

Mobile Application for Online Recruitment System

By

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A REPORT

SUBMITTED TO

Universiti Tunku Abdul Rahman

in partial fulfillment of the requirements

for the degree of

**BACHELOR OF INFORMATION SYSTEMS (HONOURS) BUSINESS
INFORMATION SYSTEMS**

Faculty of Information and Communication Technology
(Kampar Campus)

JAN 2022

UNIVERSITI TUNKU ABDUL RAHMAN

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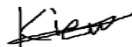
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ACKNOWLEDGEMENTS

I would like to express my sincere thanks and appreciation to my supervisor, Mr. Su Lee Seng who has given me this bright opportunity to engage in an online recruitment mobile application development project. It is my first online recruitment system which requires understanding of mobile application development, user perspective, and database. A million thanks to you.

Furthermore, I would like to thank to UTAR for all the teaching program and knowledge offered to students. Finally, I must say thanks to my parents and my family for their love, support, and continuous encouragement throughout the course.

ABSTRACT

This project is a mobile application for online recruitment system as final year project in UTAR for academic purpose. It will provide students with the knowledge and experience about mobile application development along with user interface design and database design. As mobile application becoming more commonly to use by people due to it portable and mobility to access anywhere anytime, thus, this is the reason to develop an online recruitment system on mobile platform. Furthermore, the online recruitment system was designed to help job seekers to search and apply for available jobs. It will also help employers to post for jobs and recruit employees with simplified recruitment processes. The main function of this system is to allow job seekers and employers to search for available jobs more easier and post for jobs through the system. Many of the online recruitment system did not provide the job postings function for the employers to post job through the mobile application. Hence, this proposed project will provide a more convenience way of posting job function to the employers when using the mobile application. A user-friendly system will be developed for the users to increase the satisfaction users and improve the user experiences. Besides, the proposed project will implement a special function to improve the job searching processes such as 3 types of user category login features. All the job postings data will be stored in Firebase Realtime Database and the data will be retrieved to the front-end system to show a job listing to the users. The output of this project will be an Android application which will retrieve all data from database and show it in the front-end system.

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Chapter 1: Introduction

1.1 Problem Statement and Motivation

As the rapid growth of technology, the number of smartphone users keep increasing every year. Smartphones have become the most popular type of mobile handsets and almost each person today owns their own smartphones. Hence, mobile apps also become popular when it has been used with a smartphone to make people's life easier.

The motivation for this project is to develop a mobile application for online recruitment platform. This system will help job seekers to find jobs more easily with just the use of a smartphone. This proposed project will save the time of searching for jobs compared to traditional methods of searching jobs such as finding job offers on newspaper, social media and so on. Besides, Job seekers can search for various available jobs with some keywords such as job title, specialization, and name of the company to find for their desired jobs. After that, the results for the job search will be shown out quickly by the system. It is convenient to the job seekers because they can search for jobs easily in anytime with their smartphones and availability of internet access.

Instead of using traditional methods for job posting, this proposed project provides online recruitment with cost-saving, timesaving, flexible and easy to the employers for hiring new employees through online. Employers can send out their job postings anytime to the system with internet access. They do not need to do the paperwork such as printing out the advertisements of the job vacancies. Not only that, this system will also help employers to hire new employees more effectively than traditional methods of recruitment. Online recruitment is easily accessible to job seekers and making it as an effective method to get the job postings being more noticeable.

Besides, there are many online recruitment mobile applications in the market today such as JobStreet, Indeed and Glassdoor. These mobile apps are developed to simplify the recruitment processes of job seekers and employers. However, each of the existing mobile apps has its own features to provide better experience for the users in the recruitment processes. This proposed project will have almost all features of the

existing mobile application and some unique features that the existing mobile apps do not provide. Not only that, this proposed project will be developed to make recruitment become easier and more convenient. It will also be an online recruitment mobile app which meets the user's requirement more closely compared to other existing mobile apps. Therefore, this proposed project would provide a better user experience to users in searching, applying, or posting for jobs.

