Islington College

Final Year Project

CS6P05

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Abstract:

The lack of employment in our country, has advocated the need of an online job portal website application directly or indirectly. A new medium has to be introduced in order to help people find a job. The research brings upon current scenario of Nepal. The current scenario shows the areas engaging in an online job portal website application. Slow progress in providing employment has its root in lack of awareness, misunderstanding and a very little support from the government. Based on the research, the use of an online job portal website application has somehow managed and helped people to secure a job. Nowadays, applications like these have evolved to make the daily life of people a lot more easier. This online job portal website application involves the role of an employer and a job seeker to help people find and provide a job. The platform to build an online job portal website application is done using core php, css, javascript and html.

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1. Introduction:

1.1. Project Description:

The project title for the FYP module is “Job recommendation system”. We all know that it is not easy to get job in Nepal despite qualifications a person possesses. He/she has to travel to different locations in order to explore the kind of jobs they want to do. It is time-consuming to travel to different locations and also it is quite difficult to follow all the long procedures. So many works nowadays have been simplified by the use of online facilities. Thus, Job recommendation system comes up with the solution to the people who are willing to apply for their desired post via website.

Job recommendation system is an online website system which consists of an Admin, a Job seeker and a Job giver. The admin should login to get access to view the people who applied in the website. The admin cannot respond to anyone. The admin can only see the people/company who have registered themselves in the website and can also delete particular appliances. The job seeker should fill up the form which consists of informations of him/her including Name, Date of Birth, E-mail, Address, Qualifications, Skills, etc. The Job seekers who have applied can be viewed by the admin. The Job giver are the companies who will have to register their company in the website by filling up their basic informations and the type of candidates they want to hire. If the requirements of a company based on the types of candidates they want matches, the candidates who have applies will be notified. The candidates can then proceed to apply for the company they want to explore.

The main theme of the website of Job recommendation system will consist of three types of people/company who will have to work on their respective tabs i.e. Admin, Job seeker and Job giver. The Admin can view the people/company who have applied on this website and can delete particular lists. The Job seeker, who will have to fill up the form containing their basic informations and skills to show their capabilities to companies. The Job giver, who will select the best candidates.

1.2. Current Scenario:

The use of internet technology is being popular day by day in Nepal. Nowadays, various facilities such as online shopping with home delivery, online food order, online classes, online payments have been implemented and is used by thousands of users all over the country. These types of web applications have made the daily life of people a lot more easier. Instead of going on their own, they can search for the things they want to buy and then order the things, which will be delivered to the place wherever they will be convenient at. Here, in my project, I have created a Job recommendation system which makes it a lot more easier for people to find the jobs they want. People residing in different parts of the country are starting to learn about the benefits of using an online job portal web app. There are various factors contributing the people to use an online job portal web app. The convenience of finding a job or the availability of jobs they want according to their criterias have made people to accept the benefits of using an online job portal web app. People don't have to travel to different places to find their jobs by the use of this app which helps people to save their time. Thus, the use of an online job portal web app has been rising in Nepal.

1.3. Problem Domain and Project as a Solution:

Problem:

In developing countries like Nepal, the availability of jobs is not adequate and is comparatively slow. So, many people face tremendous amount of challenge to find a job for their livelihood. Also, the support from our government for the people to find their jobs has not been adequate. People have been widely struggling to get their dream job, or at least a well-paid job in their homeland despite their qualifications. According to the Central Bureau of Statistics, a total of 4,000,200 people are not getting jobs befitting their qualification skills. It further reveals that the illiterate unemployment (unemployed and illiterate) is 2.1 per cent in the country, whereas the literate/educated unemployment (unemployed despite having a college degree) is 4.1 per cent. Besides that, there are also the people who are employed, yet not satisfied with their work and salary. (Lohani, 2016)

Solution:

An online job portal web application is a user-friendly website. There are people who have been trying to pursue a job, but they are not seen or heard of. And there are people who want to find a job, but they are not quite certain on where to find one. The first thing about this project is that it can benefit both the employer and the job seekers. The first priority of this project is to manage the job seekers who are registered in the website. Any job seeker or the end user can visit the website and select the company they want to apply for in a certain post. Second priority of this online job portal is to the employers or individuals who wants to provide jobs. Hence, any company or individual can visit the website, register their company and post the criteria that must be fulfilled by the candidates or the job seekers in order to join their company. This website can not only help people to maximize their probability of finding a job, but also the employers, since they can post the vacancies of jobs at their company. This makes the task of both the employers and the job seeker very convenient.

1.4. Aims and Objectives:

Aims:

The main focus of this application is the user interface and online job recommendation system. The main aim of this project is to create a web-based application for:

1. Searching jobs and viewing them.
2. List the jobs available according to company.
3. Apply for a company.
4. Dashboard for the registered company.

Objectives:

The main objective of this application is to build an interactive user interface which will be useful. The application will be straight and easy to navigate throughout and shall be designed for any end users to understand and interact with the application, i.e. for both the users and the company administrations. Once the users are registered, they cannot delete their details. The informations is then sent to the admin dashboard. The register option is easy to find in the application and to register, the user will have to fill up an online web-based form. A verification message will then be sent to the user's email address. Once the email is verified, the username and password will be required to login to the website. Once the users login, they can add and edit their personal details.

2. Background/literature review:

2.1. Resource requirements:

2.1.1. Hypertext Preprocessor (PHP):

PHP is a server-side scripting language that is embedded in HTML. It can be used for various purposes such as managing dynamic content, databases, session tracking and build websites such as e-commerce sites. It is also compatible with popular databases such as MySQL, Oracle, Sybase, Informix. PHP performs system functions, i.e. from files on a system it can create, open, read, write, and close forms. PHP can also handle forms which can gather data from files, save data to a file and send data through email. Also, the elements in the database can be added, modified and deleted through PHP. Using PHP, we can restrict users to access some pages of the website. (Lathkar, 2019)

2.1.2. Hypertext markup language (HTML):

HTML stands for HyperText Markup Language and is a programming language for website creation. These websites can be viewed by anyone else having internet connection. The HTML programming language is relatively easy to learn. This programming language consists of a series of tags typed in a text-file. This text-file is then saved as html file and viewed through the browser like Internet Explorer. Different tags will perform different functions. The html file created is then designed by using Cascading Stylesheets (CSS). (Jamsa, 2013)

2.1.3. Cascading Stylesheets (CSS):

Cascading Stylesheets, CSS is a programming language used to design and describe reusable styles for presenting documents in a markup language. The task of CSS is to alter the layout and appearance of the web pages like designing the fonts used in particular HTML elements including its size and color. A CSS file can be linked to multiple pages making it easy for the developer to change the appearance of all the pages at the same time. CSS is not a markup language and it is used to define the font, font size, font weight, its position and various visual settings. (mozilla, 2019)

2.1.4. JavaScript (JS):

JavaScript is a scripting language, primarily used on the Web to enhance HTML pages and is commonly mixed up with HTML code. Since JavaScript is an interpreted language, it does not need to be compiled. The JavaScript renders web application in an interactive and dynamic fashion which allows the pages to react to events, exhibit special effects, validate date, create cookies and so on. In a HTML file, the JavaScript file is opened using the Script element and enclosed by the Script tags. JavaScript files are known by the .js extension. (Morris, 2012)

2.1.5. Bootstrap:

Bootstrap is the most popular HTML, CSS and JS framework for developing a responsive projects on the website application. It is a free and open source front end development framework used in the creation of websites and web apps. Bootstrap includes user interface components, layouts and JS tools along with the framework for implementation. (RB Team, 2019)

2.2. Methodology used:

Agile methodology

The term “agile” refers to the ability to respond to changes quickly and in a more organized way. It is a way of dealing with, and ultimately succeeding in, an uncertain and turbulent environment. Most of the software developers choose to go with this approach because of the fact that they can identify what they are uncertainly facing, so that they can figure out how they can adapt to these changes made in the software in an organized way when they go along. When most teams and organizations start doing agile software development, they largely focus on the practices that help with collaboration and organizing the work, which makes it a lot more easier. One thing that separates agile from other approaches to software development is the focus on the people doing the work and how they work together. (Cockburn, 2011)

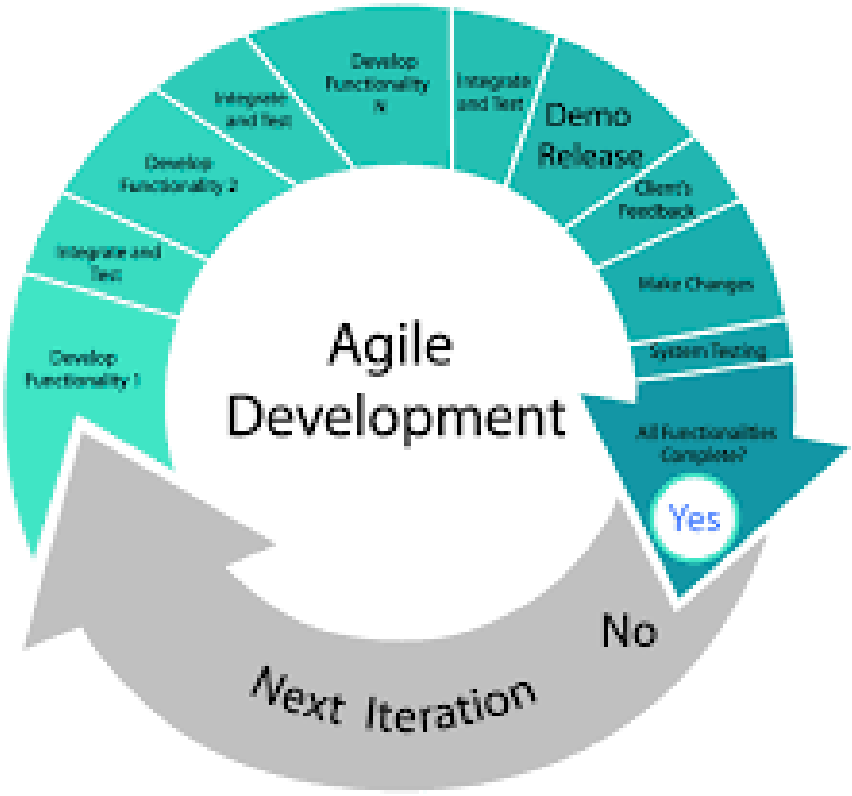

Figure 1: Agile methodology

2.2.1. Why I used Agile methodology

After a fair amount of research in the web to determine which methodology I should use, I decided to go for Agile methodology. Agile methodology makes it easier to truly understand the vision of the project and how I should plan and break-down my work structure. An agile approach provides a unique opportunity for clients to be involved throughout the project, from prioritizing features to iteration planning and review sessions to frequent software builds containing new features. Here, the priority of features that provide the most business value. Also, the quality of the software is improved by producing frequent builds and conducting testing and reviews during each iteration by finding and fixing defects quickly and identifying the mismatches early. Experimentally, it is found that adopting agile software development practices deliver the software project on time and with a higher degree of client satisfaction. So, agile is a powerful and one of the best methodology for software project development by not only providing benefits to the developer team, but also by producing a more satisfactory project to the users as well. By organizing and re-envisioning the activities involved in the customer software development, agile achieves much more objectives in a more gradual and satisfaction oriented way.

2.3. About the end users:

1. To register a job seeker, a user can navigate to register page easily, enter details and register themselves in the website. The job seekers cannot immediately login. They should be verified first. To verify the job seeker, they must satisfy the certain register criteria.
2. To apply for a company, an end user can see a panel in their home page, to choose or select the company according to their city. Or the user can simply select the city and the application will show the companies in that particular city. Then, the user can select the company, they can select multiple companies.
3. The registered user should login with valid or existing username and password. After the login is successful, they can add, remove or update their details.

2.4. Similar Projects and Comparison:

- **Kumari Jobs:**

Kumari Jobs is an online job portal where a user can search for a job meeting their requirements. The main advantage of using this application is that it is very user-friendly to the clients who want to find or provide a job. The flip side of this application is to those people who wants to register their company, they might need to scroll all the way to the bottom of the page and it might be difficult to find it. Comparing the web application with Kumari Jobs looks huge but looking at features, all the possible unique features are present in the web application. These features are likely to be understood and is user-friendly as well. That may be the reason for this website to have implemented such features, such as requirements filtering. While a user can compare salaries with the freedom to choose, they can be less satisfied as well. Like the other application, this application also provides the informations of finding a job in Nepal through an online job portal web application. This application is also business oriented like the other one. Being both a business application as well as information provider, this application will be unique on its own. Further, selecting required candidates would not be a problem, since an interview date would be set at a particular date and time for the eligible candiadates.

3. Development:

3.1. Use case diagram of the entire system:

Figure 2: Use case diagram

Job Recommendation System has 3 major actors they are Job Seeker, Employer and Admin. The Job Seeker is able to create a profile, search for the job they need and the system provides them recommendation of job. Similarly, the Employer post jobs of some category. Select the candidate and notify if the candidates are selected for the position. There is a System Admin who can view and monitor the user's activity and are able to remove the users.

3.2. High level use case of the system:

3.2.1. High level use case for Login:

Login
Use Case: Login
Actor (s): Admin, Job seekers, Employer
Description: In order to gain access to the account, the actors must first login.

Table 1: High level use case for Login

3.2.2. High level use case for Register:

Register
Use Case: Register
Actor (s): Admin, Employer, Job seekers
Description: In order to create an account on this Job portal, one must first register filling up the basic informations.

Table 2: High level use case for Register

3.2.3. High level use case for Manage Jobs:

Manage Jobs
Use case: Manage Jobs
Actor: Admin
Description: The admin can view the jobs which have been posted in the website and also has the authority to delete some jobs.

Table 3: High level use case for Manage Jobs

3.2.4. High level use case for Manage Job seekers:

Manage Job seekers
Use case: Manage Job seekers
Actor: Admin
Description: The admin can view the job seekers who have applied for a particular company and also has the authority to delete some job seekers.

Table 4: High level use case for Manage Job seekers

3.2.5. High level use case for Manage Employers:

Manage Employers
Use case: Manage Employers
Actor: Admin
Description: The admin can view the employers who have created an account in the website and also has the authority to delete some employers.

Table 5: High level use case for Manage Employers

3.2.6. High level use case for Create Jobs:

Create Jobs
Use case: Create Jobs
Actor: Employer
Description: The employer after creating their account on the website can post the type of jobs

Table 6: High level use case for Create Jobs

3.2.7. High level use case for Select eligible candidates:

Select eligible candidates
Use case: Select eligible candidates Actor: Employer Description: The employer selects the type of candidates they want to hire after looking at the list of job seekers and selecting the eligible ones.

Table 7: High level use case for Select eligible candidates

3.2.8. High level use case for Apply for a company:

Apply for a company
Use case: Apply for a company Actor: Job seekers Description: The job seekers can apply for the company they want to after looking at the list of the companies which satisfies their desired job level.

