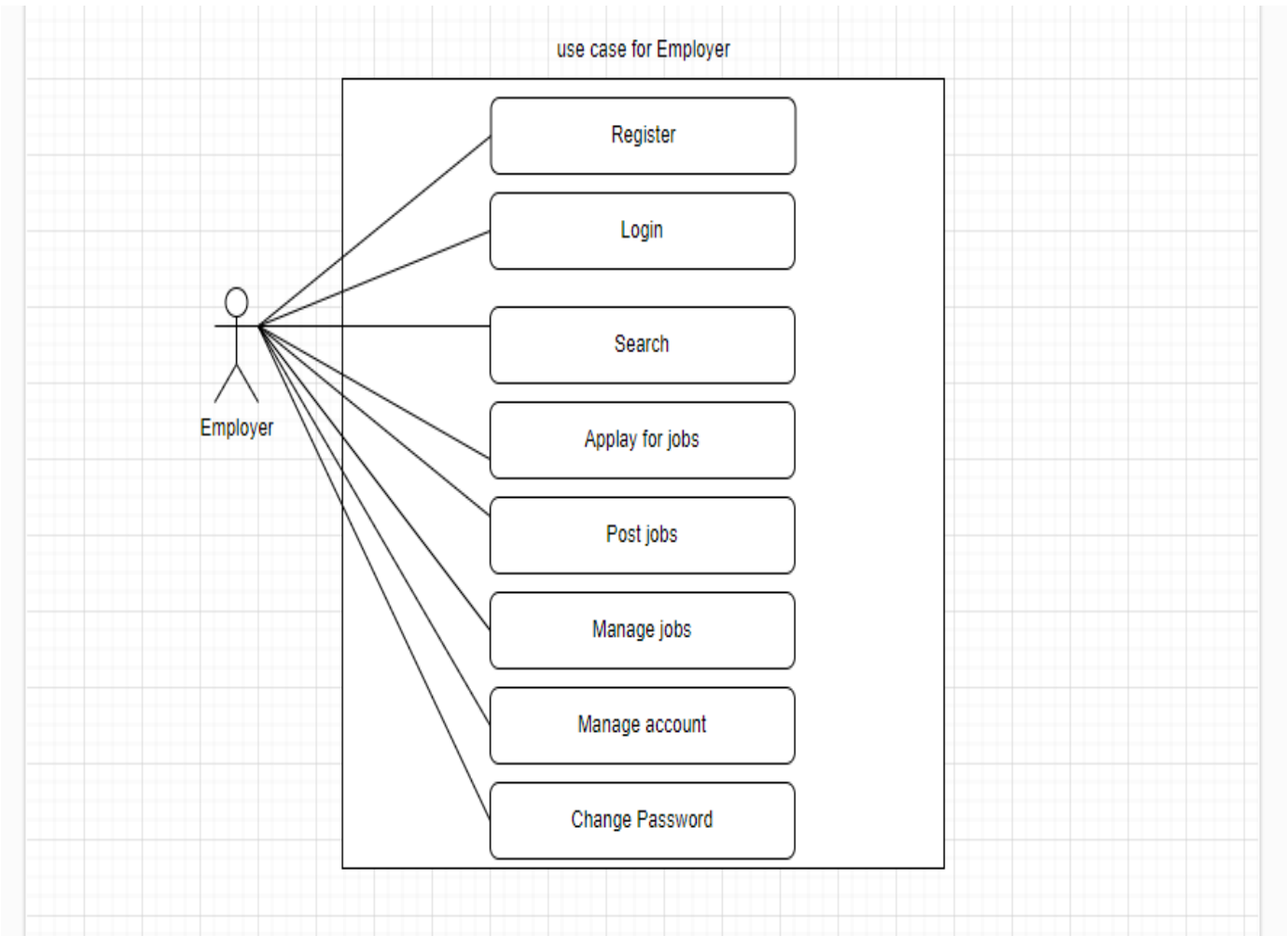
Use Case for Admin



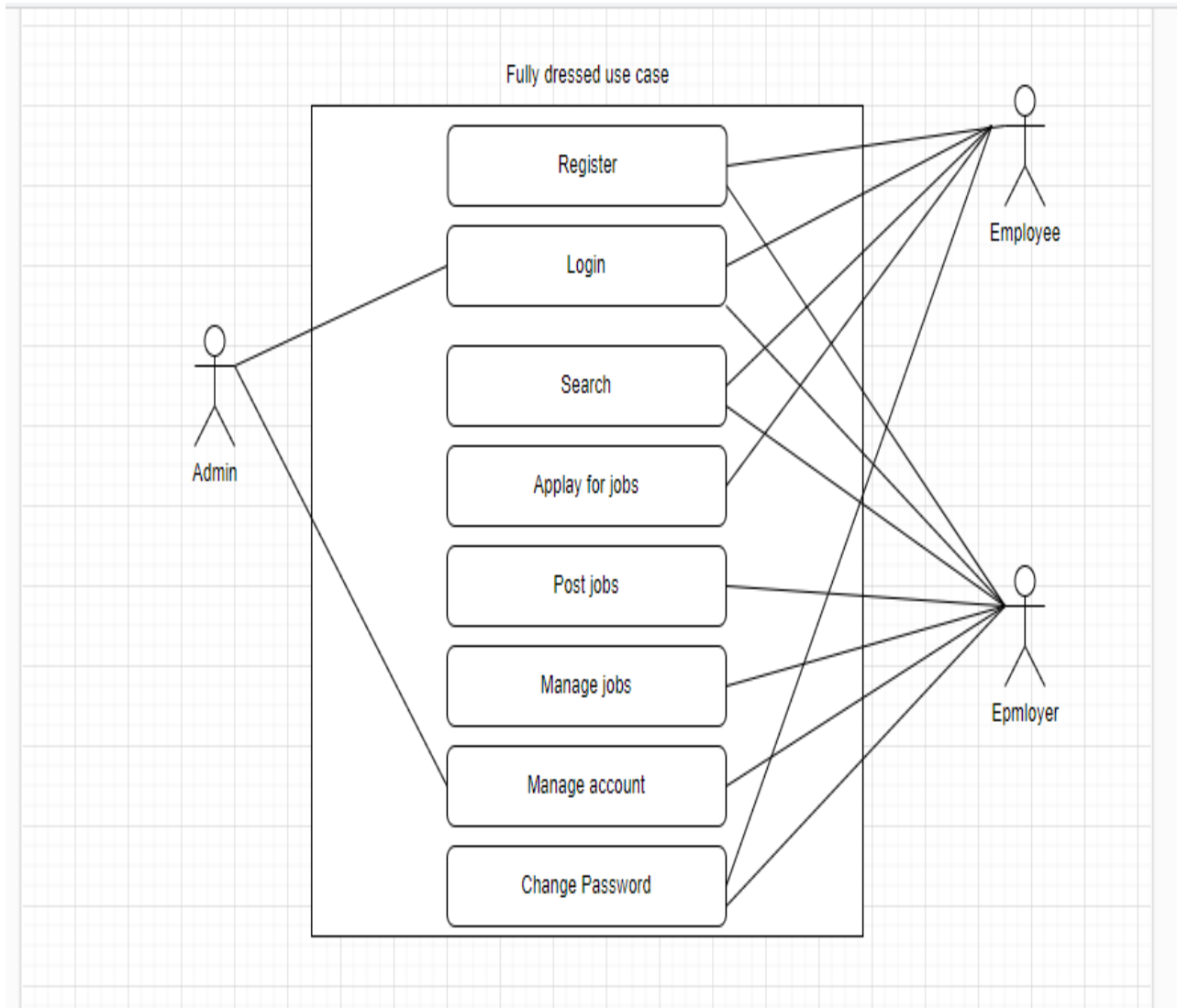
Use Case for Employee



Use Case for Employer



Fully Dressed Use Case



3.2. Use Cases Description

Registration:

Name	Register
Brief Description	A user of the System creates an account
Actor(s)	Admin
Flow of Events	
Basic Flow	
<p>This use case starts when a system user is not logged in to the system and goes to the login page.</p> <ol style="list-style-type: none"> 1. The System prompts the user for a username and password or register new account. 2. The user selects registration option. 3. The System prompts user for registration information, Username, password, etc 4. The user enters in their information. 5. System verifies information and creates account. 6. The use case ends. 	
Alternate Flows	
Title	Description
Cancel Registration	<ol style="list-style-type: none"> 1. The user selects the cancel option. 2. The system returns the user to the home page without the user being logged in and any information entered has been erased.
Invalid Information Entered	<ol style="list-style-type: none"> 1. User clicks submit after entering information system asked for. 2. System displays information with appropriate message to correct invalid information. 3. User re-enters information.

Pre-Conditions	
Title	Description
System	To logged in to the system the user must have the System
Internet	To logged in to the system the user must have the network on theSystem.
Post-Conditions	
Title	Description
Success	The user entered successful information and is returned to the homepage as a Logged in User
Failure	User is unable to log in for one or more reasons and is returned to the home page as a Guest.
Extension Points	
If the User is unable to log in for one or more reasons the user must once check the internetConnection.	

Login:

Name	Log In
Brief Description	The System user logs in to the System.
Actor(s)	Logged In User
Flow of Events	
Basic Flow	
<p>This use case starts when a system user is not logged in to the system and goes to the login page.</p> <ol style="list-style-type: none"> 1. The System prompts the user for a username and password or register new account 2. The user enters his/her username and password. 3. The system validates the entered username and password, making sure that the entered username is a valid username in the System, and that the required password is entered for the entered username. 4. The user is signed in and returned to the home page as a Logged in User. 5. The use case ends. 	
Alternate Flows	
Title	Description
User Fails Authentication	<p>If the User entered an invalid username and/or password, the following occurs:</p> <ol style="list-style-type: none"> 1. The system describes the reasons why the User failed authentication. 2. The system presents the User with suggestions for changes necessary to allow the User to pass authentication. 3. The system prompts the User to re-enter the valid information.