1. Invalid or outdated job postings

Many of the online recruitment systems do not regularly update the job postings in its databases. Therefore, it will cause the users searching for the outdated job postings. When the job seekers apply for the outdated job postings, it will waste their time as they checked all the details of the jobs before applying for the jobs. Some of the job postings that already successfully applied and took by other applicants must become invalid for other job seekers to apply for. It requires the system to update the database of job postings to prevent job seekers from searching and applying for the outdated or invalid job postings. Recruiters also spend a lot of unnecessary time to read and process applications corresponding to job postings that had expired or closed. This will affect the using experiences because it makes the recruiters feeling inconvenience and wasting their time. Besides, the application rating will become lower due to the problems and inconvenience caused. A lower rating of online recruitment mobile application will be getting lower number of users in using it for online recruitment. Hence, a regularly update for the job postings must be done to improve the user experiences and gain trust from the users that the system is a real online recruitment system which can provide real and valid job posting for them.

2. Lack of communication channel

Many of the online recruitment system did not provide a communication channel for the users to communicate with each other. It will cause the job seekers facing some problems or questions that cannot solve through communicating with the employers. Some of the job seekers may have questions about the job descriptions or requirements and they need to ask for the employers. For example, some of the job details will be occurred some typing errors or lack of specific information about the jobs and this will cause the job seekers who searched for the job postings will have some questions about

the job details. Not only that, lack of communication channel will also cause the chances of job seeker to get hired become lower because the system will limit the flow of communications between the employers and job seekers. As the system lack of a communication channel for the employers and job seekers to interact personally during the process of applying for the job postings. Therefore, the candidates will be missed the opportunities to communicate with the employers before the employers making the decision to approve or reject the application. Hence, a communication channel must be provided for the job seekers and employers to communicate and message each other to solve for the problems. Trust must exist that recruiter will pay the agency, the necessary fees for successful recruitments (if a fee is imposed), even with direct communications channels made available between the job seekers and employers/recruiters.

3. Inaccurate searching and filtering result

To search for jobs with specific words, specification or user's requirements, an accurate result must be provided to the users to save their time by using the search or filter features. Many of the online recruitment system cannot provide the accurate searching or filtering result to the users. Therefore, it will become a weakness for the system in providing the search or filter function to the users. It will also decrease the user experience due to the inaccurate searching and filtering result. For example, the user wants to search for data analytics jobs in Ipoh area, but the system only shows the jobs in Kuala Lumpur, thus inaccurate searching result are given to the user. Another example is the recruiter wants to look for candidates with specific Python programming skills, but the system shows all candidates with all programming skills. This will cause decrease the user experience towards the system because the user will think that the system is not professional for the developed function. Therefore, the search and filter functions must be well-developed in order to provide an accurate result for the users and improve the user experience of the system.

1.2 Project Objectives

- To provide job seekers with active and available job postings all the time.

As the invalid and outdated job postings will waste the time of job seekers in looking on it and it will affect the user experience when they always found that the job

postings are outdated or invalid. Therefore, the database of the proposed system must be regularly updated in order to provide available job postings to the job seekers. This proposed project is to make sure that all the job postings are available for the job seekers to search and apply for it. It can save the time of job seekers in preventing them to search for invalid or outdated job postings. This proposed project will regularly update the database for job postings to avoid invalid and outdated job postings shown to the users.

- To develop a user-friendly job recruitment system with a communication channel

This proposed project is to develop a user-friendly job recruitment system with a communication channel provided in order for the job seekers and employers to communication through the system. As this job recruitment system is developed for all the users who willing to find for jobs or recruit new employees and they can be either youth, adults, or elders. Hence, a user-friendly mobile application will be more suitable for the users in using the features of the system such as communicating with each other. A communication channel in a job recruitment system will enable job seekers to message employers directly when they have any questions about the job postings. Besides, this proposed system with a communication channel provided can also encourage two-way communication between the job seekers and employers in order to make the recruitment more successfully.

- To implement better searching and filtering functions for job seekers and employers.

An accurate of searching or filtering result is important for the users when they want to search or filter the job postings. Hence, this proposed project is to implement a better searching and filtering function for employers and job seekers to provide an accurate searching and filtering result for them. It can improve the user experiences and make the searching or filtering more convenient with a more accurate result generated by the system. It can save the time of users in searching for job postings or candidates with specific criteria.