Table 8: High level use case for Apply for a company

3.2.9. High level use case for Search Job:

Search Job
Use case: Search Job Actor: Job seekers Description: The Job seekers can explore the companies they want to apply to after successfully logging in to their account.

Table 9: High level use case for Search Job

3.3. Functional requirements:

The functional requirements for a system describe what the system should do. Those requirements depend on the type of software being developed, the expected users of the software. These are statement of services the system should provide, how the system should react to particular inputs and how the system should behave in particular situation.

Identifier	**Requirements**
Browse	Job Seeker can easily browse to the website through internet and view Job information.
Search	The user can easily search the Job by browsing the website.
Register User	The Job Seeker and Employer should register to the website.
Login	The Job Seeker and Employer shall login with the Valid Username and password.
Add Profile	The Job Seeker adds his/her profile/cv
Post Job	The Employer Posts job
Generation of Recommendation	The Jobs are recommended to the Job Seeker By the system using some algorithm
Log Out	The User can log out any time they login in the website

Table 10: Functional requirements of the system

3.4. E-R Diagram of the system:

An entity-relationship model (ER model) describes inter-related things of interest in a specific domain of knowledge. The following ER model shows the entities, their attributes and relationships between them in our application. It supports the business process within the scope of corresponding information systems in organizations.

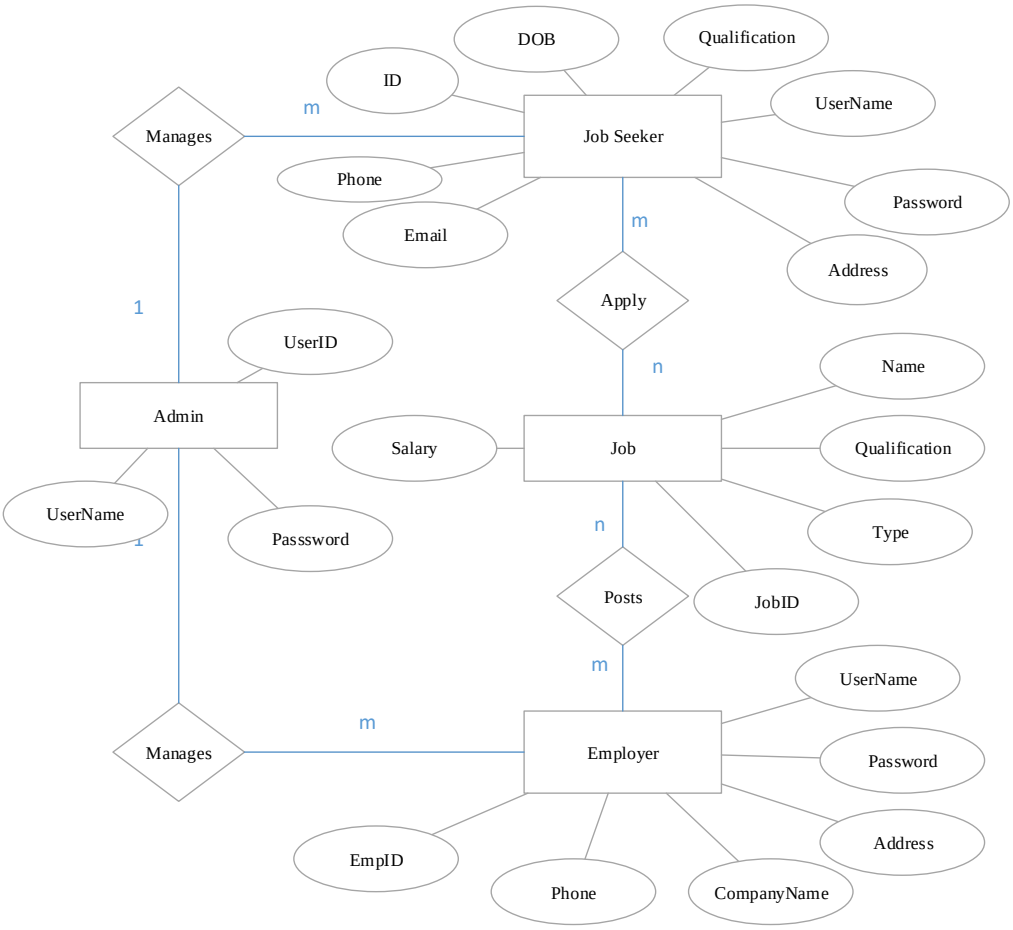

Figure 3: E-R Diagram of the system

3.5. Class Diagram:

The following class diagram is an illustration of the relationships and source code dependencies among classes in our system. Each class has three sections: Name, attributes and operations.

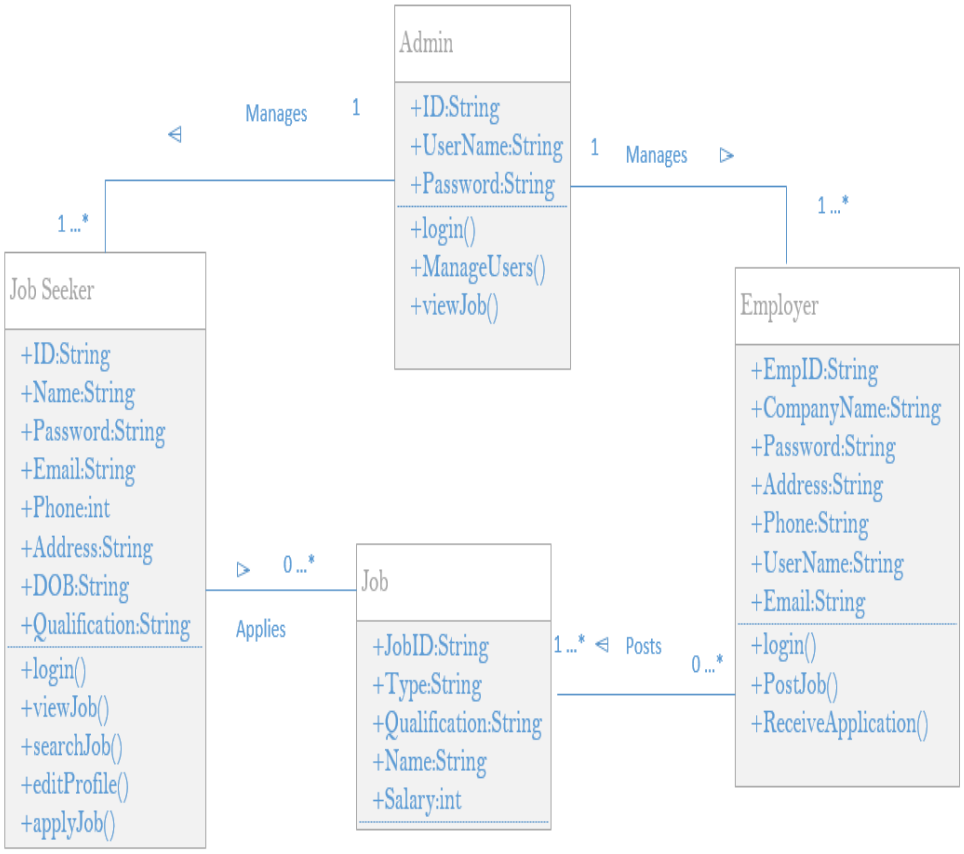

Figure 4: Class diagram of the project

3.6. Activity Diagram:

Activity diagram is important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system. The control flow for Job Seeker, Employer and Admin is shown below:

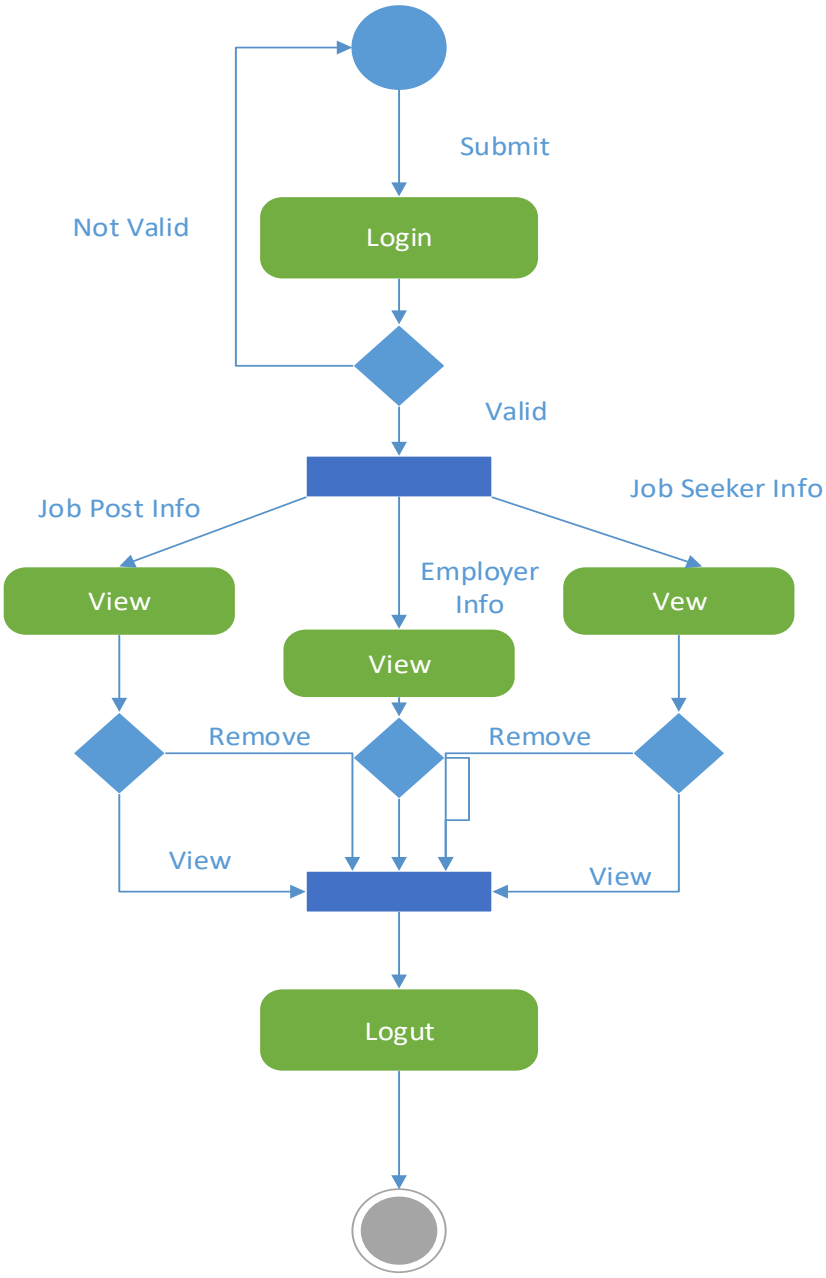

Figure 5: Activity Diagram for Job Admin

The Activity diagram explains the activities of the Admin in our system. The admin logins and is able to view and manage the user that can be Job Seeker or Employer. Admin can view the details and remove the users in our system.

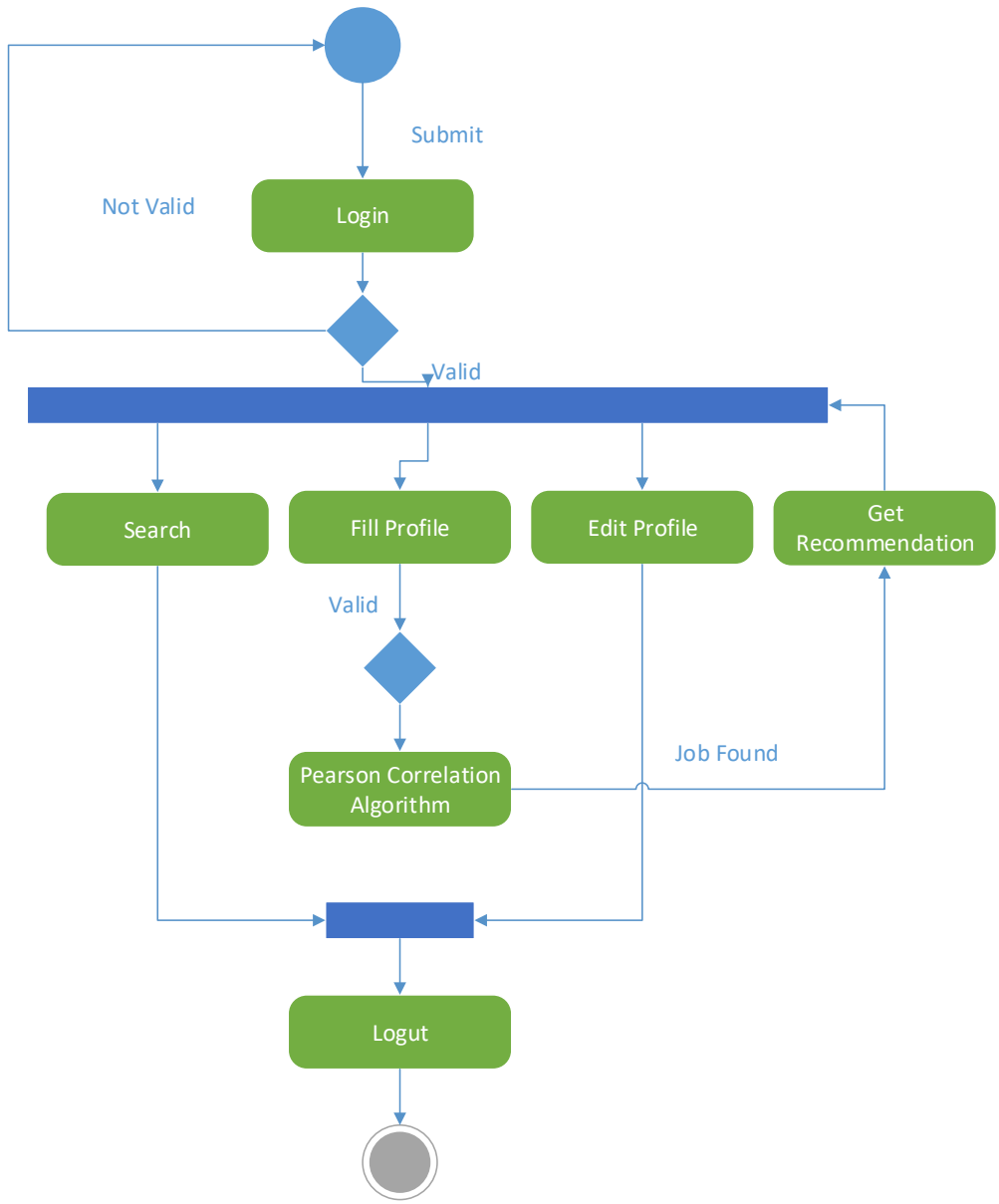

Figure 6: Activity Diagram for Job Seeker

The above activity diagram explains the major activities of the Job Seeker in our system. The Job Seeker after logging in the system is able to search job, edit the profile and respond to the appointment after getting recommendations from the system.