	4. The Basic Flow continues where the User enters new information.
Pre-Conditions	
Title	Description
Register	A user of the System creates an account
Post-Conditions	
Title	Description
Success	The User is authenticated and the system displays a home page based on the user type.
Failure	User is unable to log in for one or more reasons.
Extension Points	
The user must make sure that the entered username is a valid username in the System or entered password is a valid password.	

Employee:

Name	User applying for job.
Brief Description	The Employee may be a man or woman who applied for job.
Actor(s)	Employee
Flow of Events	
Basic Flow	
This use case starts when an employee accesses the "Search job" feature of the system.	
<ul style="list-style-type: none"> ➤ The system asks the employee to enter the appropriate information. ➤ Employee drops cv and clicks submit. ➤ Employee validates cv. 	

➤ This Use Case ends.	
Alternate Flows	
Title	Description
Invalid Information Entered	<ul style="list-style-type: none"> ➤ The system displays an “Invalid” error after the user submits the information and asks the employee to re-enter the information. ➤ Employee re-enters information and clicks submit.
Cancel Submitted Application Form	<ul style="list-style-type: none"> ➤ Employee clicks cancel after selecting the “Search Job” feature. ➤ System returns Employee to the portal.
Pre-Conditions	
Title	Description
Register	A user of the System creates an account
Login	The System user logs in to the System.
Post-Conditions	
Title	Description
Success	The employee user cv is added into the database.
Failure	Employee information is not added for one or more reasons.
Extension Points	
If the Employee cv is not submitted for one or more reasons the employee must re-submit or fill valid information in all the requisite information.	

Employer:

Name	Employer
Brief Description	Employer who will choose deserving employee
Actor(s)	Employer
Flow of Events	
Basic Flow	
This use case starts when Employer accesses the "Application Form" feature of the system.	
<ul style="list-style-type: none"> ➤ The system asks the Employer to enter the appropriate information. ➤ Employer enters appropriate information and clicks submit. ➤ Employer validates information. ➤ Employer goes to manage account. ➤ This Use Case ends. 	
Alternate Flows	
Title	Description
Invalid Information Entered	<ul style="list-style-type: none"> ➤ The system displays an "Invalid Information" error after the user submits the information and asks the Employer to re-enter the information. ➤ Employer re-enters information and clicks submit.
Cancel Submitted Application Form	<ul style="list-style-type: none"> ➤ Employer clicks cancel after selecting the "Application Form" feature. ➤ System returns employer to the portal.
Pre-Conditions	
Title	Description
Register	A user of the System creates an account

Login	The System user logs in to the System.
Post-Conditions	
Title	Description
Success	The new Employer information is added into the database.
Failure	Employer' information is not added for one or more reasons.
Extension Points	
If the employer's information form is not submitted for one or more reasons the employer mustre-entered or fill valid information in all the requisite information.	

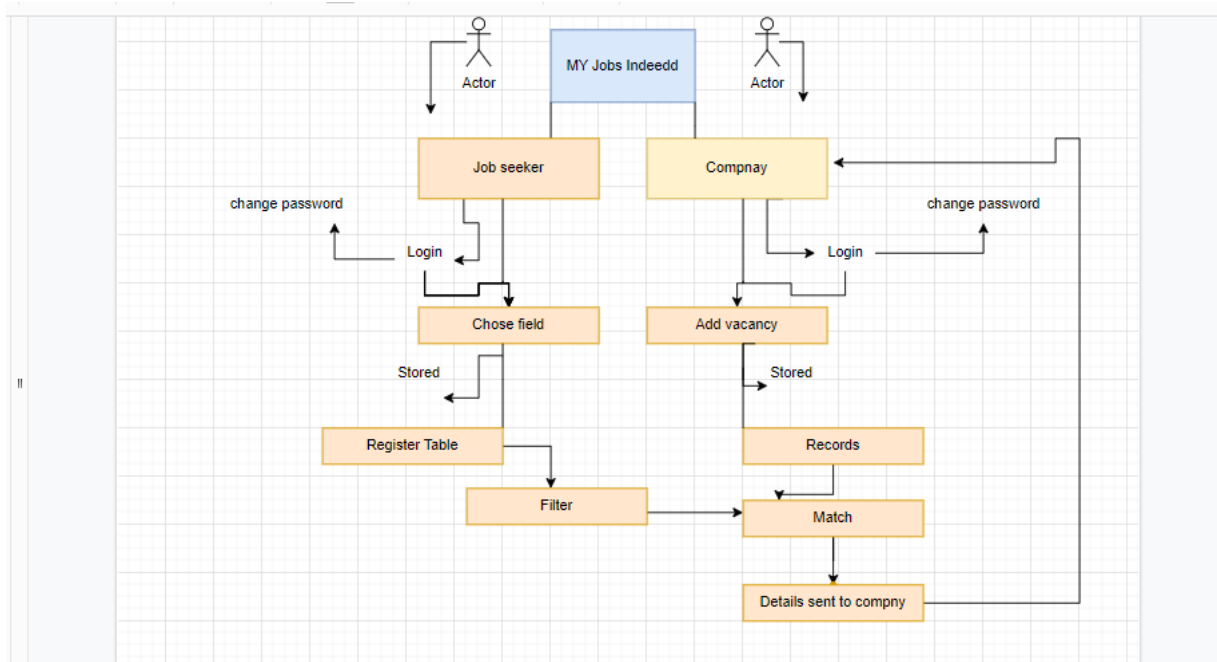
Chapter 4

System Design

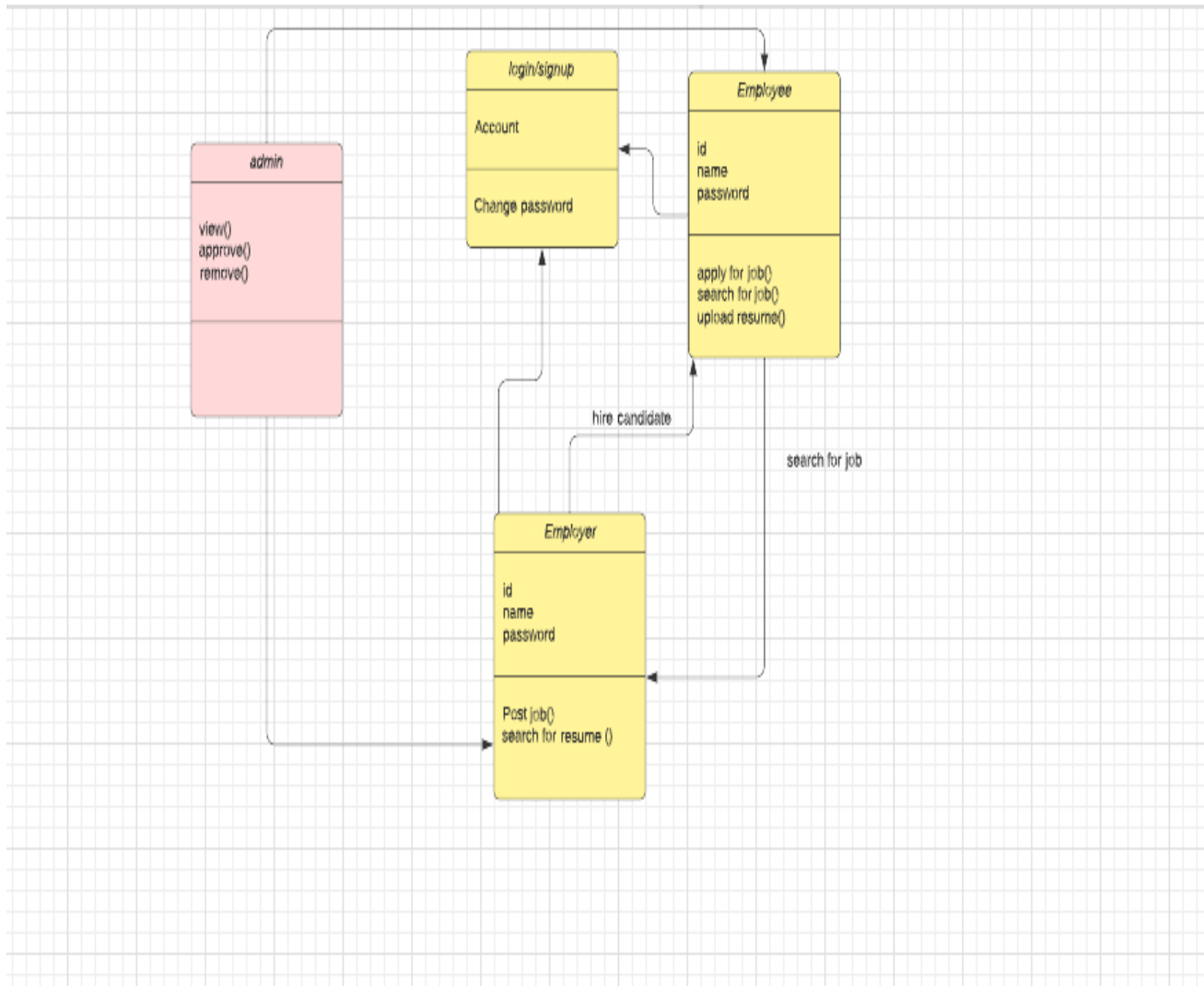
Chapter 4: System Design

In this chapter we will define our project system that how it will work. We define the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. The UML is a collection of diagrams and standard set of notations for specifying and visualizing various aspects such as requirements and design of software systems