1.3 Project Scope

This proposed project aims to develop a mobile application for online recruitment system. It is also to help job seekers to find their desired jobs and help employers to recruit the right and potential employees. This system will be a user-friendly and easy-use mobile application to enhance user experience. A user-friendly system can improve the first expression of the users after they used the mobile application. Not only that, the interface of this mobile application will be an easy use interface because it is easier for the users when they are using it without any confusion. Through this system, a lot of job opportunities can be easily reached to the job seekers when there are many demands of the employers to hire more employees. Therefore, job seekers will have more offers or choices of job to look for and they can choose wisely through the system to apply for their desired job.

This system will require users to login when they want to apply for the jobs or post jobs to hire employees. Since this system is an online job recruitment platform, users are required to have internet access to use the mobile application. Moreover, job seekers can upload their curriculum vitae (CV) to the system to make the application of jobs easier. They can apply for jobs with the uploaded CV and complete profile more easily. Furthermore, job seekers can get the location of the job by checking the map in this system. They can look for the surrounding of the working place to find available facilities that around the company such as bus stop, LRT or MRT.

1.4 Impact, Significance and Contribution

The main contribution of this project is to develop a job recruitment mobile application for job seekers and employers to search, apply, post jobs and recruit employees. As the numbers of smartphone users keep increasing in the world, the proposed project will be more convenient than other website based online job recruitment platform. A successful online job recruitment platform will enable job seekers to search for jobs and apply for the job while employers can post jobs in the platform to hire employees. Not only that, different types of jobs such as full-time and part-time jobs will be available in the system. It can help the users to improve their standard of living. For example, some of the users would like to earn more money and they choose to do some part-time jobs during weekend. Therefore, this proposed project can provide job opportunities to users

who willing to find for jobs. Not only that, this proposed project will be better than other apps because some special features will be developed in this proposed project. For example, this proposed system will provide employers to login to their account and post jobs through the mobile app. In addition, job alert will also be provided to the job seekers which can provide more efficient way in searching jobs. Job seekers can set a job alert through the proposed system to prevent missing of any new jobs that related to their job specifications.

Due to the Covid-19 pandemic, face-to-face interaction are not encouraged to prevent the spread of virus. Hence, this proposed project can help users to avoid face-to-face interaction in searching jobs or hiring employees. Users can apply for jobs more easily by uploading and sending their curriculum vitae (CV) to the employers using the system without any face-to-face interactions. Moreover, many people become jobless during the COVID-19 pandemic because many of the companies are facing bankruptcy and they forced to fire some of their employees. Thus, this proposed project will become more important for the job seekers especially during the COVID-19 pandemic. They can search for any available jobs in the system and apply for it to prevent jobless due to the COVID-19 pandemic. Various jobs can be offered to the job seekers when the employers willing to hire part-time or full-time employees.

1.5 Project background

As the internet and mobile technology keep growing, online recruitment which can be called as E-recruitment, and it has become the latest trend of recruitment. Recruitment is the most critical human resource management processes that consist of locating, identifying, choosing, and attracting the capable applicants to a company. Not only that, recruitment is also an important process for many companies to hire potential employees in the highly competitive labour market. Traditional methods of recruitment were slowly transforming into e-recruitment due to the evolving of internet and smartphone. The purpose of e-recruitment is to make the recruiting processes become more efficient and lower the cost of recruitment. Therefore, e-recruitment has been adopted and used by many large and small organizations to make recruitment processes easier and faster. It is because the employers only need to post the jobs on the online recruitment platforms and wait for the respond of the applicants.

In the era of globalization, most of the companies have their own websites or job advertisement for e-recruitment in hiring the right candidates. There are many methods of e-recruitment which are job boards, employer websites, and social media. Job boards is a place where employers can post jobs and search for the right candidates. It is also a place where job seekers can find for new career opportunities easily by using the job boards to search jobs and apply for it through online. Besides, many of the employers will have a website that developed by themselves in order to attract applicants. The website will contain all of the information and documentation that candidates need when apply for it. For example, some of the companies would like to hire employees by providing some hints for the candidates such as join us now or be a part of us. Furthermore, some of the employers will create job advertisement using social media such as Facebook, Twitter or Instagram. This famous social media can be a useful tool for disseminating the job advertisement to attract candidates. However, it required large number of followers or friends in order to disseminate the job advertisement more effectively.