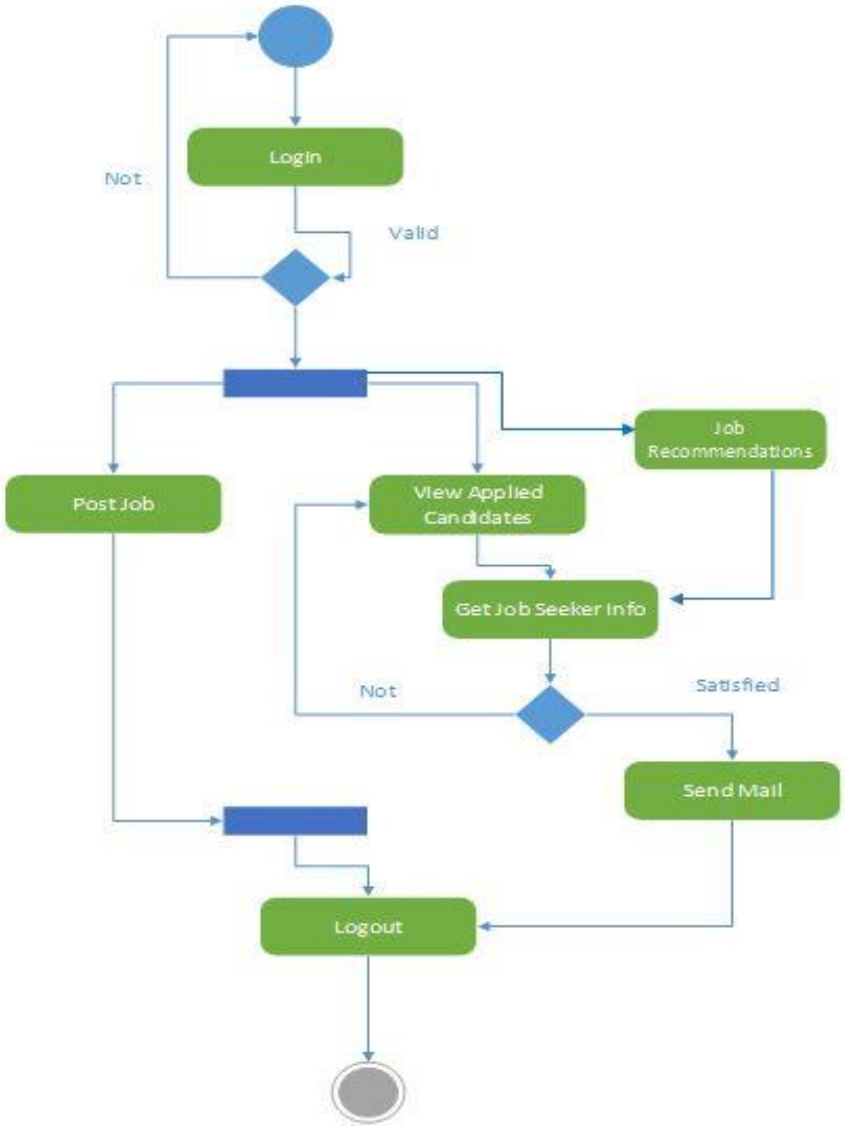

Figure 7: Activity Diagram for Employer

The above activity diagram explains the major activities of the Employer in our system. The Employer after logging in the system is able to post the jobs. Similarly, an Employer views the applied job seekers and their profiles. They send mail to the selected candidates.

3.7. Sequence Diagram:

A sequence diagram is a type of interaction diagram because it describes how and in what order a group of objects works together. Sequence diagrams are sometimes known as event diagrams. The sequence diagram of our system is shown as below.

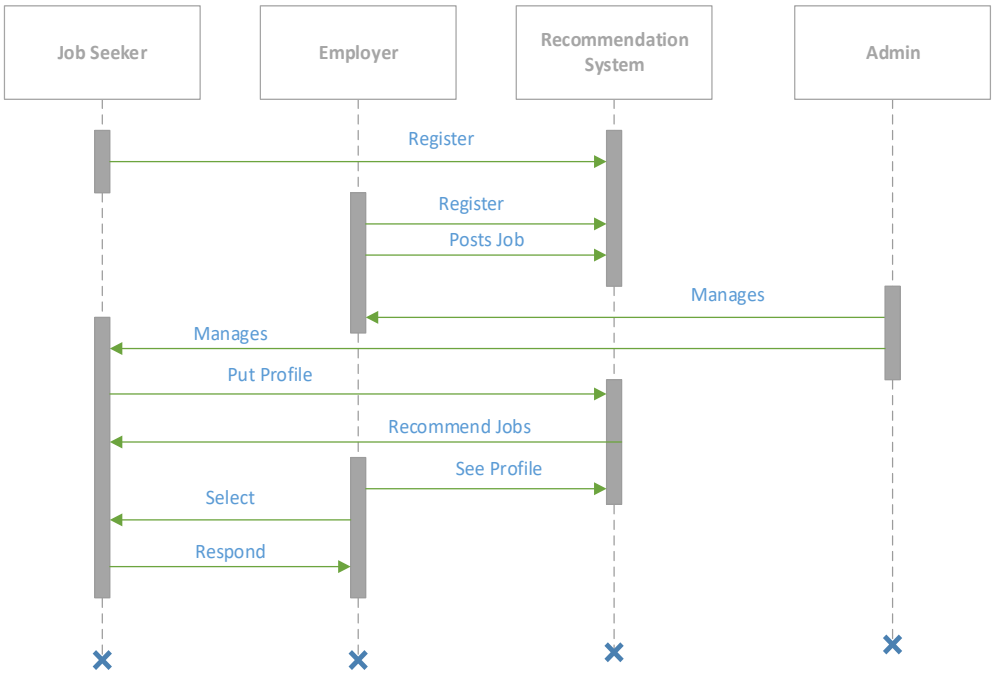

Figure 8: Sequence diagram of the project

3.8. Expanded use case description:

3.8.1. Expanded use case description of Login:

Use Case: Login

Actors: Admin, Job seekers, Employer

Description: A user tries to login to the website by entering his/her username and password.

Action steps:

Actor action	System Response
1. The actor enters the username and password to login. 4. The actor gets access to the website.	2. The database verifies the user's username and password. 3. The system gives access to the user.

Table 11: Expanded use case description of Login

Alternative course of action:

Line 2: If the user enters invalid username/password, the login won't be successful.

3.8.2. Expanded use case description of Register:

Use case: Register

Actors: Admin, Job seekers, Employer

Description: A new user registers into the website by entering his/her informations.

Action steps:

Actor action	System Response
1. A new user enters his/her informations to register in the website. 3 The user is registered.	2. The database records the informations of the users.

Table 12: Expanded use case description of Register

Alternative course of action:

Line1: If wrong/invalid informations are entered by the user, he/she cannot proceed.

3.8.3. Expanded use case of Manage Job seekers:

Use Case: Manage Job Seekers

Actor: Admin

Description: The admin manages the job seekers after they register in the website.

Action steps:

Actor action	System Response
1. A job seeker registers in the website.	2. The admin checks the registered job seekers. 3. The admin manages the job seekers.

Table 13: Expanded use case description of manage job seekers

3.8.4. Expanded use case description of Manage Jobs:

Use Case: Manage Jobs

Actor: Admin

Description: The admin checks and manages the jobs.

Action steps:

Actor action	System Response
1. The jobs registered are displayed to the admin.	2. The admin checks the available jobs. 3. The admin manages the jobs.

Table 14: Expanded use case description of manage jobs

3.8.5. Expanded use case description of Create jobs:

Use Case: Create Jobs

Actor: Employer

Description: The Employer creates jobs based on the type of candidates they want to hire.

Action steps:

Actor action	System Response
1. The employer registers into the company. 2. The employer creates jobs it has on offer.	3 The database stores the jobs created by the employer.

Table 15: Expanded use case description of create jobs

3.8.6. Expanded use case description of Manage Employers:

Use Case: Manage Employers

Actor: Admin

Description: The admin checks and manages the employers.

Action steps:

Actor action	System Response
1. The registered employers are displayed to the admin.	2. The admin checks the registered employees. 3. The admin manages the employers.

Table 16: Expanded use case description of manage employers

3.8.7. Expanded use case description of Search Jobs:

Use Case: Search Jobs

Actors: Admin, Job seekers

Description: The job seekers search for the jobs they want on the website and the admin verifies the jobs available for them.

Action steps:

Actor action	System Response
1. The job seekers search for the jobs they want.	2. The admin checks and verifies the jobs available for them. 3. The jobs are then displayed to the job seekers.

Table 17: Expanded use case description of search jobs

Alternative Course of action:

Line2: The admin might not find suitable jobs for the job seekers.

3.8.8. Expanded use case description of Select eligible candidates:

Use Case: Select Eligible Candidates

Actor: Employer

Description: The employer hires only the candidates meeting the criteria to be an employee for their company.

Action steps:

Actor action	System Response
1. The job seekers registers and applies for a company.	2. The employer checks the criteria and the eligibility requirements of the job seekers. 3. The employer verifies the job seeker.

Table 18: Expanded use case description of select eligible candidates

Alternative course of action:

Line3: The criteria of the job seekers might not be verified.

4. Testing:

4.1. Unit testing and System testing:

Unit Testing:

Unit testing is simply a testing technique in which the individual modules are tested to determine if there are any issues by the developer himself. The main aim of unit testing is to isolate each unit of the system to identify, analyze and fix the defects of the existing system. The advantages of unit testing include:

1. The defects in the freshly developed software is individually checked which reduces the bugs when changing some of the functionalities.
2. Since defects are determined right in the early phase of development, the cost of testing is also reduced.
3. Improves design and allows better refactoring of the code.
4. The quality of the software developed is enhanced when unit testing is integrated.

Hence, unit testing allows the developers to modify the source code without having major concerns about how such changes might affect the functioning of other units or the program as a whole. This means, unit testing must be frequently performed in order to ensure that all the units of the program are found to be executing according to the developer's plan.

Some of the disadvantages of unit testing includes:

1. Tests will not uncover every single bug.
2. The errors in integration are not caught since unit testing tests only particular sets of data and its functionality.
3. Unit testing can be more time consuming since multiple lines of codes must be written in order to test a single line of code.

(Rouse, 2014)

System Testing:

Unlike unit testing, system testing refers to testing the software as a whole. Here, the end to end testing of the system as a whole is executed in order to verify the peaceful functioning of the software. Usually, system testing is done after integration testing and it plays a very vital role in delivering a high-quality product. In order to test the system as a whole, the expectations and the requirements must be clear and the developer must understand the system's functionality, performance, security, recoverability or the instabilities of the existing system.

(Desyatnikov, 2020)

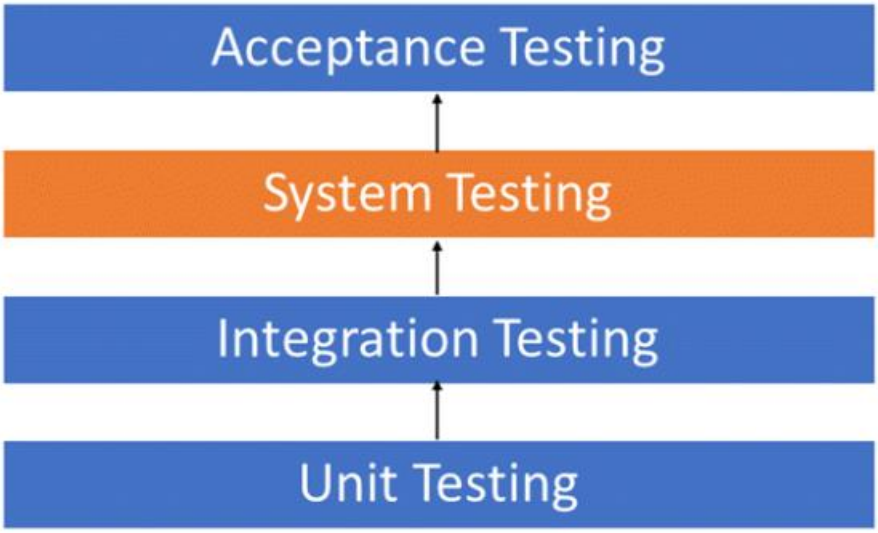

Figure 9: System testing

Pros of system testing method includes:

1. The end to end software testing is done.
2. Both the business requirements and system software architecture are tested in system testing.
3. Appropriate system testing helps in relieving after production goes live issues and bugs.
4. System testing is led in a situation like a production condition or some of the time it is finished with production parallel test condition where the same data input is fed to the

existing framework and a new framework to look at the differences in functionalities removed and added.