4.1. Architecture Diagram

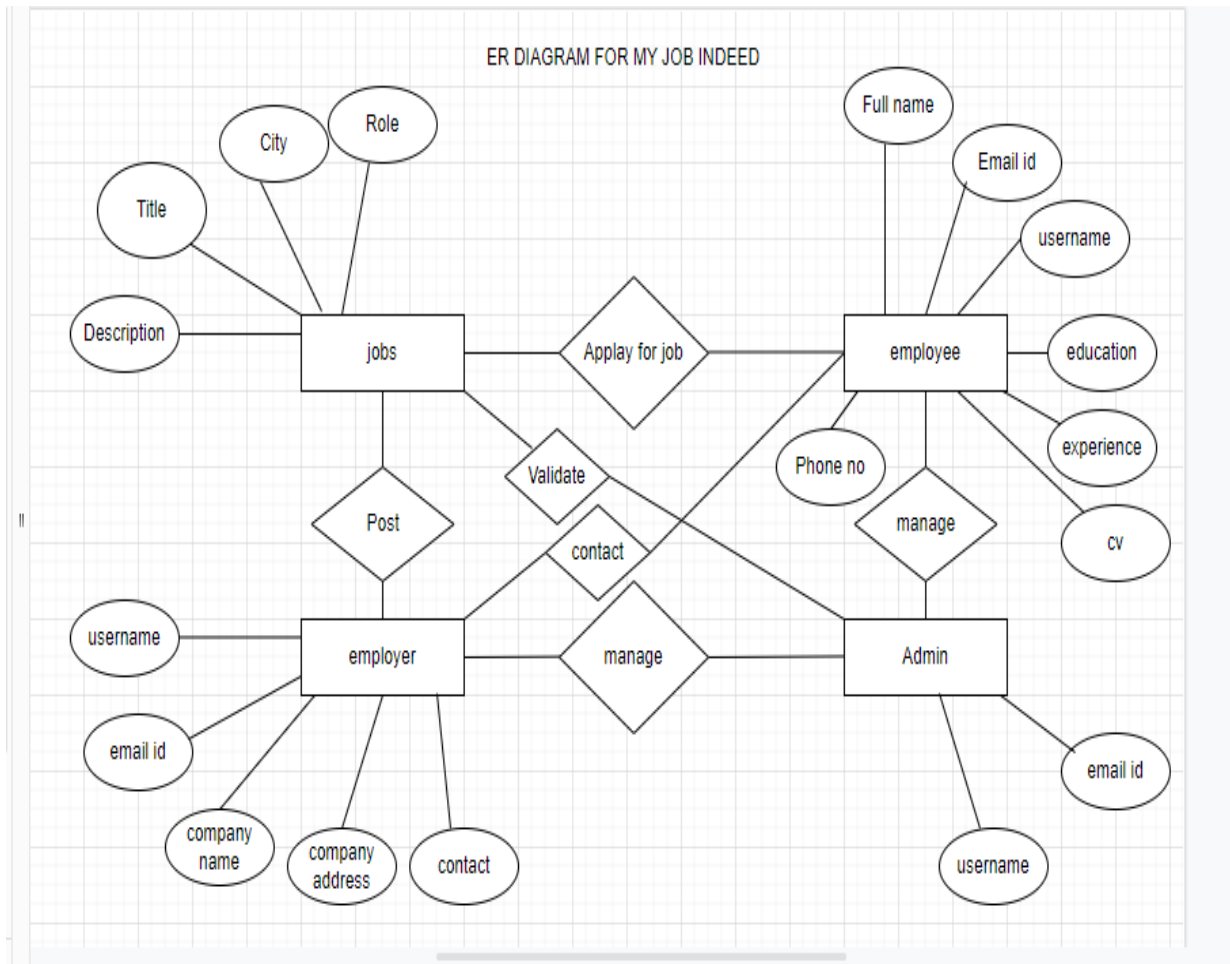


4.2. Domain Model

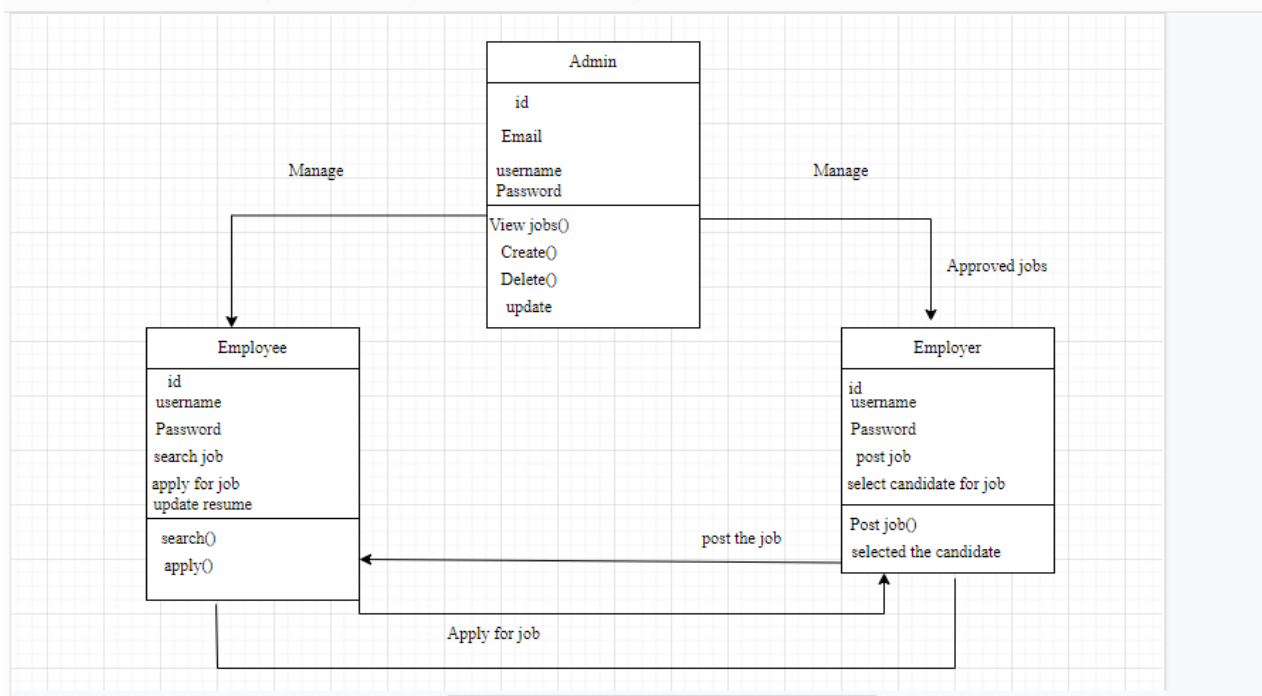


Domain model diagram

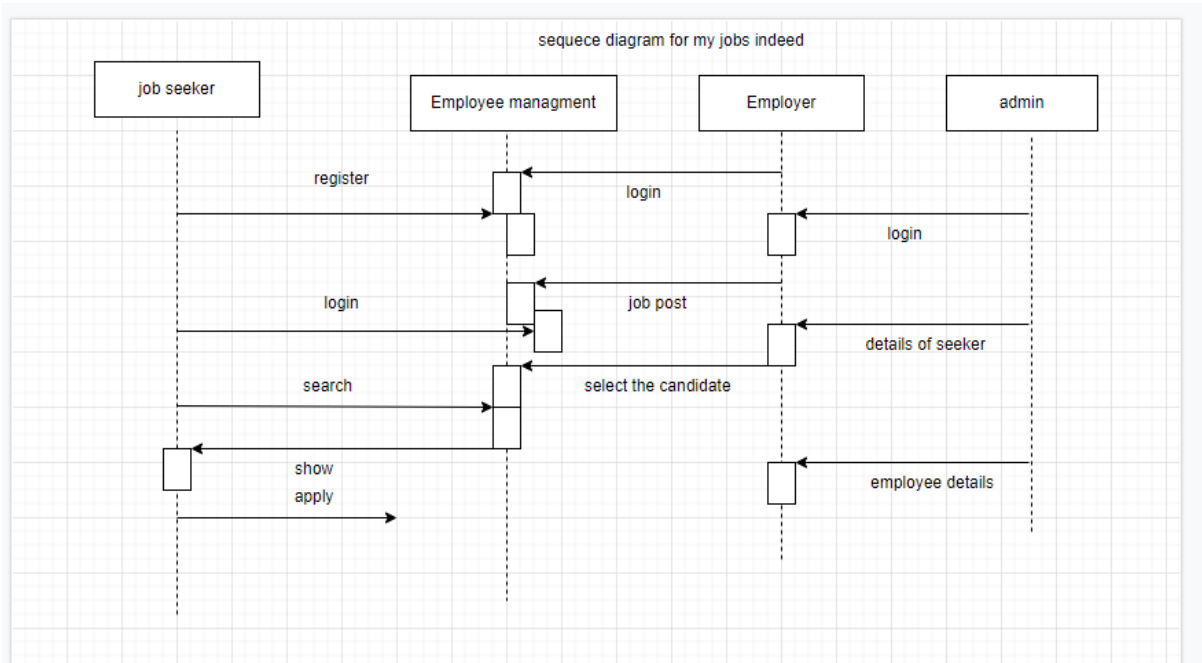
4.3. Entity Relationship Diagram with data dictionary



4.4. Class Diagram



4.5. Sequence / Collaboration Diagram



4.6. Operation contracts

- **Operation Contracts # 1**

Name: Register.

Responsibilities: To register the new user.

Cross References: Use case: Register.

Exceptions: None.

Preconditions: Register interface must be opened and user must enter valid information.

Post conditions: Message pop-ups that you are successfully signed up.

- **Operation Contracts # 2**

Name: Login.

Responsibilities: A user is logged in.

Cross References: Use case: Login.

Exceptions: Invalid username/email or password.

Preconditions: User must have account.

Post conditions: User successfully login.

- **Operation Contracts # 3**

Name: Log out.

Responsibilities: User is logged out.

Cross References: Use case: Logout.

Exceptions: None.

Preconditions: User must be login.

Post conditions: Logout successfully

- **Operation Contracts # 4**

Name: Employee.

Responsibilities: Apply for jobs.

Cross References: Use case: Employee.