Why online-recruitment/E-recruitment?

According to the studies from e-Recruitment Developments [1], there are some benefits of moving to online recruitment compared to traditional methods of recruitment because online recruitment with the use of internet to provide access 24 hours every day to reach global audience. The benefits are reduced costs, faster processes, wider access, reputation, and brand. For example, the usage of online recruitment to post jobs can reduce the costs on using recruitment agencies to hire people. The cost of using recruitment agencies can be more expensive than the cost of online recruitment. By using online recruitment, employers can easily reach a huge pool of potential candidates.

According to [2], a recruitment mobile application can provide many benefits to recruiters and job seekers due to internet and mobile technology has transformed human lives. It provides the following benefits for job seekers and recruiters.

For job seekers:

1. Convenience: can search for jobs at all the time.
2. Speed: Easy job search, job apply and get quick response.
3. Great experience: all processes done using phone.
4. More familiar environment: slowly transforming into mobile-first world, almost all people using mobile every day.

For recruiters:

1. Convenience and productivity:
2. Lesser human errors: Works transformed into automation help to reduce errors.
3. Time saving: Quick response and instant feedback.
4. Cost saving: Lesser paperwork.
5. Efficiency: Improved recruitment process.

1.6 Report Organization

The introduction, literature review, system methodology, system design, system implementation, system evaluation, and conclusion are the seven chapters of the report. First and foremost, the first chapter is Introduction which will provide an overview of the project, including problem statements, motivation, project objective, project scope, contribution, and project background. The second chapter is Literature Review which will include the evaluation on numerous current mobile applications on the market in order to assess its' strengths and drawbacks. The third chapter is the system design which contains the system design diagrams, such as the system architecture diagram, use case diagram, and activity diagram. Then, in chapter 4, all of the system design information is saved, including block diagrams, database tables, system flowchart, and so on. Aside from that, the fifth chapter will document the system's implementation, including hardware and software setup, system development methodology, project timeline, user requirement, screenshots of operations. The system evaluation will involve black box testing, testing setup, results, user testing and feedback, with an objective evaluation documented in the sixth chapter. In the last chapter, the report will be ended with a conclusion and recommendation.

Chapter 2: Literature Review

2.1 Review of the Technologies

2.1.1 Hardware Platform

The term "hardware platform" refers to a collection of interoperable hardware components on which software may operate. In order to write programs that are compatible with any particular hardware platform, they must be written in a specific machine language. In this proposed project, there are 2 hardware platform being used is computer and Android phone.

2.1.2 Operating System

On a computer platform, the operating system is the most critical piece of software. It is in charge of the memory and operations on the computer, including the software and hardware. Additionally, it enables the users to interact with the computer without first learning its language. The operating system that will be used in this proposed system is Window 10.

2.1.3 Database

Database is used to store data of job postings , user details, company details and etc. It is organized collections of information or data that are often save digitally in a computer system. In this proposed project, Firebase Realtime database is selected to store all the data of the application because it is a cloud-hosted database. Data is synchronized in real time across all clients and is available even if the app is turned off.

2.1.4 Programming Language

In this proposed project, Java language will be used in developing the online recruitment app. It is an official and popular language for Android application development. Java was created to be simple to use, making it easier to write, build, debug, and learn than other programming languages. Other than that, it is an object-oriented programming language, therefore this enables users to construct modular applications and code that is reusable.