(TestOrigen, 2019)

4.2. Software testing:

Admin Login:

Objective	Login the Admin
Action	A valid username and password is inserted to login the admin.
Expected result	The admin should reach at his dashboard.
Actual result	The admin reached at his dashboard.
Conclusion	Test Successful

Table 19: Test for admin login

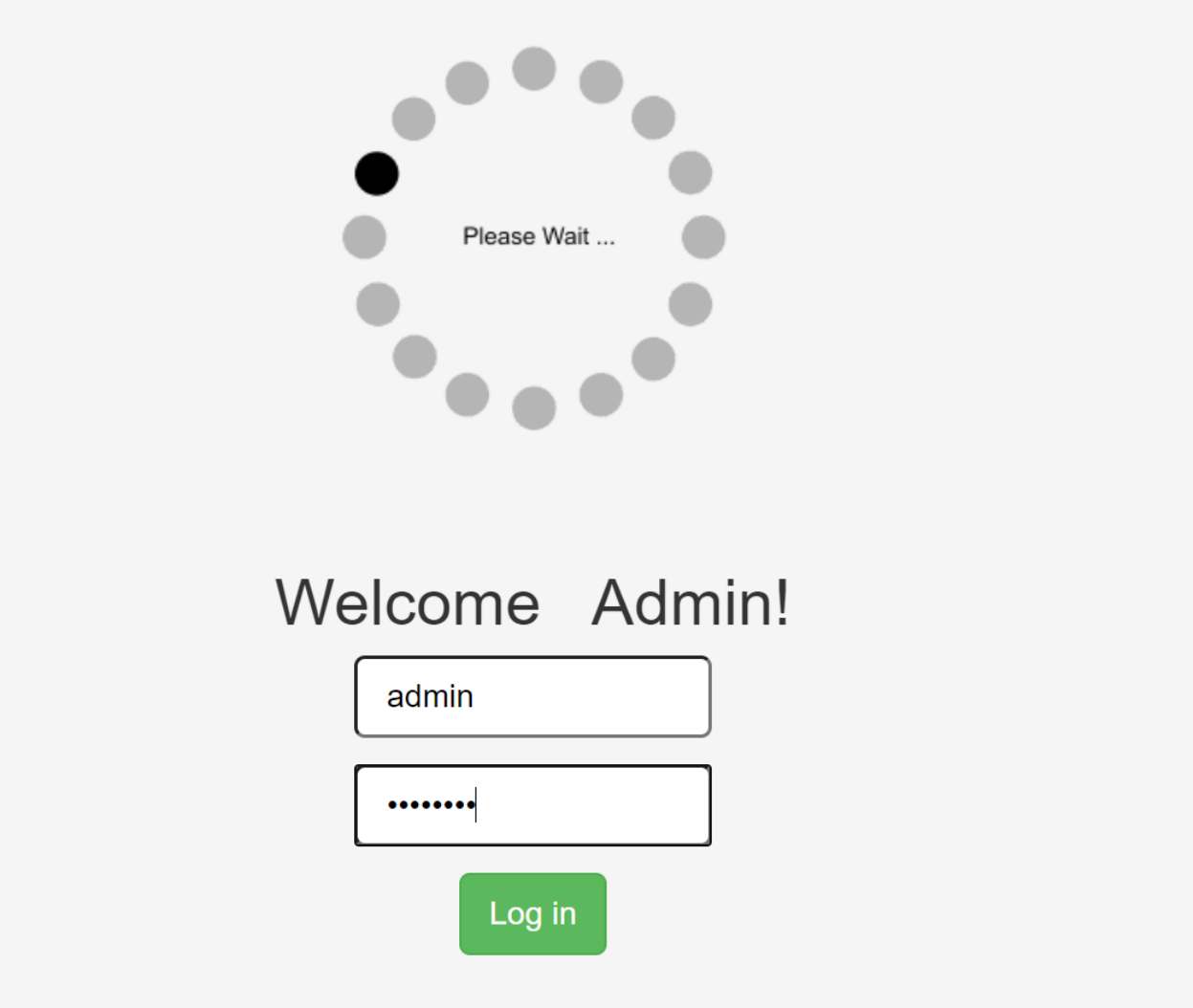

Figure 10: Admin login panel

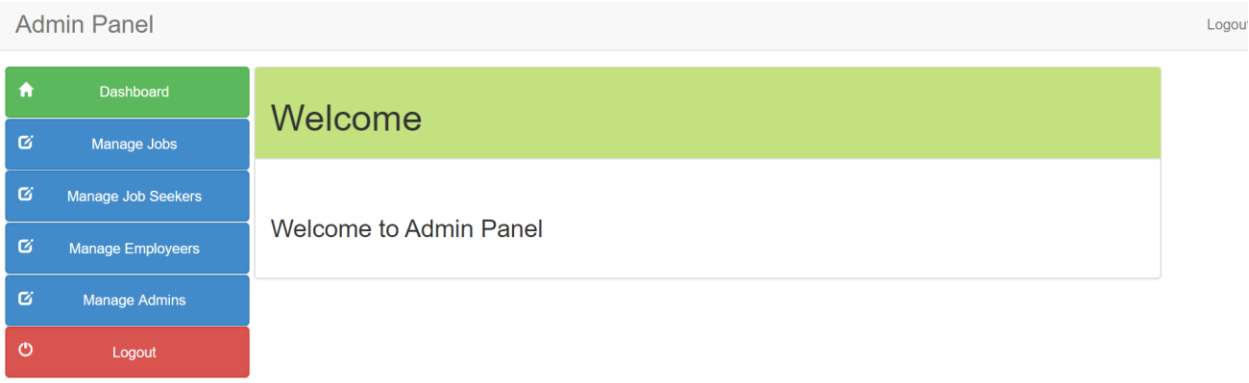

Figure 11: Admin dashboard

Register error:

Objective	To show a pop-up message when the length of password is not sufficient.
Action	The length of password is not sufficiently entered.
Expected result	A small pop-up message will be displayed below the password's text box.
Actual result	A small pop-up message is displayed below the password's text box..
Conclusion	Test Successful

Table 20: Test for register error

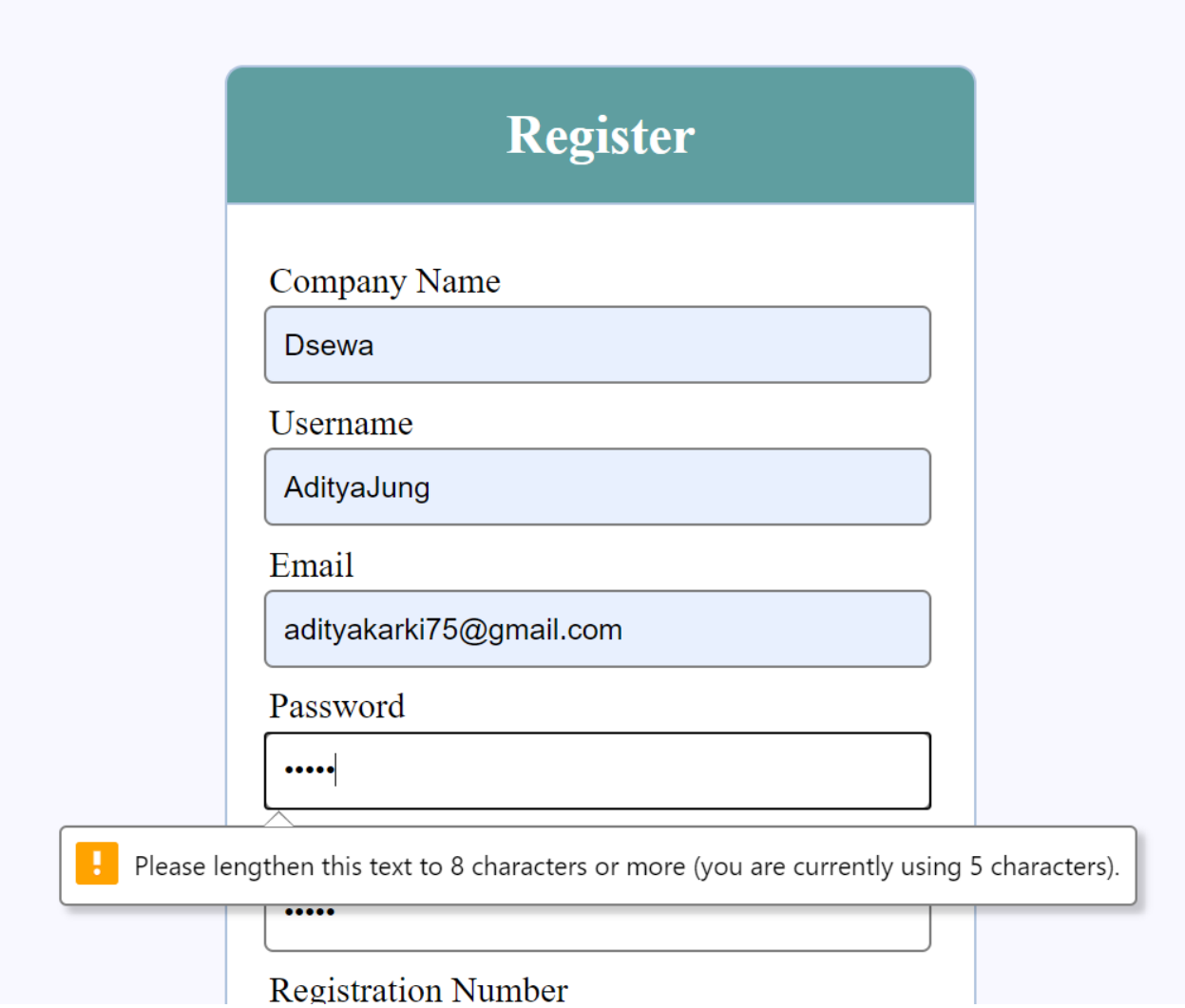

Figure 12: Register panel error

Job seeker login:

Objective	To login the job seeker.
Action	A valid username and password of an existing job seeker is entered.
Expected result	The job seeker should be successfully logged into his/her account.
Actual result	The job seeker is successfully logged into his/her account.
Conclusion	Test Successful

Table 21: Test for job seeker's login

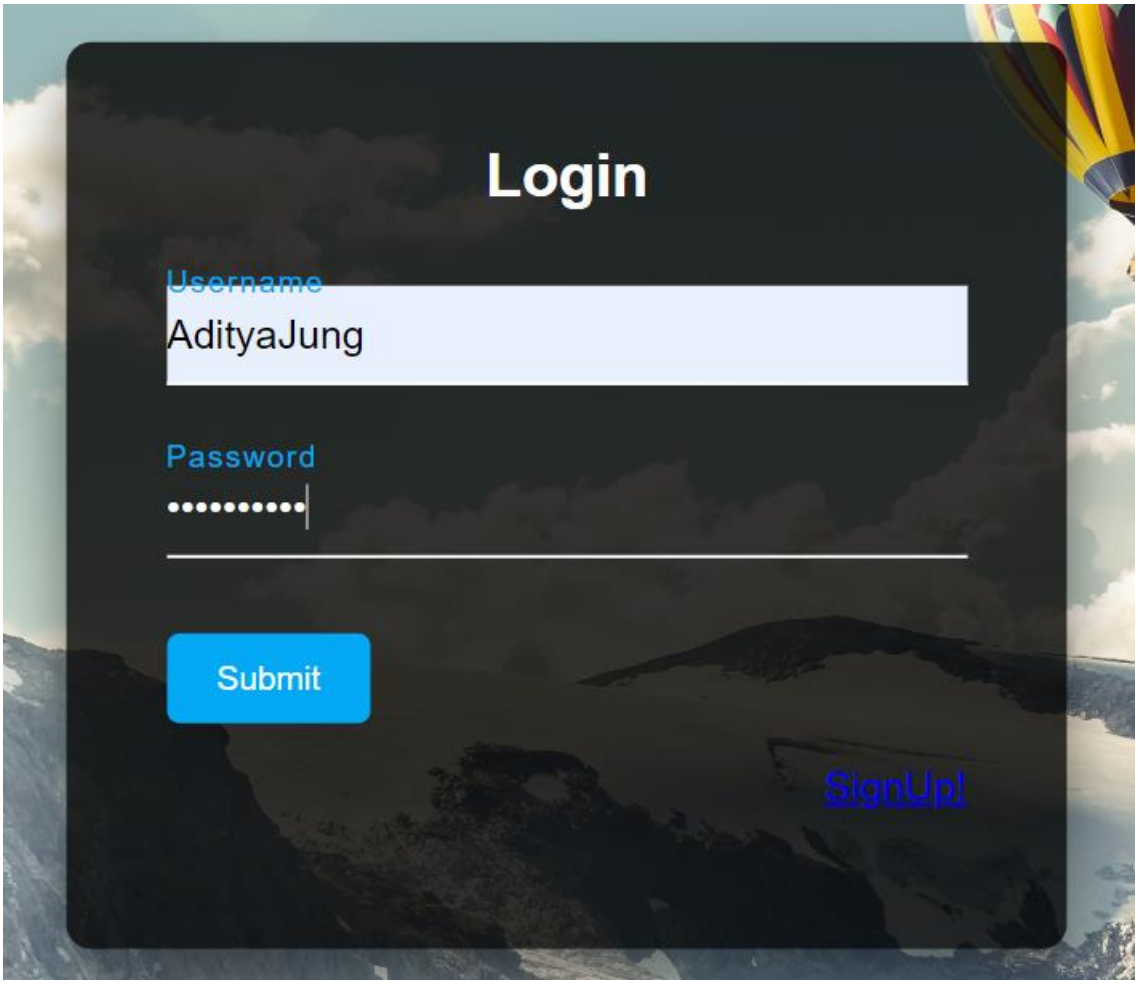

Figure 13: Test for login panel of job seeker

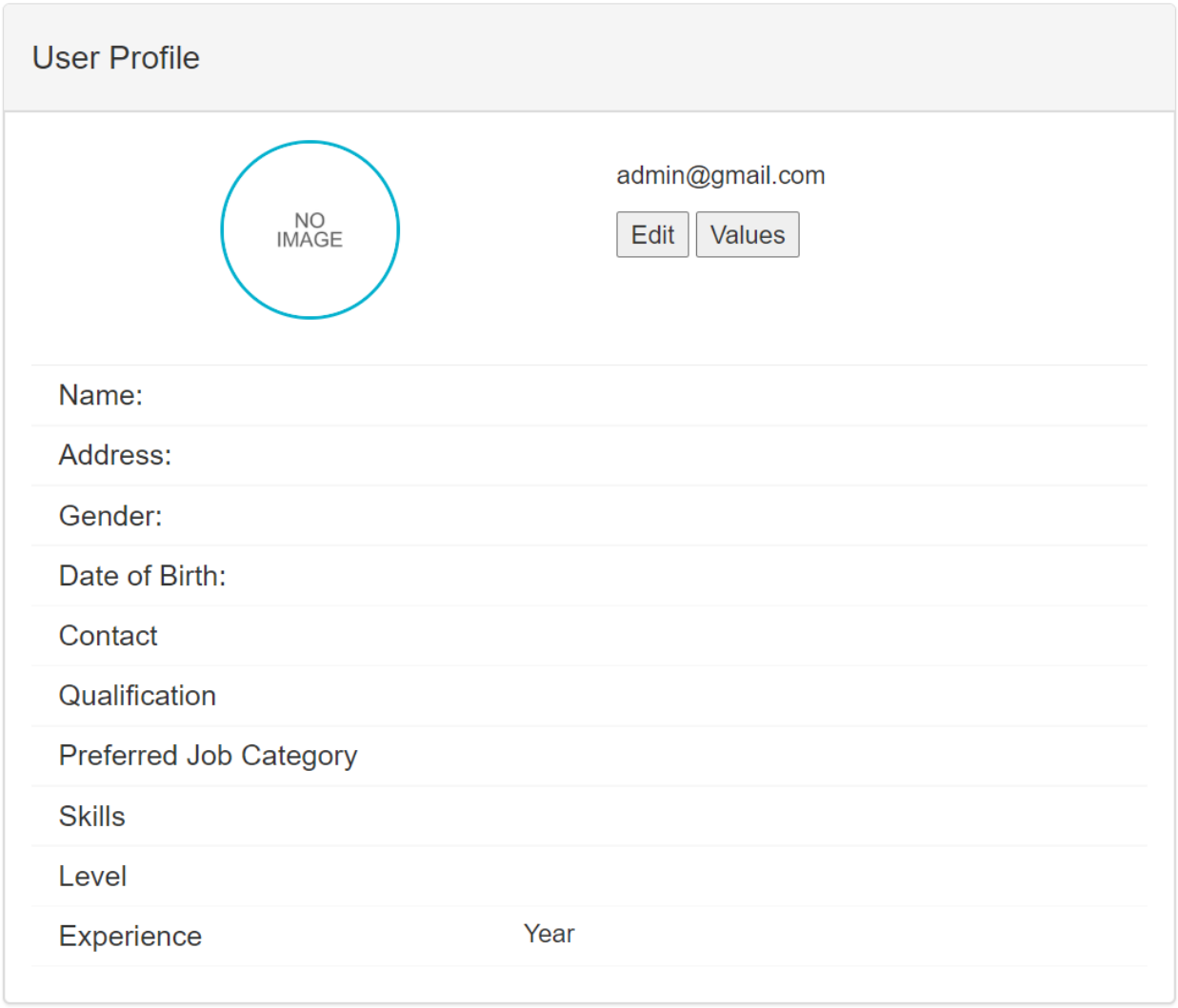

Figure 14: Test for successful login of job seeker

4.3. Critical Analysis:

Testing was done on the basis of features of the application. Some bugs and minor errors were sorted out which were then solved. Firstly, a prototype review was done where the working model was reviewed. Certain feedbacks were then received after showing to the client and supervisors. A few suggestions were given where minor bugs and errors were sorted.