Exceptions: None.

Preconditions: User must be login.

Post conditions: Apply for job successfully

- **Operation Contracts # 5**

Name: Employer.

Responsibilities: Post the job.

Cross References: Use case: Employer.

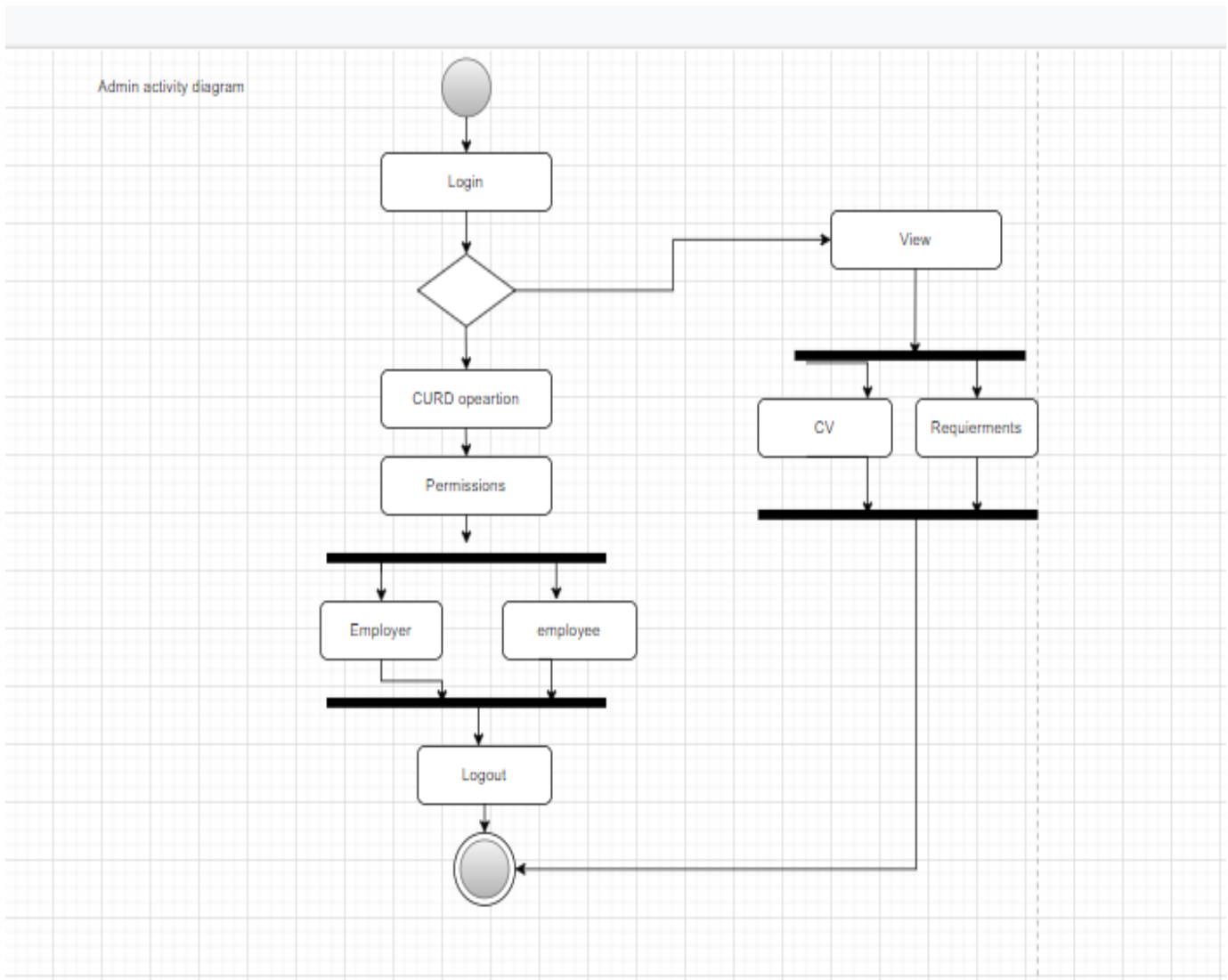
Exceptions: None.

Preconditions: User must be login.