2.1.5 Summary of the Technologies Review

Components	Technologies Used
Hardware Platform	Computer and Android Phone
Operation System	Window 10
Database	Firebase Realtime Database
Programming language	Java

Table 2.1 Summary of Technologies

2.2 Review of Related Work

2.2.1 The Graduate Helper: Using a Mobile Application as a Feasible Resource for Job Hunting Across Saudi Arabia

In this reviewed journal, [3] have proposed that a mobile application for graduates and senior university students which are named Graduate Helper. The purpose of this mobile application is to help users to seek employment opportunities in Saudi Arabia. Graduate Helper is mainly focusing on the recent graduates due to many students and graduates have faced problems in exploring their employment opportunities at the fresh graduate level. Besides, it will help Saudi graduates to find better job opportunities by using the mobile application. As most of the online recruitment websites only available in English language which cannot be understood by the graduates due to English language not commonly used in Saudi Arabia. Therefore, Graduate Helper was developed in Arabic language to help graduates of Saudi Arabia to understand the core aspects in finding available jobs. Graduate Helper provides the features such as finding a job, create resume, ask for help, course searching , and interactive user profile. Figure 2.1.1.1 shown the login page of Graduate Helper while figure 2.1.1.2 shown the search for jobs page of Graduate Helper. Figure 2.1.1.3 shown the Help page of Graduate Helper. Figure 2.1.1.4 will show the user page of Graduate Helper.



Figure 2.1 Login page



Figure 2.2 Search for jobs page



Figure 2.3 Help page



Figure 2.4 User page

2.3 Critical Remarks of Previous Works

There are many online recruitment mobile apps available on IOS and android platforms. Most of the mission for the online recruitment app is to help the employers to hire employees and also help the job seekers to find jobs. Besides, all of the mobile apps provide the functions to the job seekers such as search for jobs and apply for the available jobs. However, all of the apps will have its own features to make it become an outstanding mobile application. Therefore, the mobile applications to be reviewed in this proposed project are JobStreet, Indeed Job Search, Glassdoor and Maukerja.

2.3.1 JobStreet (IOS, Android)

JobStreet is one of the Asia's leading online employment marketplaces which available on website and mobile app [4]. For mobile app, JobStreet available on 2 main mobile platforms which are IOS and android. It provides an easy job search experience and job vacancies to the users. JobStreet aims to deliver a smooth and pleasant job seeking experience and to help improve the recruitment process for both jobseekers and recruiters [5]. Besides, JobStreet provides different type of jobs to the job seekers such as internships, part time jobs, and full-time jobs. Not only that, JobStreet app provides jobs that are located in different countries such as Malaysia, Singapore, Philippines, and Indonesia. Therefore, job seekers can select the country that they wanted to work and search for the available jobs in the selected country. JobStreet provides an easy and user-friendly interface for their users to improve the user experiences in searching for jobs. Moreover, JobStreet provides smart filters for the job seekers in searching for a lot of job postings. It will make the process of searching for jobs become more easily and provide convenient for the job seekers in browsing through numerous jobs in many industries. Furthermore, JobStreet also provides job recommendations for the job seekers to recommend them with more suitable jobs. However, JobStreet contains 2 weaknesses which are job seekers not able to message or communicate with employers directly through the app and JobStreet did not provides the function for the employers to post jobs by using the app. Employers only can post jobs by using the website version of JobStreet.

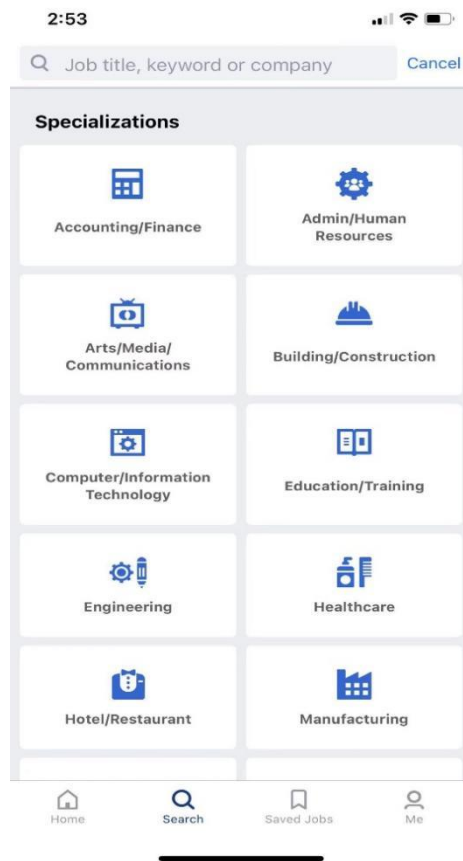


Figure 2.5 Search Page(IOS)