5. Conclusion:

5.1. Legal, Social and Ethical issues:

5.1.1. Legal issues:

Legal issues are the laws that are set according to the governmental laws. Legal issues help people judge or determine what they can do and what they cannot. With legal issues in place, authorities are allowed to enforce rules when people or organization do something illegal. The laws defined as per legal issues disciples a person or an organization according to the crime of which he/she is found to be guilty of, by perhaps placing in prison. (Alcocar, 2017)

The reach and impact of the project on the internet is well known and it provides a must-have medium to advertise, promote and conduct business. In order to set up and maintain a website, legal issues should always be taken into consideration. While setting up the website, the legal issues of 3 main categories must be followed which are:

1. Knowing what content, graphics and other materials should be protected on your website.
2. Making sure of the Terms and Policies including the Privacy statement and business rules.
3. Making the proper use of trademark symbols in a way that provides protection and limits risks.

Hence, it is very important to get a full review of the website developed and make sure it is in full legal compliance. (Vershave, 2017)

5.1.2. Social issues:

Social issues can be stated as a problem or an issue which has been identified by the society as a problem which is disturbing the society from functioning peacefully at an optimal level. There are various factors besides social problems that arises social issues. Mostly, social issue arises when the scenario is against the general values accepted by the society or when a large segment of population recognizes the problem as a valid concern. (Kelly, 2017)

In a website, the most common factor leading to a social issue is a poor or outdated visual design. Also, there are various other factors such as slow upload speed, lack of quality images, low standard of written content, hidden details or no obvious point of contact and so forth. Also, keeping the website's safety features up to date is a must for starters. (Bushby, 2016)

5.1.3. Ethical issues:

Ethical issues in general terms can be described as the issue raised in the context of people doing their work. Ethics can be defined as the study of what it means to do the right thing. An ethical issue in an organization or a company arises when there is lack of integrity, organization problems, unethical culture, unclear policies and the exploitation of the code of ethics.

(Banks, 1999)

Every design is a decision made on the behalf of the users, also referred as end-users. The web offers various communications capabilities, and unethical users can at anytime harness these capacities for personal or financial gain. There are web ethics to be followed which provides a guide to appropriate online behavior, adapting familiar ethical standards to provide a moral framework for navigating the Internet's virtual environment. The web ethics can be followed by concerning the basic rules and ethics of online social interaction. (Orrill, 2013)

5.2. Advantages:

Living in a country like Nepal, unemployment has always been the issue. There are very few online job portal apps which are helping the people to find a job and to provide a job. The demands for such websites are also very high in the current scenario. Any user who enters the web application, can view the jobs available for them. They can select the jobs they want to have. The jobs selected by the candidates will then be recorded within the application. The final recorded jobs can then be applied online through the web app and the selection will be done by the requirements of that particular company. The website user friendly is the main advantage of this online job portal web application. The user will have to log in to the website with a valid username and password in order to get access. Then, the users can have access to select the jobs or the post the required job vacancies on the website. The admin can only delete the record of a particular user. Through this web app, the convenience of finding a job would be enhanced since people don't have to regularly travel to different companies in search of a job. This allows people to save their time. Thus, the main purpose of this online job portal web application is to provide a convenient and a more time saving platform for people who want to find jobs through an online job portal web application.

5.3. Limitations:

Unlike other specific modules the final year project deals with all the aspects of the learning possibilities from proposal to use cases to wireframes to database design to complete construction of the fully functioning software. Without proper planning the project would be incomplete. Proper planning and development required some sort of methodology or process. Selecting and identifying the proper methodologies could be very difficult without help of our supervisor and assistant supervisor. Rational Unified Process could be one of the best suited methodologies for this type of project. Rational Unified was not very new to us as one of our software engineering module had to deal with Rational Unified Process. Some research was done back than but this time all phases were deeply investigated. Each phase came out to be very handy for this project. First requirements gathering phase which was a very crucial part for our final year. Requirements gathering and idea proposal was working smooth but in the peak time risk identifying phase proved to be very crucial. A change in platform occurred and use case only had minor changes. Thus this methodology helped to confirm my list of possibilities to get started with this project in early stages. If only had I started the construction phase, and worked on the old platform a huge loss would have occurred, hampering my whole final year effort. So identifying risk and refining them did not trouble me for the development phase. In the developing or construction phase this methodology provides flexible process where a standard working and tested prototype is built and released (in this case demonstrated to supervisor, second supervisor, assistant supervisor and client). Based on this release several feed backs and some minor breakdown issues were figured out, which helped update the application. Again after updating the software/ application again the demonstration was done. And finally when all features were working properly final testing was done. Thus, the final year project was based on this methodology and every research made, every outcome produced, choosing of platform, change and update in features came under different phases of this methodologies.

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Cockburn, A. (2011) *Agile Alliance* [Online]. Available from: agilealliance.org/agile101/.

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Orrill, J. (2013) *Chron* [Online]. Available from: smallbusiness.chron.com/ethics-33123.html.

RB Team, R. (2019) Bootstrap Tutorial.

Rouse, M. (2014) *TechTarget* [Online]. Available from: searchsoftwarequality.techtarget,com/definition/unit-testing.

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Vershave, R. (2017) *JDSUPRA* [Online]. Available from: jdsupra.com/legalnews/legal-issues-for-creating-and-42406/.