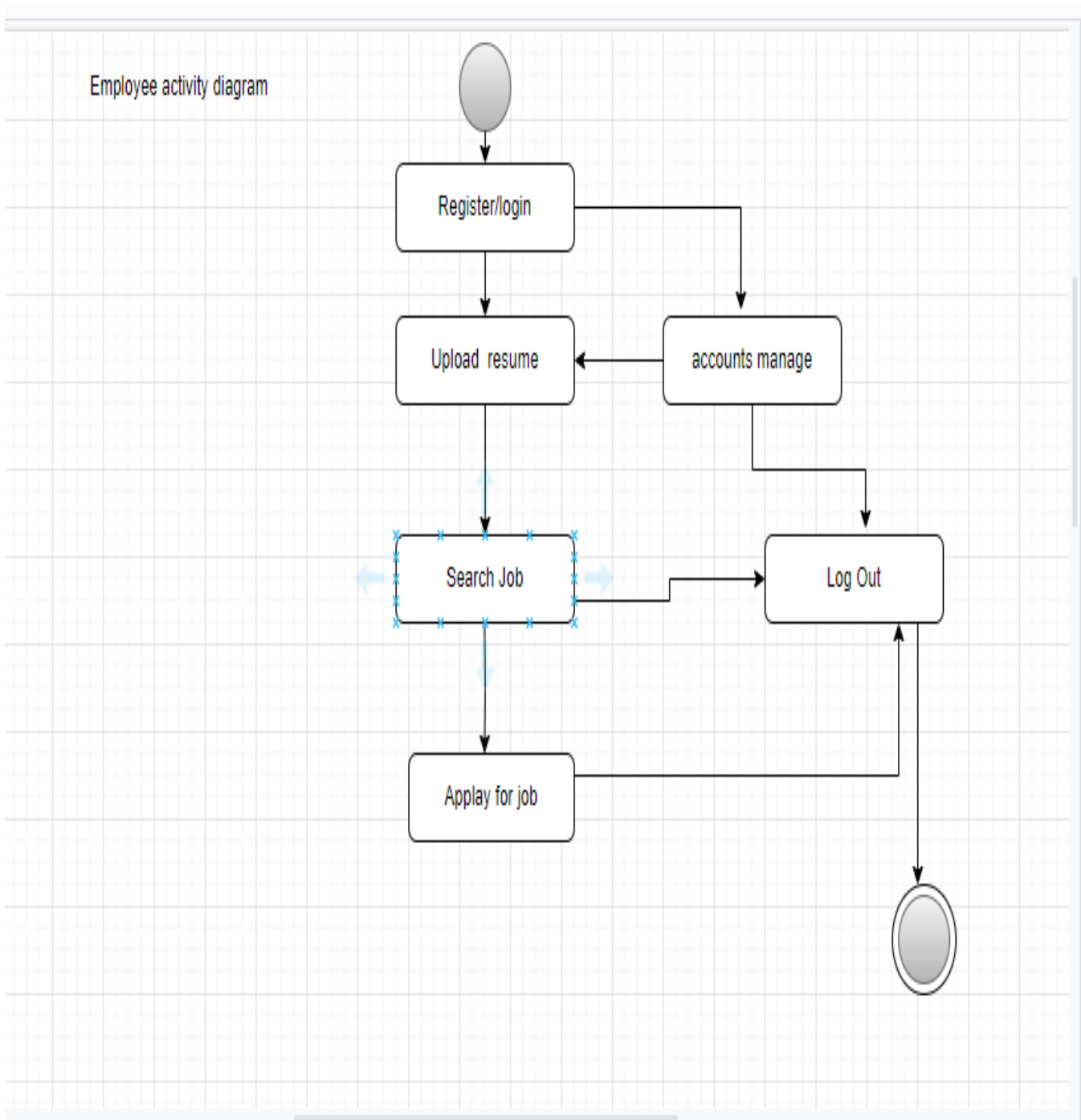
Post conditions: Post job successfully

4.7. Activity Diagram

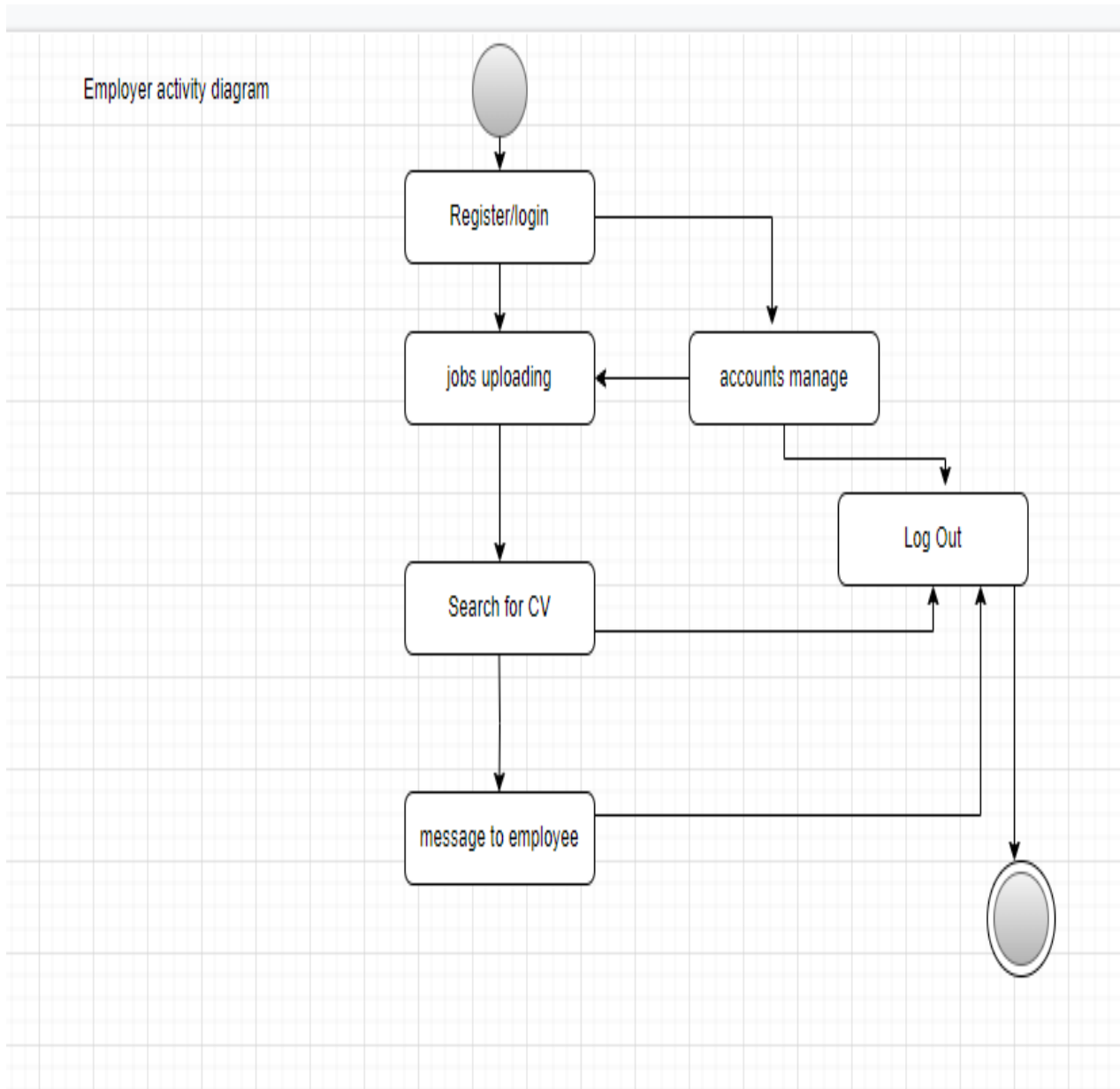
Activity Diagram for admin:



Employee Activity Diagram:

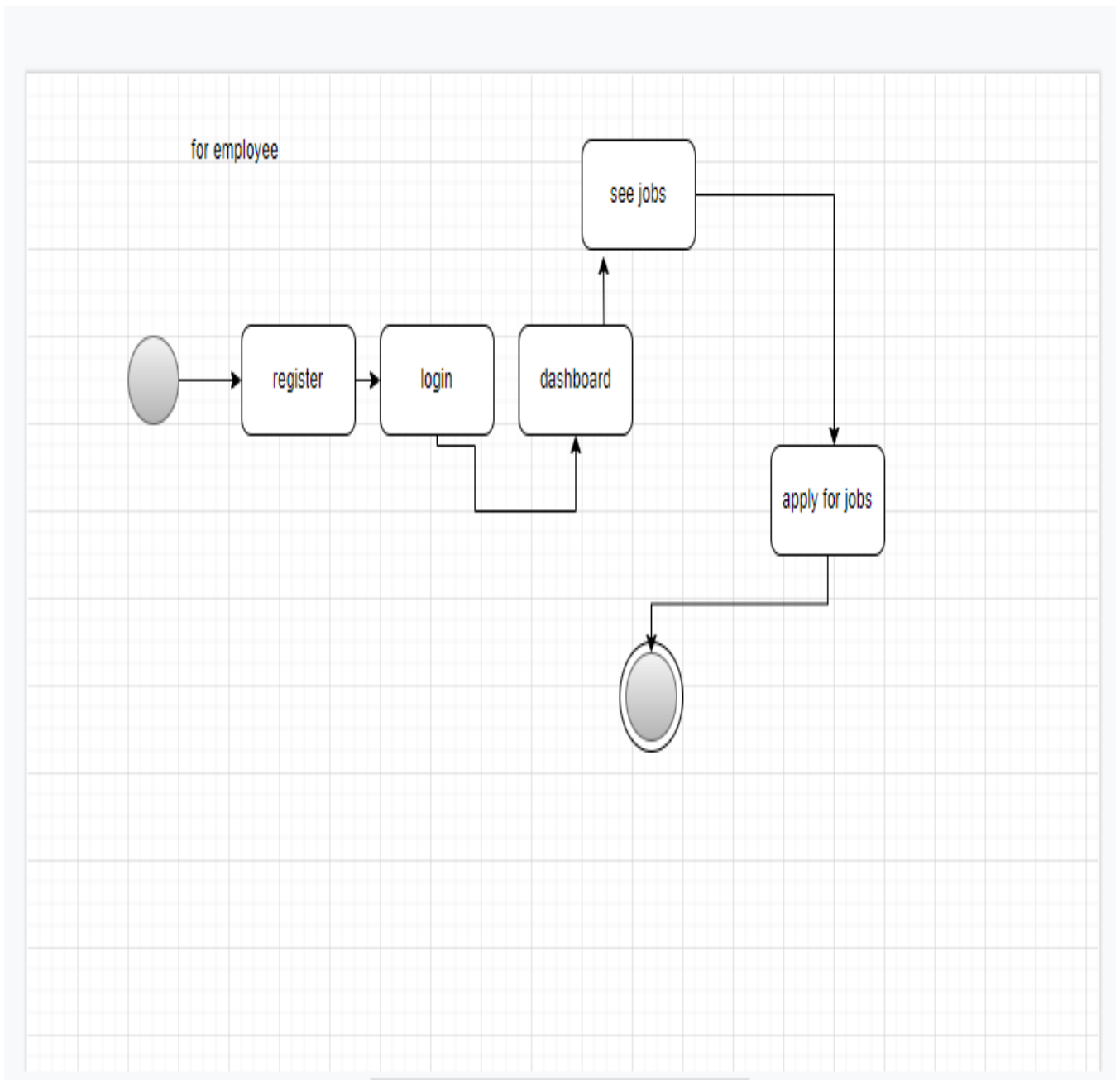


Employer Activity Diagram:

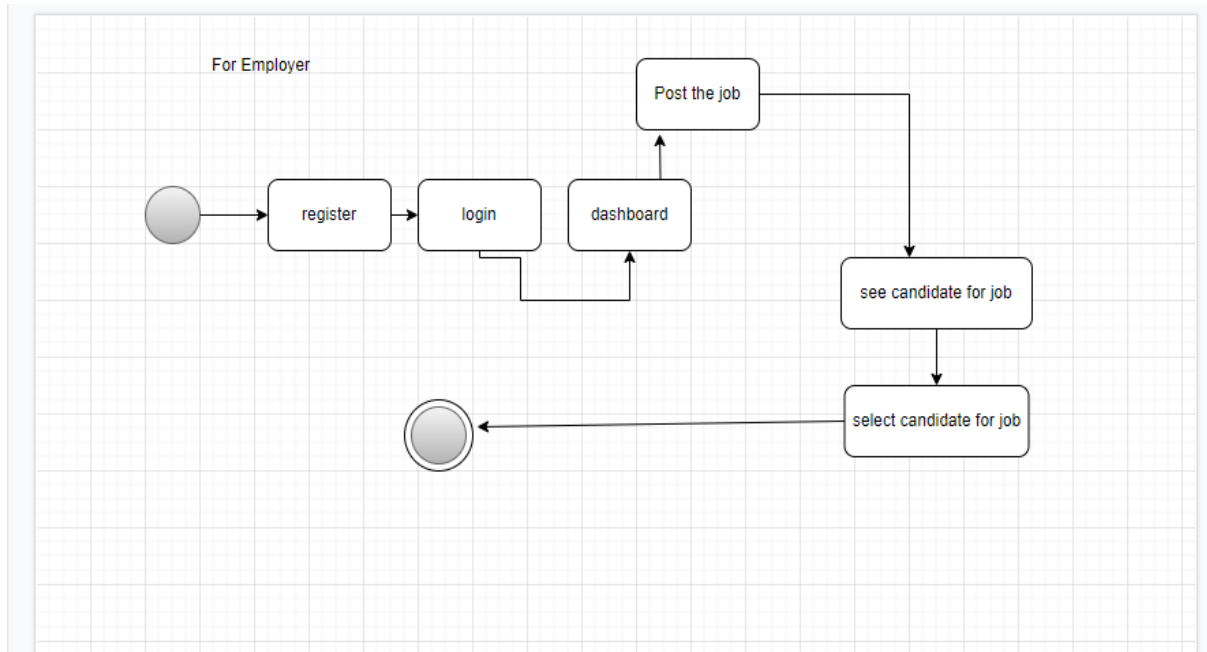


4.8. State Transition Diagram

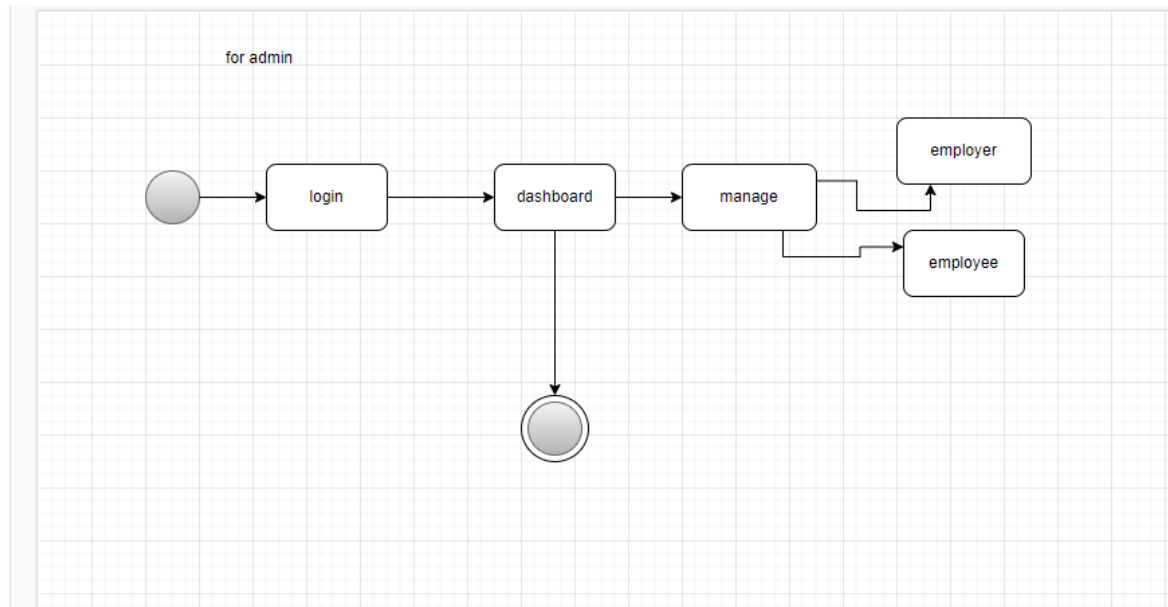
For employee:



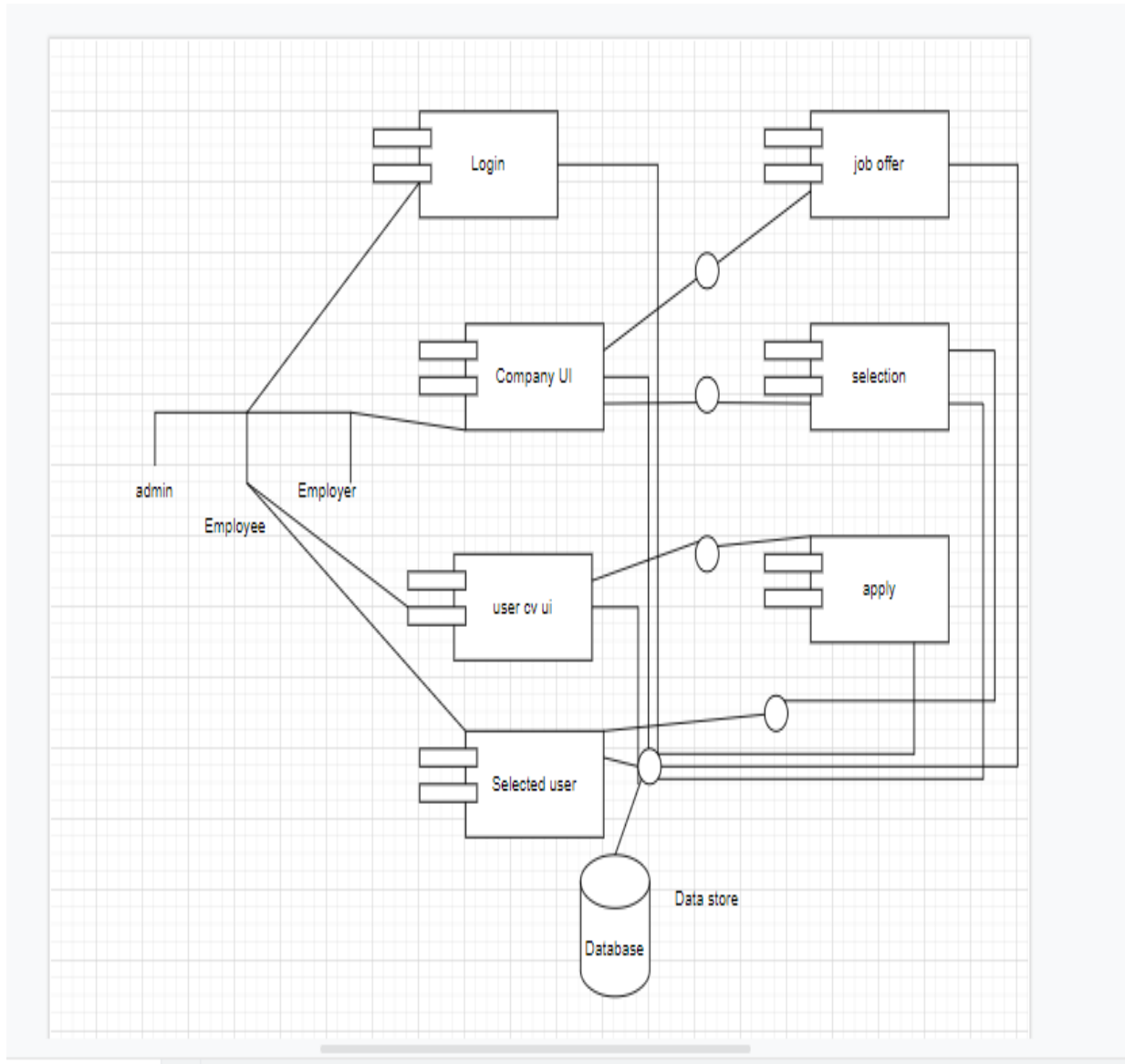
For Employer:



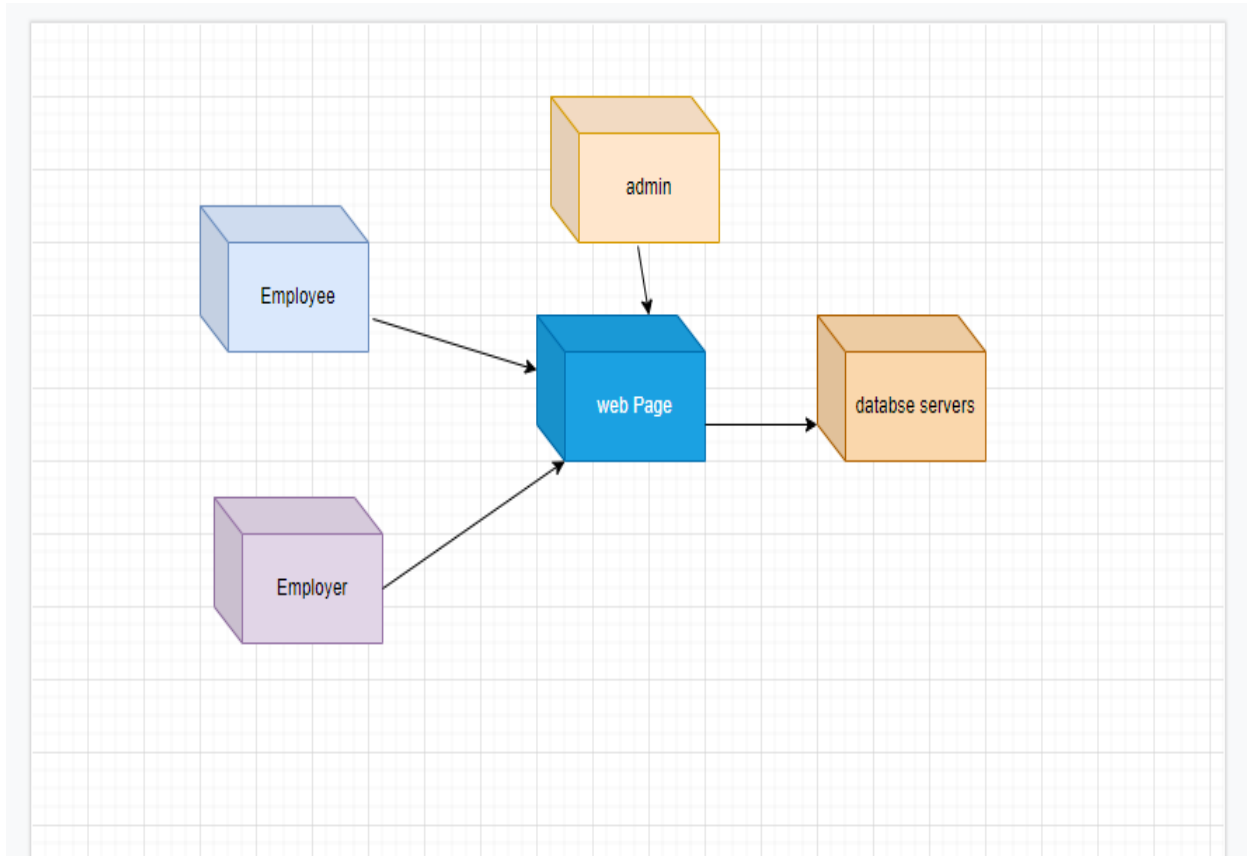
For Admin:



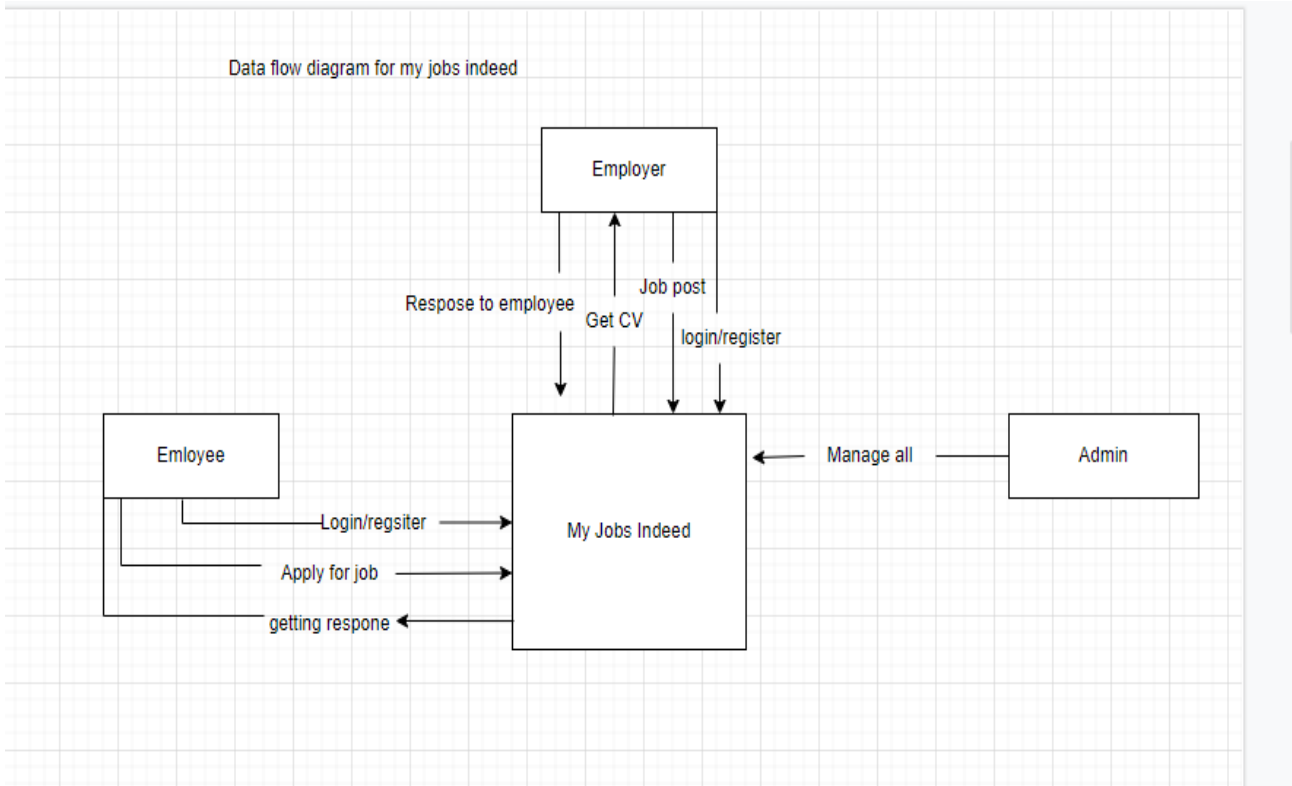
4.9. Component Diagram



4.10. Deployment Diagram



4.11. Data Flow diagram



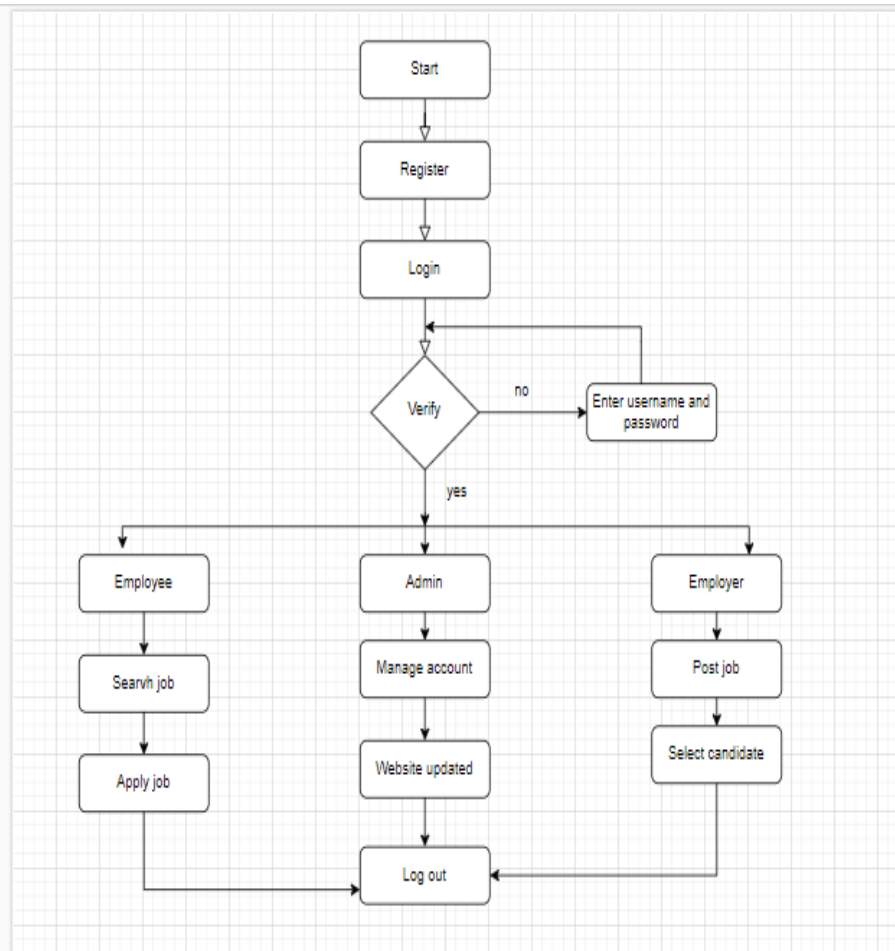
Chapter 5

Implementation

Chapter 5: Implementation

The actual coding to create the suggested system begins at the conclusion of the system design. The database table structure will first be constructed during the development phase in order to provide a suitable data type that will suit system backend development, system connection, and data transfer. We used MySQL and php. The system will be put through a number of test cases throughout the testing phase in order to assess the system's dependability and accuracy. A system testing report will be created in accordance with the test cases for further analysis to identify system flaws and make the necessary improvements.

5.1. Important Flow Control/Pseudo codes



5.2. Components, Libraries, Web Services and stubs

Libraries:

- Bootstrap CSS
- tailwind CSS
- frame work
- html CSS

They are some libraries which we used during development.

Web Services

- User can easily register.
- Employee can easily apply for job.
- Relation between Employee and Employers.
- 24-hr access
- Security.

5.3. Deployment Environment

In Deployment environment we will work on visual studio code for development of our website.

5.4. Tools and Techniques

Languages:

HTML, CSS, JavaScript. These are used to design the frontend of our website.

SQL: It will facilitate our website for retrieving specific information from databases that are further used for analysis.

Php: It will be used as backend language

Tools

MySQL: It will help our project for database development.

Visual studio code: This code editor will support our website for developing operations like debugging, task running, and version control.

For Project Management

Gantt chart: Gantt chart will help us to plan work around deadlines and properly allocate resources.

Diagrams: Diagrams includes; DFD Diagrams, Use case diagrams, Activity diagrams, Sequence diagrams etc.

5.5. Best Practices / Coding Standards

- User specific requirement tool
- Function and classes are always commented showing expected input and output.
- Step by step guide

5.6. Version Control

Version control is a technique for keeping track of changes to files and documents so that you always know which version is the most recent. We can effectively track and control changes to these documents inside our project management software with version control. A system called version control keeps track of changes made to a file or set of files over time so that you can later recall particular versions. A version control system keeps track of all file modifications so that if necessary, a specific version can be called at a later time.

Chapter 6

Testing and Evaluation

Chapter 6: Testing and Evaluation

In this chapter, we perform different testing (unit testing, use case testing, equivalence, data flow testing, integration testing) on our system to check the working of our website that our website is performing all the operations or not. Use Case Testing is a functional black box testing technique that helps testers to identify test scenarios that exercise the whole system on each transaction basis from start to finish.

6.1.1: Use Case Testing:

Test Suite ID	TS001
Test Case ID	TC001
Test Case Summary	To verify that by clicking Signup button username, password, email, phone# and address store in users detail in database.
Related Requirement	RSoo1: User should able to Sign up.
Prerequisites	No
Test Procedure	<ol style="list-style-type: none"> 1. Select fields in Signup form. 2. Enter user data in fields. 3. Click Signup button.
Test Data	Valid username: ahmad , Ahmad Invalid username: 12 Ahmad ./Ahmad ,Ahmad %^3 Valid password: 123Abc@5, Abc567\$%9 Invalid password: 1_2Ahmad, _Ahmad12 Valid email:ali@gmail.com, 12ali@yahoo.com Invalid email: ali.com, Ahmad@yahoo Valid phone# :03123456578 Invalid phone: @56rfgf7999, 2wstyyA
Expected Result	<ol style="list-style-type: none"> 1. If username, password, email and phone# are valid then store user data by clicking signup button. 2. If given inputs are invalid then display error message. 3. If fields are empty then show warning message.
Actual Result	<ol style="list-style-type: none"> 1. If name is valid, the result is as expected. 2. If name is not valid then invalid message displayed. 3. If fields are empty then warning message displayed.
Status	Pass
Remarks	This test case is simple and easy.

Created By	Ahmad Subhan
Date of Creation	04/01/19
Executed By	Ahmad Subhan
Date of Execution	04/01/19
Text Environment	Visual Studio Code

Table 7 : Use case of Sign up

6.1.2:

Test Suite ID	TS001
Test Case ID	TC002
Test Case Summary	To verify Authentication or Login.
Related Requirement	RS002: User should able to Login.
Prerequisites	User should Signup first.
Test Procedure	<ol style="list-style-type: none"> 1. Select Username field and enter username. 2. Select Password field and enter password. 3. Click Login button.
Test Data	Valid username: Ahmad,ahmad Invalid username: 1ahmad, ./ahmad ,ahmad%^3 Valid password: 123Aabc@, abMc567\$% Invalid password: 1_2ahmad, _ahmad12
Expected Result	<ol style="list-style-type: none"> 1. If username and password are valid then clicking the Login button user successfully login. 2. If username and password are invalid then clicking the Login button invalid message display. 3. If fields are empty then display warning message
Actual Result	<ol style="list-style-type: none"> 1. If fields are valid, the result is as expected. 2. If fields are not valid then invalid message displayed. 3. If fields are empty then warning message displayed.
Status	Pass
Remarks	This test case is simple and easy.