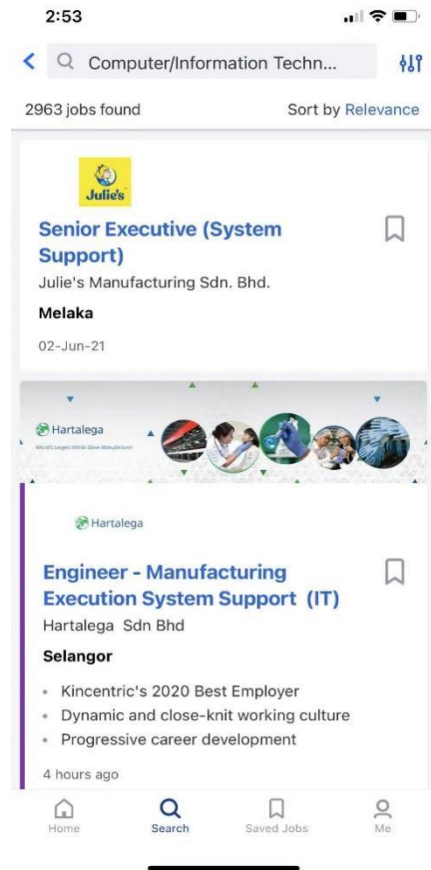


Figure 2.6 Search Result Page(IOS)

2.3.2 Indeed Job Search (IOS, Android)

Indeed Job Search is one of the famous job search sites in the world. It provides the service of online recruitment through website and mobile app. It is available on IOS and android platform. This app is striving to put job seekers first by giving them free access to search for jobs, do research for companies and create cv [6]. The mission of this app is to help people get jobs. Indeed Job Search app provides jobs in over 60 countries and 28 languages for the job seekers to search and apply for [7]. Indeed Job Search app provides full-time, part-time, contract, freelance and internship jobs for job seekers. Indeed Job Search offers millions of jobs in over 60 countries and 28 languages for job seekers. Besides, Indeed Job Search provides reviews of companies which job seekers can check and read for the company reviews. Not only that, job seekers can message employers directly by using the app and find nearby jobs using GPS. However, the language of Indeed Job Search will change according to the selected countries, hence users cannot choose what language that they want.

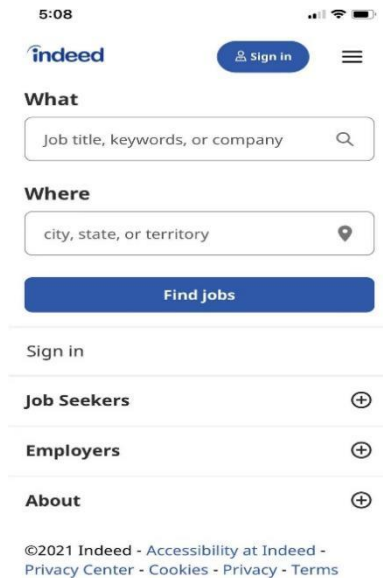


Figure 2.7 Home Page(IOS)

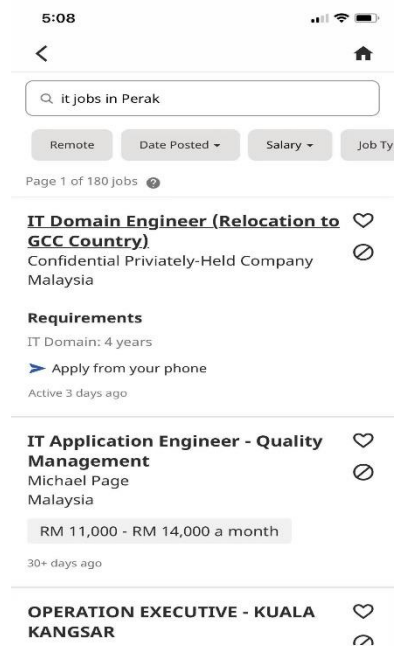


Figure 2.8 Search Result Page(IOS)