8. Appendix:

8.1. Gantt chart:

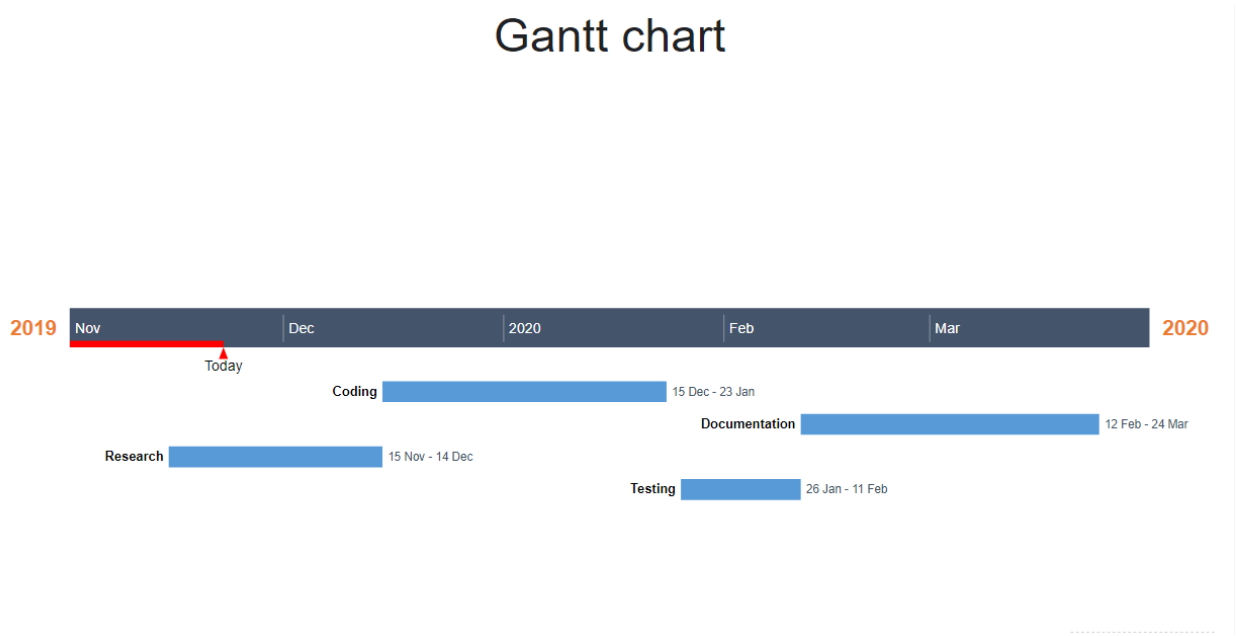

Figure 15: Gantt chart of the project

8.2. Wireframes of the system:

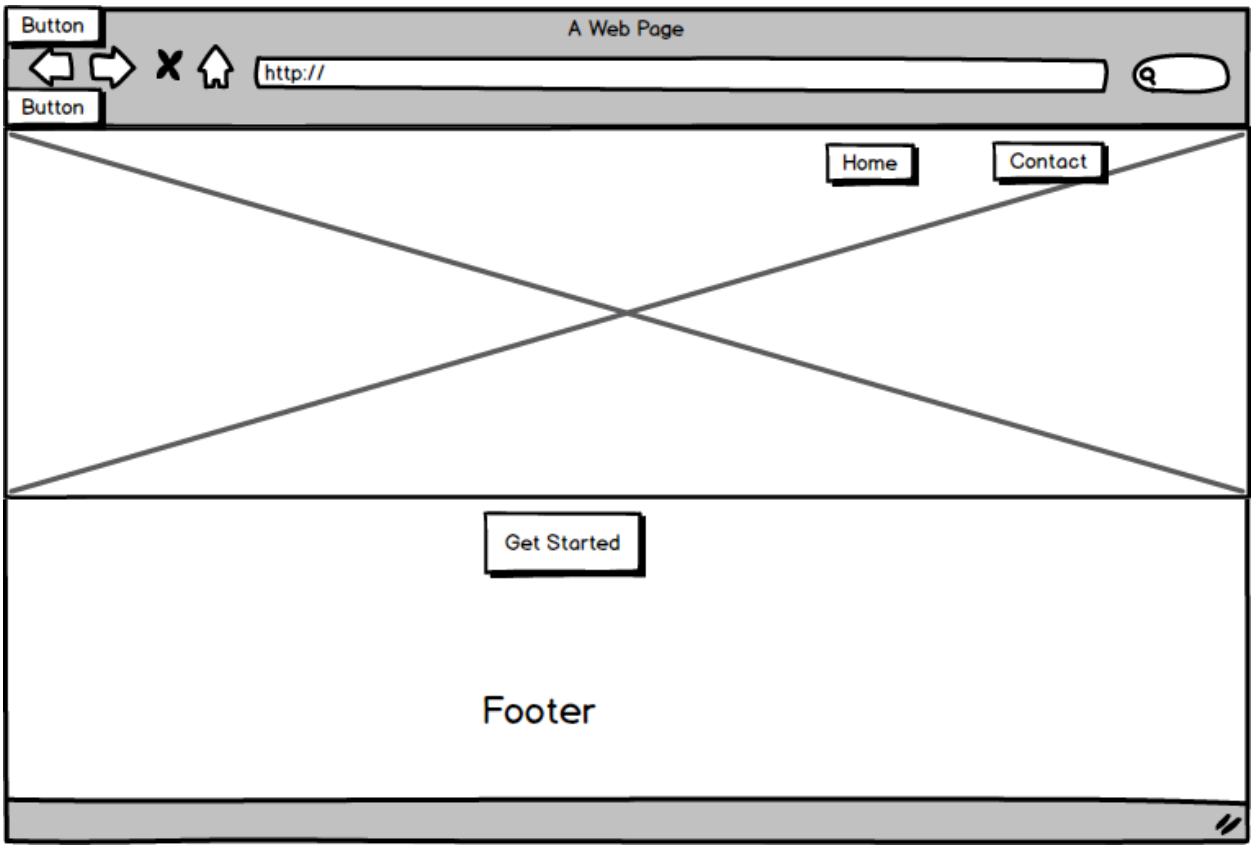

Figure 16: Wireframe of first page

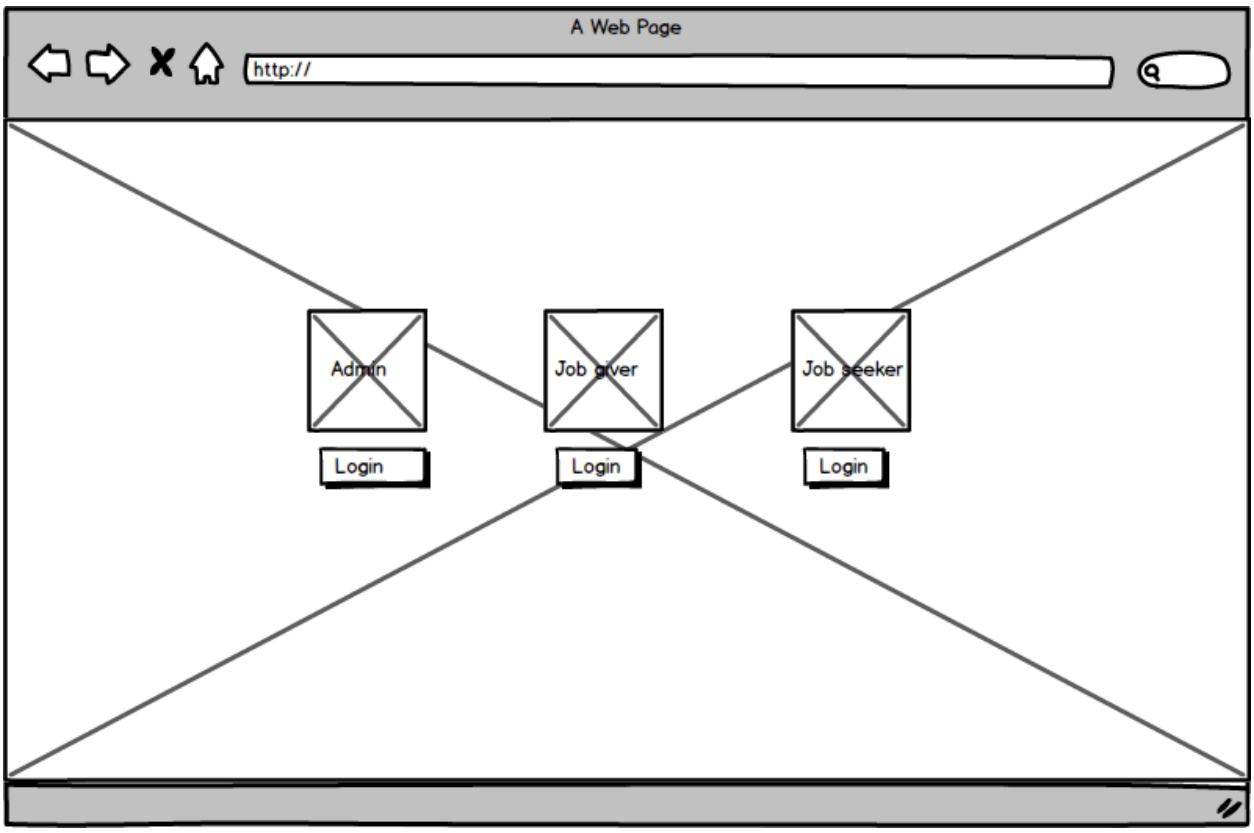

Figure 17: Wireframe after the first page is started

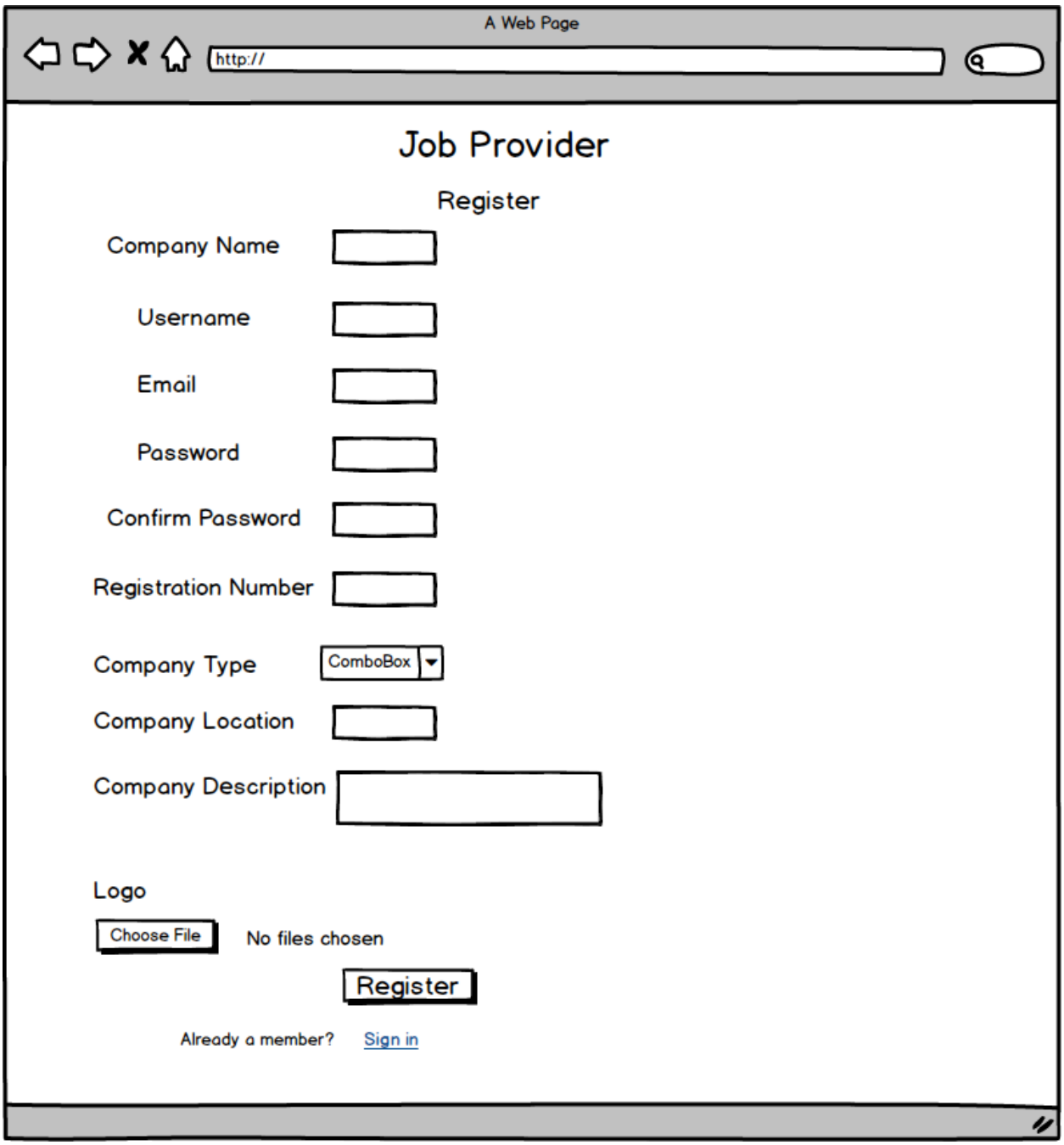

Figure 18: Wireframe for the registration page of job giver

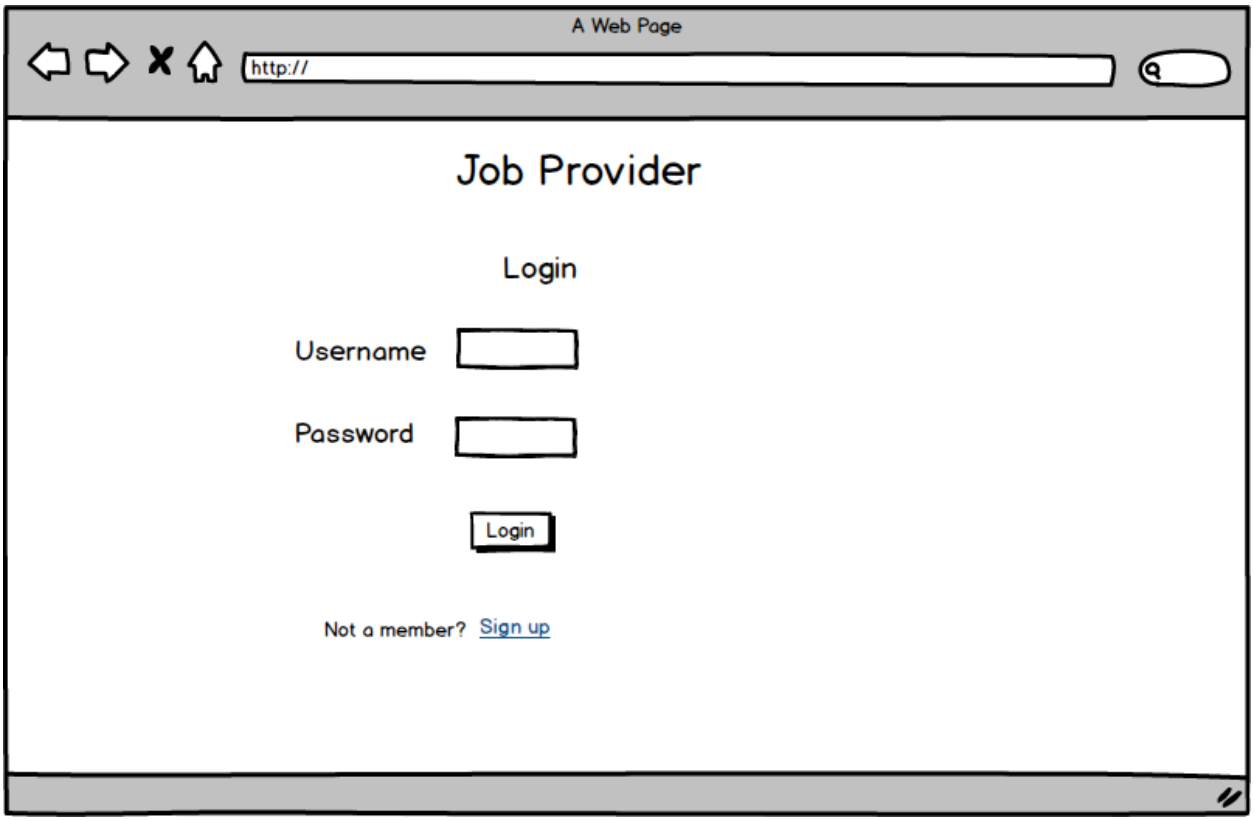

Figure 19: Wireframe for the login page of Job giver

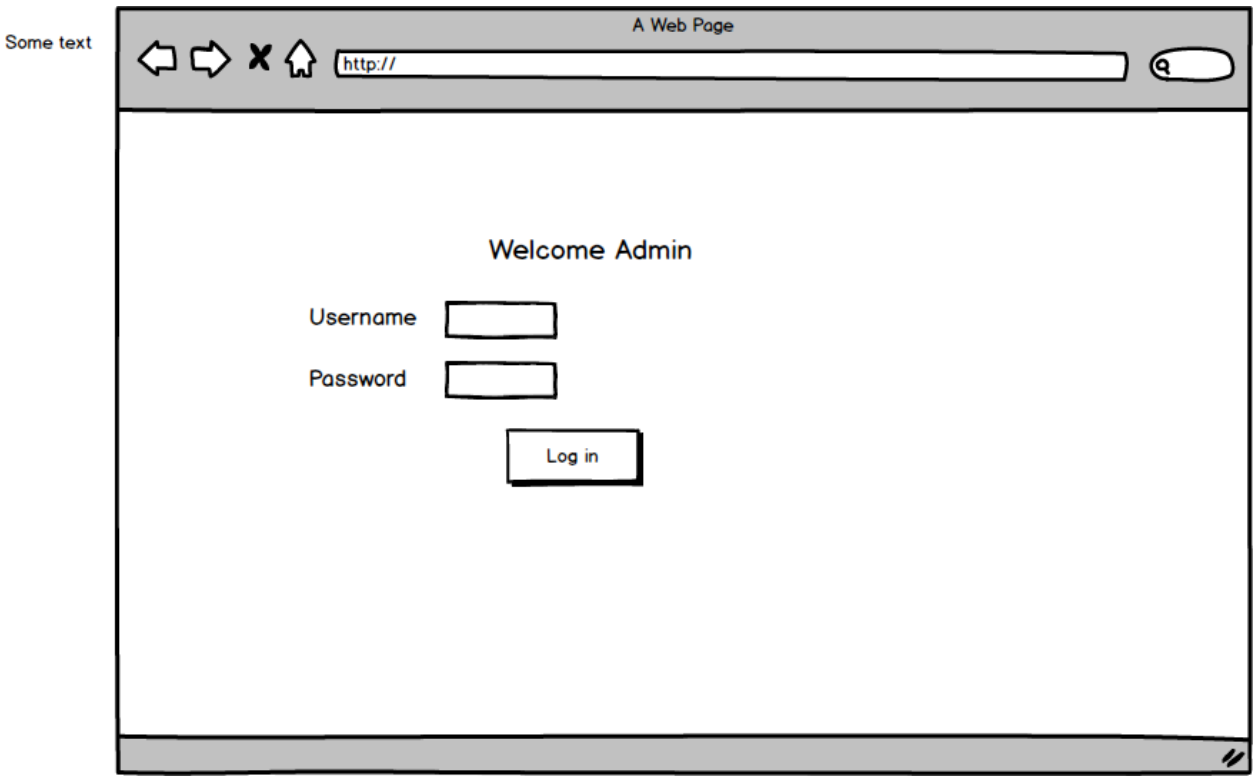

Figure 20: Wireframe for the login page of admin

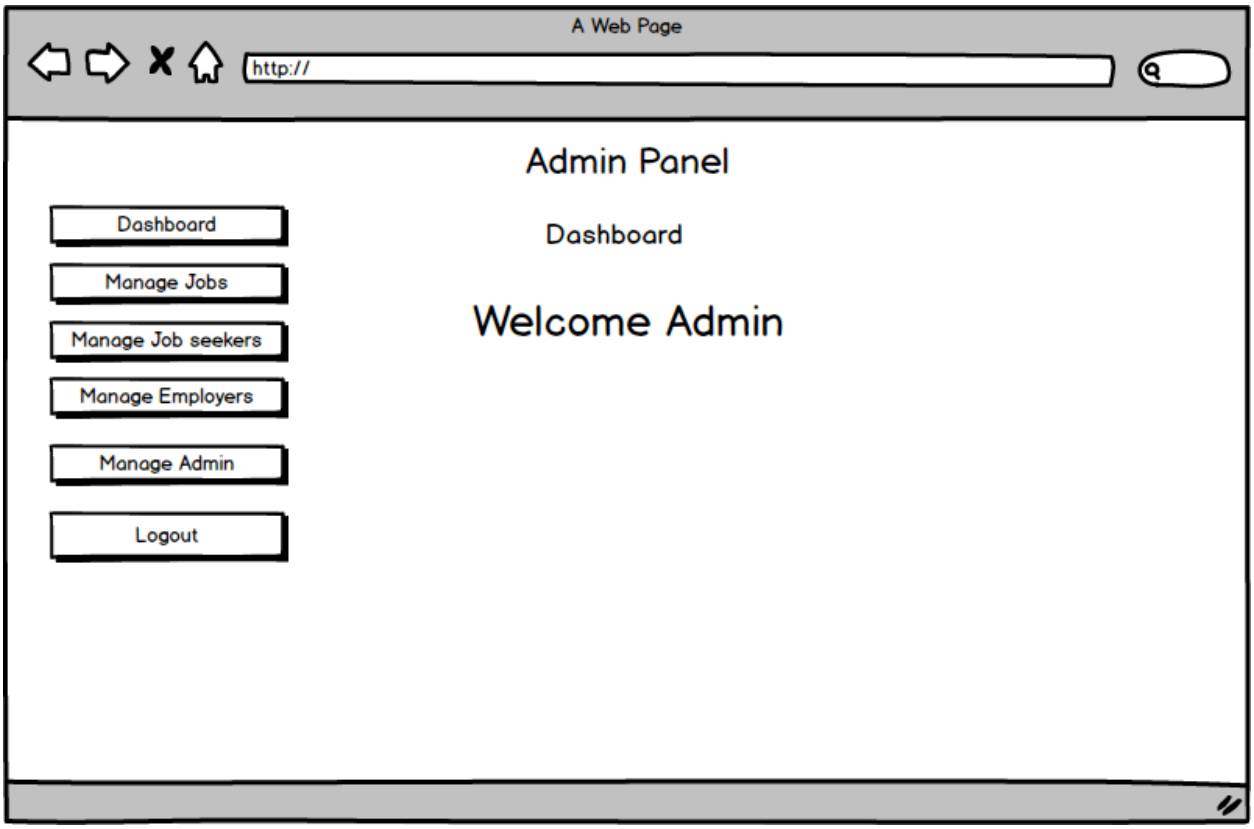

Figure 21: Wireframe for the dashboard of admin

8.3. Screenshots of the project:

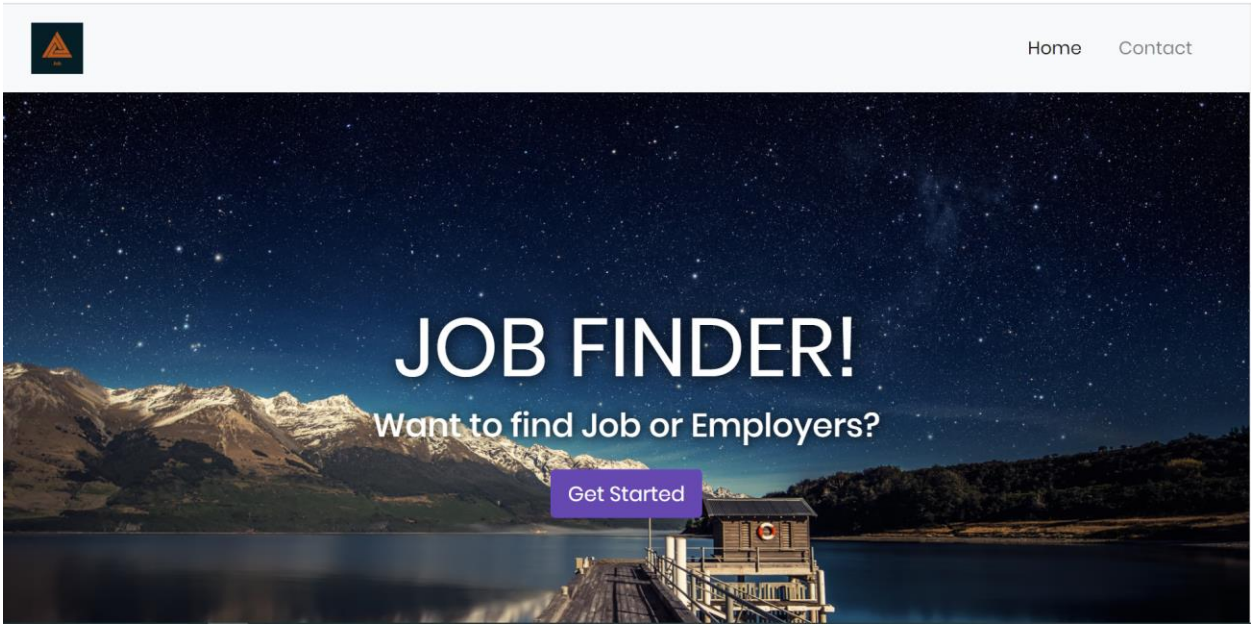

Figure 22: First page