Created By	Ahmad Subhan
Date of Creation	04/11/22
Executed By	Ahmad Subhan
Date of Execution	04/11/22
Text Environment	Visual Studio

6.1.3:

Test Suite ID	TS001
Test Case ID	TC003
Test Case Summary	To verify that admin,user once signup if they are forgot password then they can update it by email.
Related Requirement	RS003: user should able to update data.
Prerequisites	user should login.
Test Procedure	<ol style="list-style-type: none"> 1. Select fields. 2. Enter data in fields. 3. Click forgot password button.
Test Data	04/01/19
Expected Result	<ol style="list-style-type: none"> 1. If enter data is valid then update data by clicking update button 2. If given inputs are invalid then display error message. 3. If fields are empty then display warning message.
Actual Result	<ol style="list-style-type: none"> 1. If fields are valid, the result is as expected. 2. If fields are not valid then invalid message displayed. 3. If fields are empty then warning message displayed.
Status	Pass
Remarks	This test case is simple and easy.
Created By	Ahmad Subhan
Date of Creation	05/11/22
Executed By	Ahmad Subhan
Date of Execution	05/11/22

Text Environment	Visual Studio Code

Table 9 : use case of update password

6.1.4:

Test Suite ID	TS002
Test Case ID	TC004
Test Case Summary	To verify that admin,user once signup if they are deleted in database by performing crud operation by clicking Delete button.
Related Requirement	RS004: Admin can delete data.
Prerequisites	Admin should login.
Test Procedure	Click delete button.
Expected Result	If data is deleted by click button then message will appear
Actual Result	If action is valid, the result is as expected.
Status	Pass
Remarks	This test case is simple and easy.
Created By	Ahmad Subhan
Date of Creation	01/12/2022
Executed By	Ahmad Subhan
Date of Execution	01/12/2022
Text Environment	Visual Studio Code

6.1.5:

Test Suite ID	TS002
Test Case ID	TC005
Test Case Summary	To verify that data is searched by clicking search button.
Related Requirement	RS005: User should be able to search data.
Prerequisites	User should login.
Test Procedure	<ol style="list-style-type: none"> 1. Select search field. 2. Enter name in fields. 3. Click search button.
Expected Result	<ol style="list-style-type: none"> 1. If name is valid then show detail. 2. If name is invalid then display error message. 3. If field is empty then display warning message.
Actual Result	<ol style="list-style-type: none"> 1. If name is valid, the result is as expected. 2. If name is not valid then invalid message displayed. 3. If fields are empty then warning message displayed.
Status	Pass
Remarks	This test case is simple and easy.
Created By	Ahmad Subhan
Date of Creation	01/012/2022
Executed By	Ahmad Subhan
Date of Execution	01/12/2022
Text Environment	Visual Studio Code

Table 11: use case of search data

6.1.6:

Test Suite ID	TS002
Test Case ID	TC006
Test Case Summary	To verify that record is display.
Related Requirement	RS006: User should be able to view data.
Prerequisites	User should login.
Test Procedure	<ol style="list-style-type: none"> 1. Enter name in fields. 2. Click View button.
Expected Result	<ol style="list-style-type: none"> 1. If name is valid then show detail. 2. If name is invalid then display error message. 3. If field is empty then display warning message.
Actual Result	<ol style="list-style-type: none"> 1. If name is valid, the result is as expected. 2. If name is not valid then invalid message displayed. 3. If fields are empty then warning message displayed.
Status	Pass
Remarks	This test case is simple and easy.
Created By	Ahmad Subhan
Date of Creation	01/12/2022
Executed By	Ahmad Subhan
Date of Execution	01/12/2022
Text Environment	Visual Studio Code

Table 12 : use case of record to display

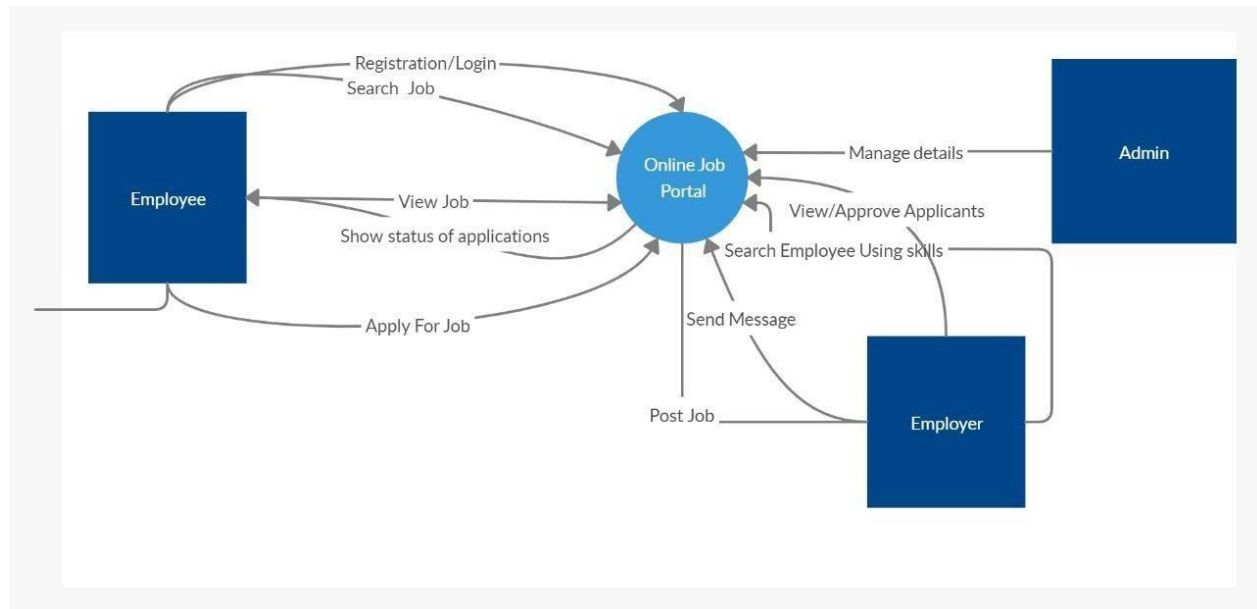
6.2. Equivalence partitioning:

1	User name is alphabetic.	valid
2	User name is not alphabetic.	invalid
3	Password is equal to 10 or greater than 15 characters in length.	valid
4	Password is 2 to 16 characters in length.	invalid
5	Password include one uppercase letter & one lowercase letter.	valid
6	Password include ' _ '.	invalid
7	Email without '@' and '.com'.	invalid
8	Email with '@' and '.com'.	valid
9	Price only be numeric.	valid
10	Price is alphabetic.	invalid
11	Search product with alphabetic.	valid
12	Search product with special character (/,%^,#,@).	invalid
13	No search product name entered	invalid
14	Brand name alphabetic	valid
15	Brand name with special character	invalid
16	Empty field	invalid

6.3. Boundary value analysis

Sr.		Partition 1	Partition 2	Partition 3
1.	Password	Less than 8 character	1 – 8 character	9 – 12
2.	Phone	<=0	1 - 11	9 – 12

6.4. Data flow testing:



6.5. Unit testing

The Unit Testing Techniques are mainly categorized into three parts which are Black box testing that involves testing of user interface along with input and output, White box testing that involves testing the functional behavior of the software application and Gray box testing that is used to execute test suites, test methods, test cases and performing risk analysis.

Code coverage techniques used in Unit Testing are listed below:

- Statement Coverage
- Decision Coverage
- Branch Coverage
- Condition Coverage
- Finite State Machine Coverage

6.6. Integration testing

Software components are logically connected and tested as a unit in a type of testing called integration testing. Multiple software modules created by various programmers make up a typical software project. This level of testing's objective is to find issues with how various software modules interact when they are combined.

The main goal of integration testing is to examine how well these modules communicate data. The name "I & T" (Integration and Testing), "String Testing," and occasionally "Thread Testing" are also used to describe it.

- A Module, in general, is designed by an individual software developer whose understanding and programming logic may differ from other programmers. Integration Testing becomes necessary to verify the software modules work in unity
- At the time of module development, there are wide chances of change in requirements by the clients. These new requirements may not be unit tested and hence system integration Testing becomes necessary.

6.7. Performance testing

In performance testing a particular certain situation is given to the website let's just say a 100 users try to register at the same time so how the system recovers back gracefully with complete results. So according to our extracted results, around 100+ people were able to register in our website.

6.8. Stress Testing

Stress Testing is a type of software testing that verifies stability & reliability of software application. The goal of Stress testing is measuring software on its robustness and error handling capabilities under extremely heavy load conditions and ensuring that software doesn't crash under crunch situations. It even tests beyond normal operating points and evaluates how software works under extreme condition

Chapter 7

Summary, Conclusion and Future Enhancements

Chapter 7: Summary, Conclusion & Future Enhancements

7.1. Project Summary

This 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 PHP web based application and no some extent Windows Application and SQL Server, but also about all handling procedure related with online job portal. 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.

7.2. Achievements and Improvements

The major accomplishments here are that we were able to apply everything we learned in four years of education and improve our skills to a professional level to this project. In this project, we were able to put all we had studied about software architectural design approaches, UML modelling, project management, testing, and other topics to use.

The lessons we learned from this project are the next major accomplishment. new programming languages, frameworks, libraries, and database diagramming software. Everything will be helpful to us in the future. We acquire creative thinking skills.

7.3. Critical Review

Our system's key strengths are its speed, user-friendliness, affordability, ability to meet users' individual needs in the moment, and availability of all functionality that any company might need. It takes a lot of time and effort to manage all of these factors.

7.4. Lessons Learnt

This project has taught us a lot. This project broadens our understanding of the front end and backend of web based application, as well as a variety of other management concepts, problem-solving strategies, and perseverance tactics. Our technical proficiency as well as personal growth abilities like teamwork and passion.

7.5. Future Enhancements/Recommendations

There is always room for further improvement. And we have plan to launch the application of our job portal . The system has been built on PHP for backend and CSS ,JS and html for frontend, but at some point we work on its efficiency, accessibility, flexibility, we are definitely going to scale it up which we believe ours is eventually going to become. We make it more user friendly interface.

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Reference and Bibliography

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[3] Huang J, Jiang X, Tang Q. An e-commerce performance assessment model: Its development and an initial test on e-commerce applications in the retail sector of China. *Information & Management*. 2009 Mar 1;46(2):100-8.

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