2.3.3 Maukerja (IOS, Android)

Maukerja is an online job platform in Malaysia. It provides the services to find jobs that are located in Malaysia. Maukerja available in website and mobile apps for users to use. Maukerja offers different types of job such as full-time, part-time, temporary, internship, home based and online jobs. Maukerja helps to simplify the recruitment process for employers. For example, employer can get job vacancy advertising, marketing, and promotions from the app. The mission of this app is to help the job seeker to get a job and help the company to get the right candidate [8]. Maukerja offers jobs from government and private sector jobs in Malaysia. It is convenient for the users who wish to find jobs in Malaysia. Besides, Maukerja provides a unique feature which is company can search for the job seekers when the job seekers have completed their profiles and it will be recommended to companies that open hiring. Job seekers can also monitor the recruitment status in real-time. Furthermore, Maukerja provides customer service for the users to contact with the customer service when they need help or facing any problems regarding to the recruitment processes. Nonetheless, Maukerja requires users to log in and complete for their profile before using the app. It will become a weakness of this app because some of users only want to search for the job postings before logging in and completing for their profile. Moreover, Maukerja

contains a lot of features which will make the app become more complicated and hardly to use.



Figure 2.9 Home Page(IOS)

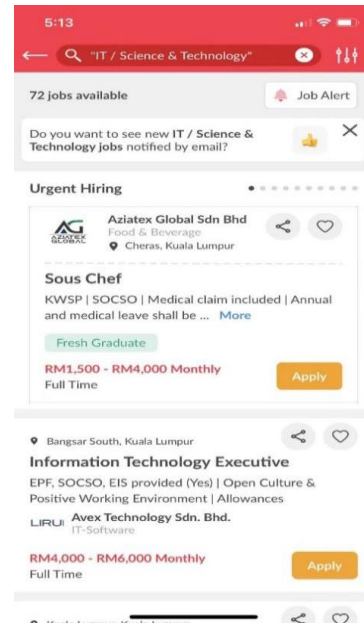


Figure 2.10 Search Result Page(IOS)

2.3.4 Glassdoor (IOS, Android)

Glassdoor is a job search mobile app that available on IOS and Android platforms. The mission of Glassdoor is to help people from everywhere to find jobs and a company they love [9]. With Glassdoor mobile app, users can find for jobs, prepare for interviews, and get hired faster. It also provides users the access to millions of job listings and company reviews. Moreover, users can also compare salaries, reviews, and the latest job listings by using Glassdoor app. Besides, Glassdoor provides job recommendations to the job seekers according to their user profiles. Job seekers also can see for the interview questions from employers through Glassdoor. Through this, job seekers can check and get for the interview tips in order to get hired faster and easier from the best companies such as Google. However, Glassdoor contains 2 weaknesses which is employers cannot post for jobs by using the app and Malaysia does not include in the selection of countries in the app.

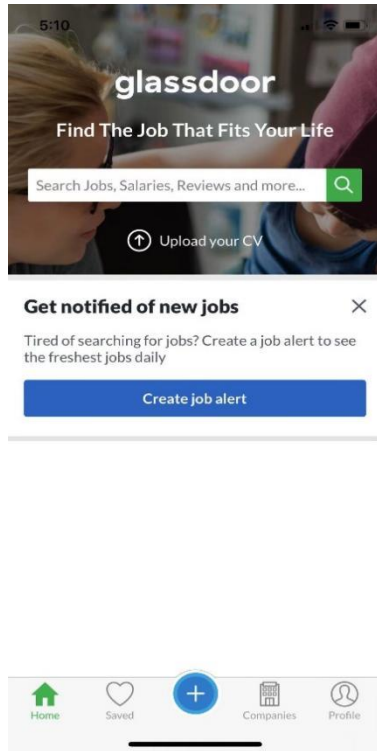


Figure 2.11 Home Page(IOS)