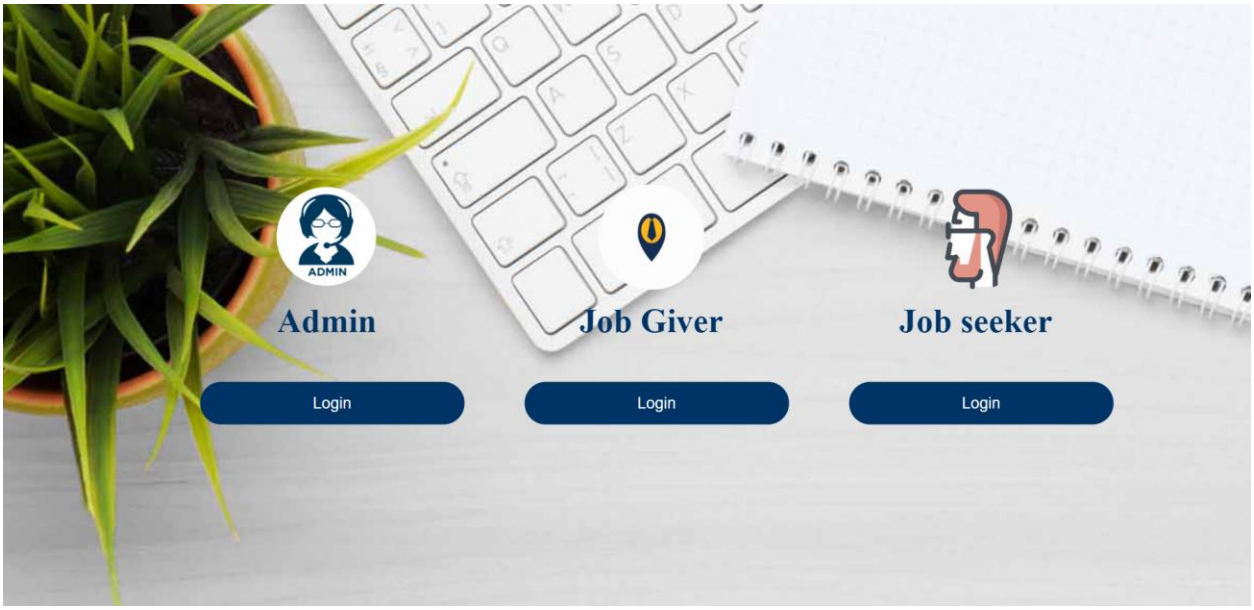

Figure 23: Login option for the users

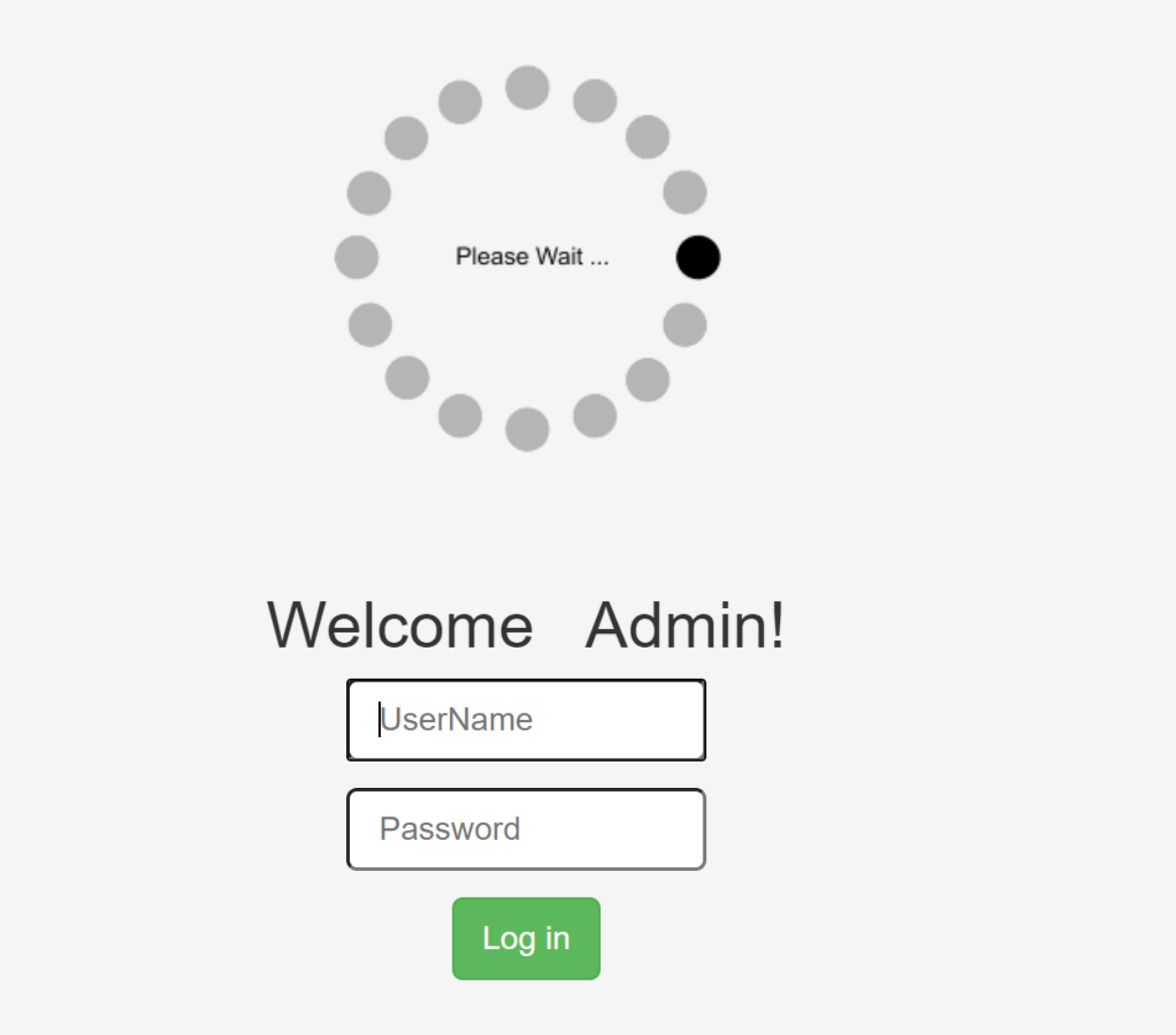

Figure 24: Login panel for admin

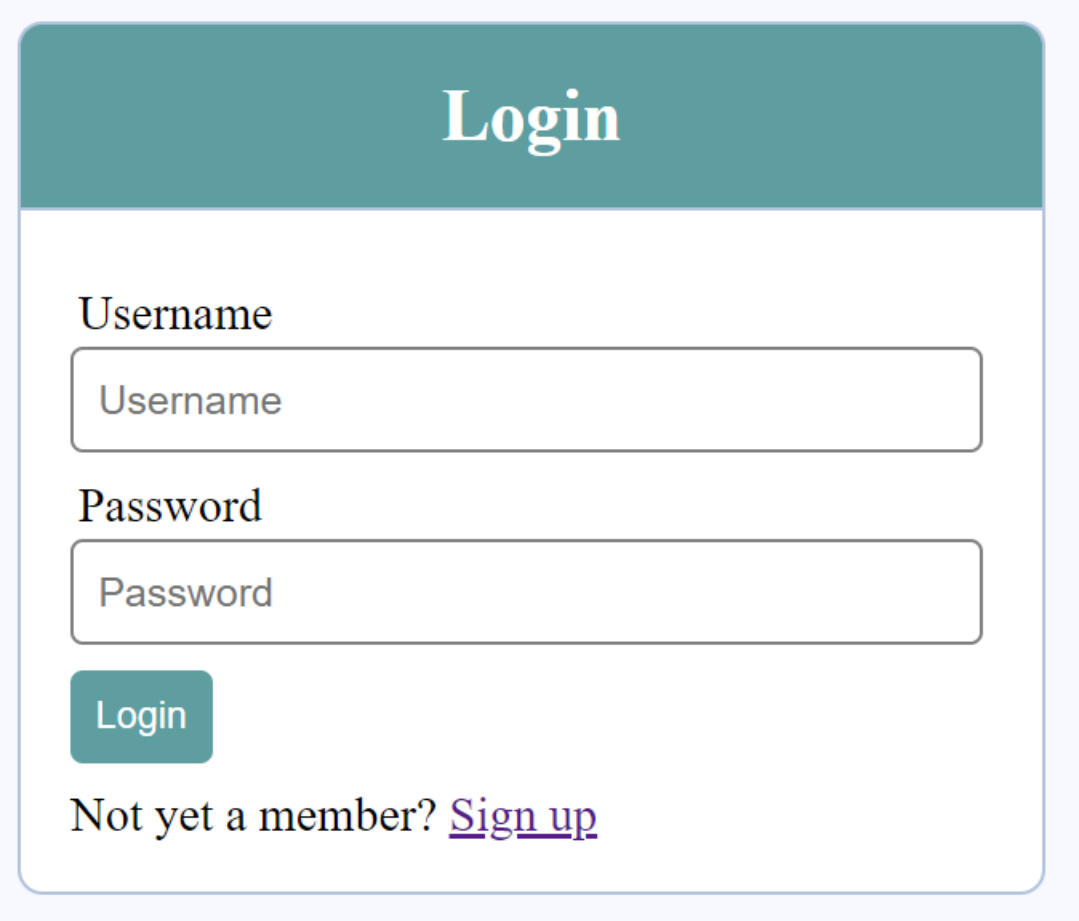

Figure 25: Login panel for job giver

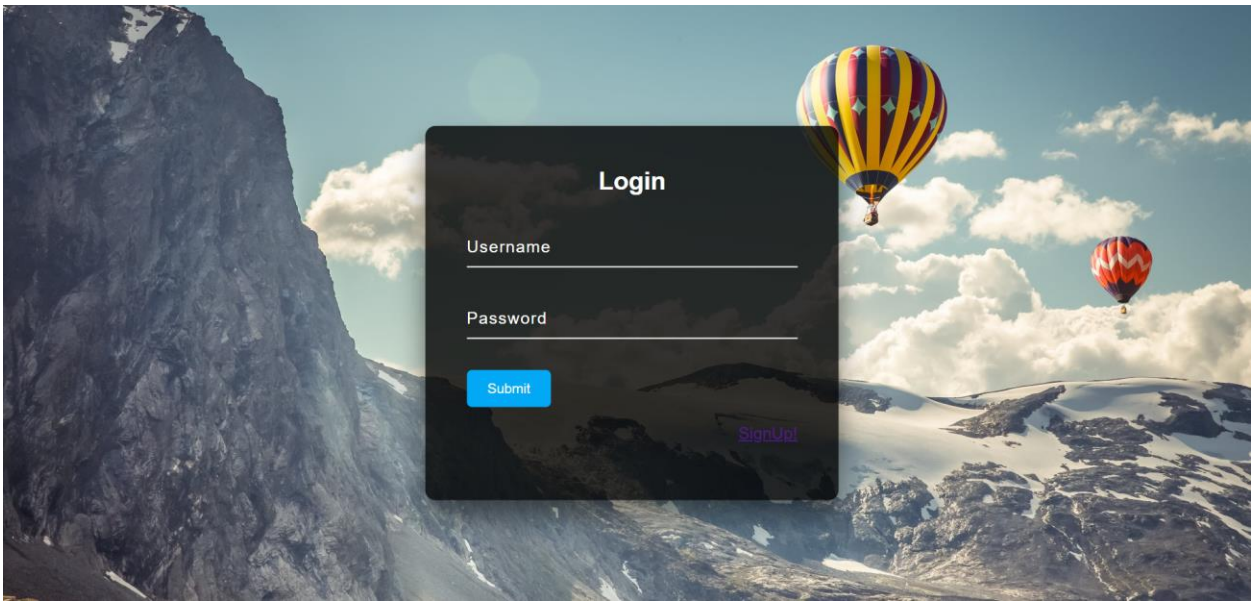

Figure 26: Login panel for job seekers

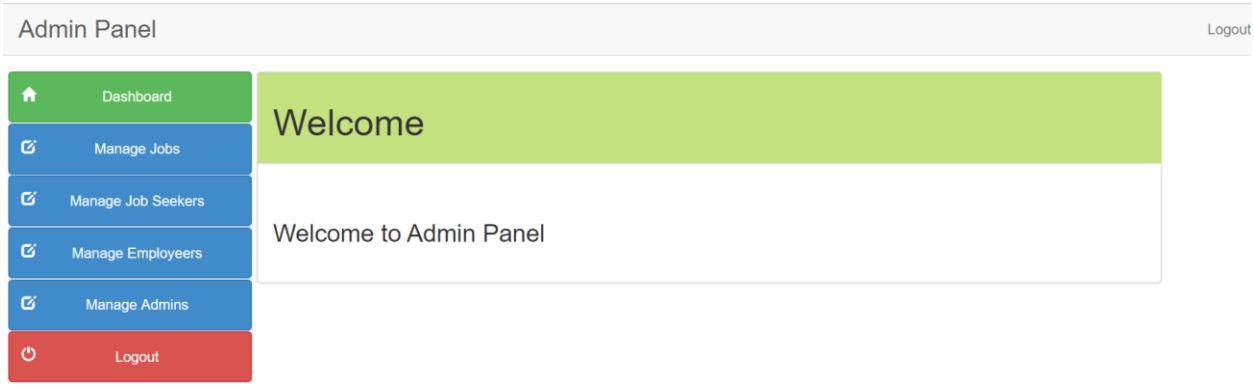

Figure 27: Dashboard of admin

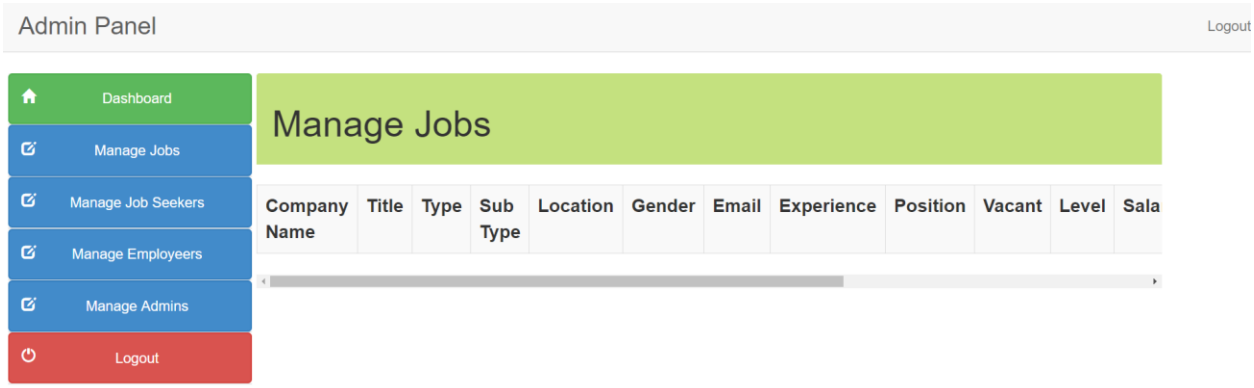

Figure 28: Manage jobs panel for admin

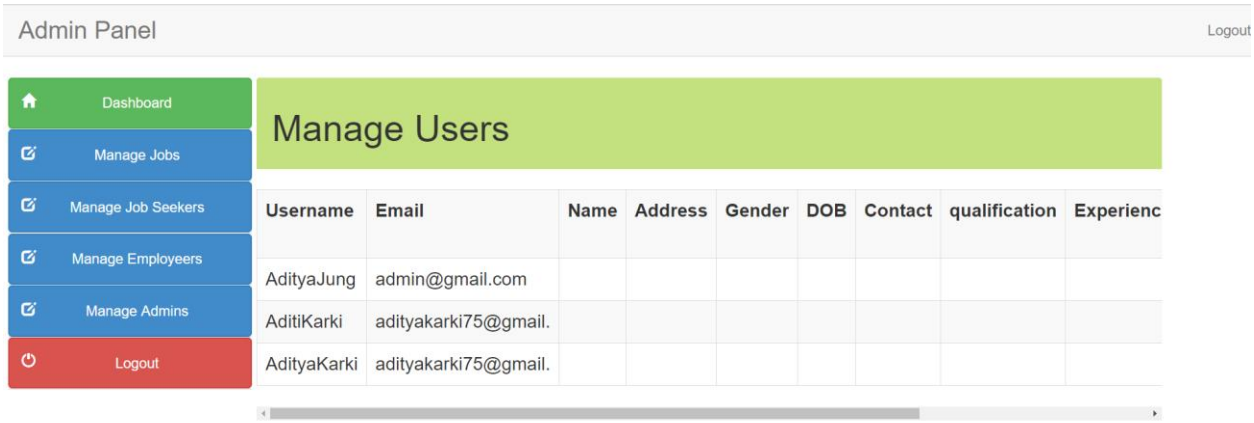

Figure 29: Manage job seekers panel of admin

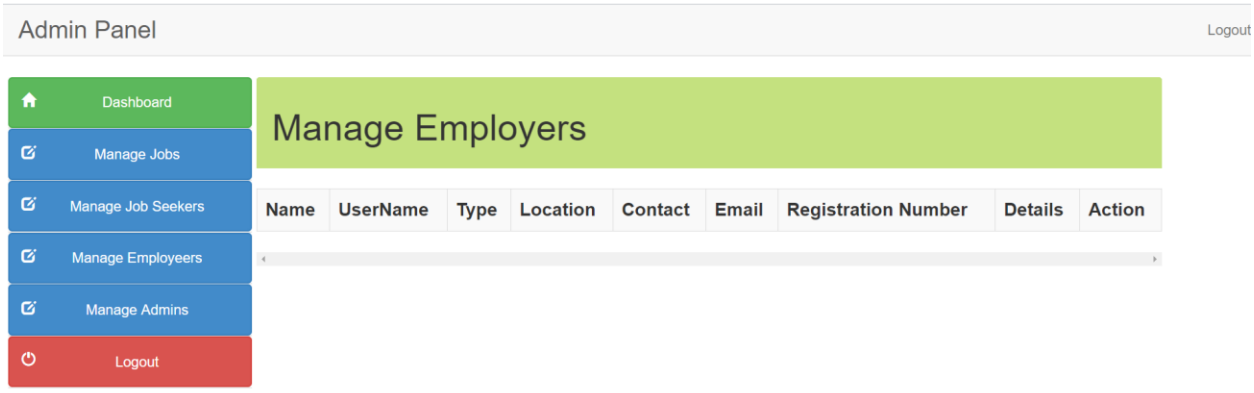

Figure 30: Manage job givers panel of admin

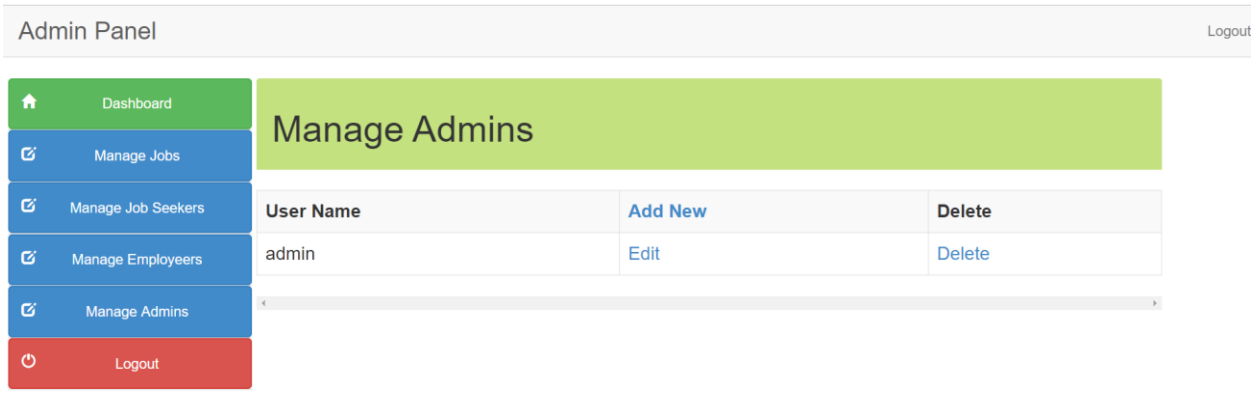

Figure 31: Manage admin panel of admin

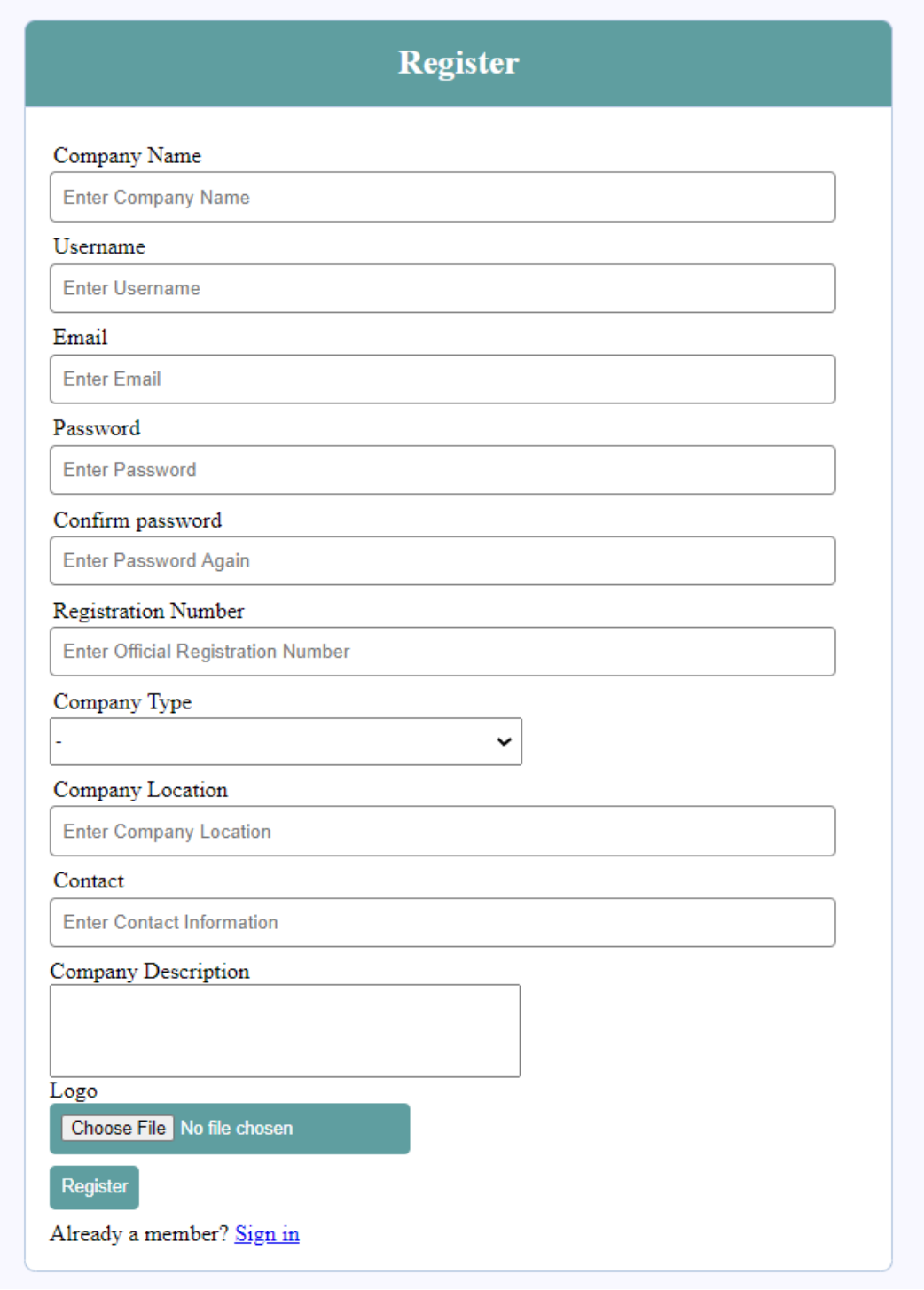

Figure 32: Registration panel for job seekers

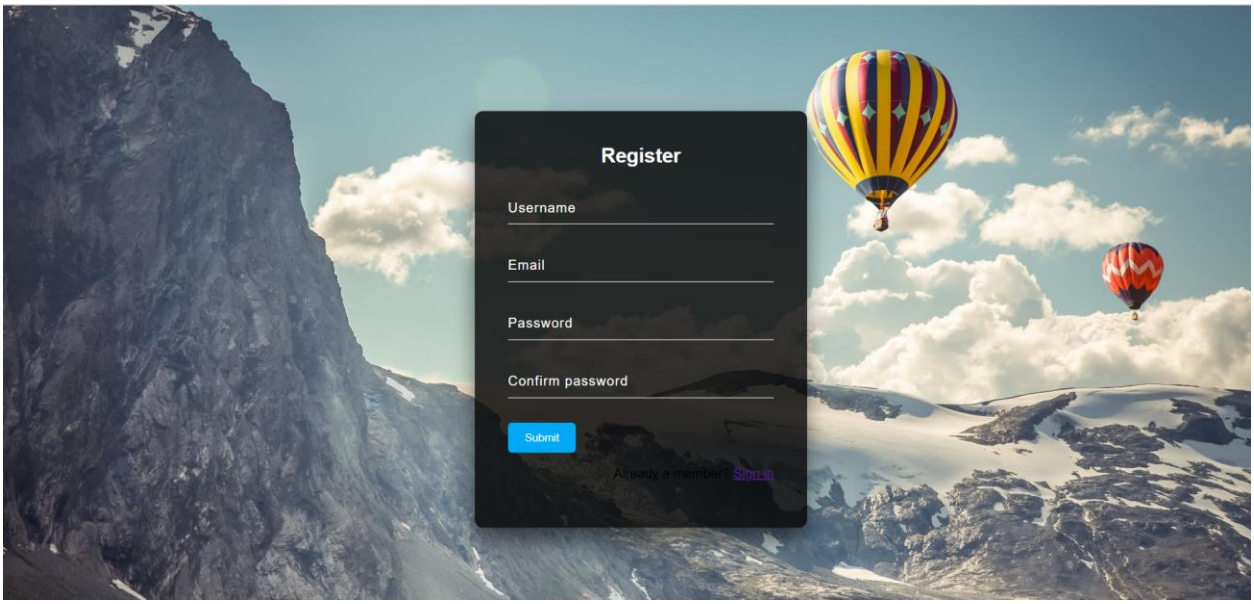

Figure 33: Registration panel for job seekers

8.4. Future Work:

Firstly, I should proceed on coding and development of the entire project under the guidance of my respected supervisors. I have now planned to show as much progress on development of the project on every week of the meeting. Then, I will have much clearer knowledge on the things to be added on the developed project. Also, I have now planned to create an expanded use case of every use case since I have successfully created a valid use case diagram of the system. Then, I should focus on normalization after gathering entities and attributes which helps me to create an entity relationship diagram. Then, I should create data flow diagrams, sequence diagram and class diagram in the upcoming days.