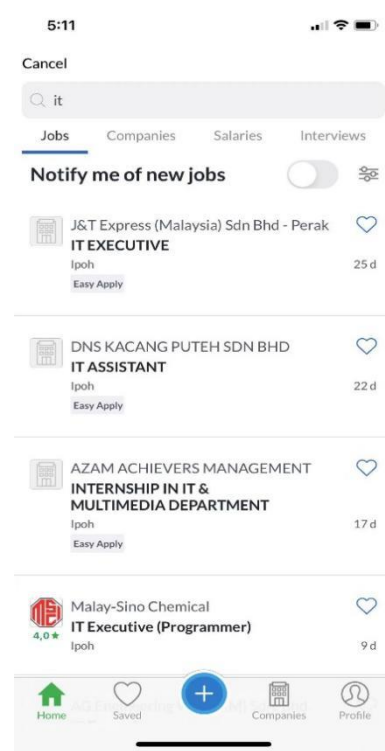


Figure 2.12 Search Result Page(IOS)

2.4 Critical Remarks of previous work

App Name	App Rating	Ranking (App Store)	Available Platform	Price
JobStreet	App Store: 4.7 Google Play: 4.6	12	IOS, Android	Free
Indeed Job Search	App Store: 4.7 Google Play: 4.6	15	IOS, Android	Free
Maukerja	App Store: 4.6 Google Play: 4.6	19	IOS, Android	Free
Glassdoor	App Store: 4.7 Google Play: 4.3	94	IOS, Android	Free

Table 2.2 Comparison of Existing Online Recruitment Apps

	JobStreet	Indeed Job Search	Maukerja	Glassdo or	Proposed project
Ability to search jobs	Yes	Yes	Yes	Yes	Yes
Ability to filter jobs	Yes	No	Yes	No	Yes
Ability to apply for jobs	Yes	Yes	Yes	Yes	Yes
Ability to save jobs	Yes	Yes	Yes	Yes	Yes
Ability to upload resume	Yes	Yes	Yes	Yes	Yes
Ability to share job postings	Yes	Yes	Yes	Yes	Yes
Ability to message employers	No	Yes	Yes	No	Yes
Ability to edit profile	Yes	Yes	Yes	Yes	Yes
Ability to check application status	Yes	Yes	Yes	Yes	Yes
Ability to read company reviews	No	Yes	Yes	Yes	No
Ability to post jobs	No	Yes	Yes	No	Yes
Ability to create account	Yes	Yes	Yes	Yes	Yes
Ability to provide a filter of part-time and full-time jobs	No	No	No	No	Yes
Ability to set job alert	No	Yes	Yes	Yes	No
Ability to login as admin through mobile app	No	No	No	No	Yes
Ability to chat with other users	No	No	Yes	No	Yes
Ability to login as employer	No	Yes	No	No	Yes

Table 2.3 Comparison Between Reviewed Mobile App

In general, this proposed project will be a free mobile application available in android platform and it will have most of the features that from the compared mobile apps. This proposed will provide an online job platform for the users to simplify recruitment processes. Other than the main features like search, apply, and save jobs, this proposed project will have a unique feature which is user can choose to login in with different user category in the mobile application such as admin, employer and job seeker. Not only that, a communication channel will be provided to the users in order to communicate with each other like other communication applications work. For

example, job seekers can message the employers directly when they have any questions that related to employer's job postings. Moreover, none of the reviewed mobile apps have the features like providing admin screen in the mobile application and a filter to filter out full-time and part-time jobs. Therefore, this proposed project will gain advantages with the 2 features compare to the reviewed mobile apps. Furthermore, this proposed project will also gain another competitive advantage as it provides 3 user categories in the application. Last but not least, the objective of this proposed project is to help job seekers to find jobs and start their career easily. It is also to help employers to hire employees easily through the app. To achieve the objective of this proposed project, the strengths of the reviewed mobile apps will be considered and deep analysed in order to develop a better online recruitment mobile application in this project. Other functions that is useful and help to improve the user experience of the user will also be considered when developing the mobile app in this proposed project.

Chapter 3: System Methodology

3.1 System Design Diagram

3.1.1 System Architecture Diagram

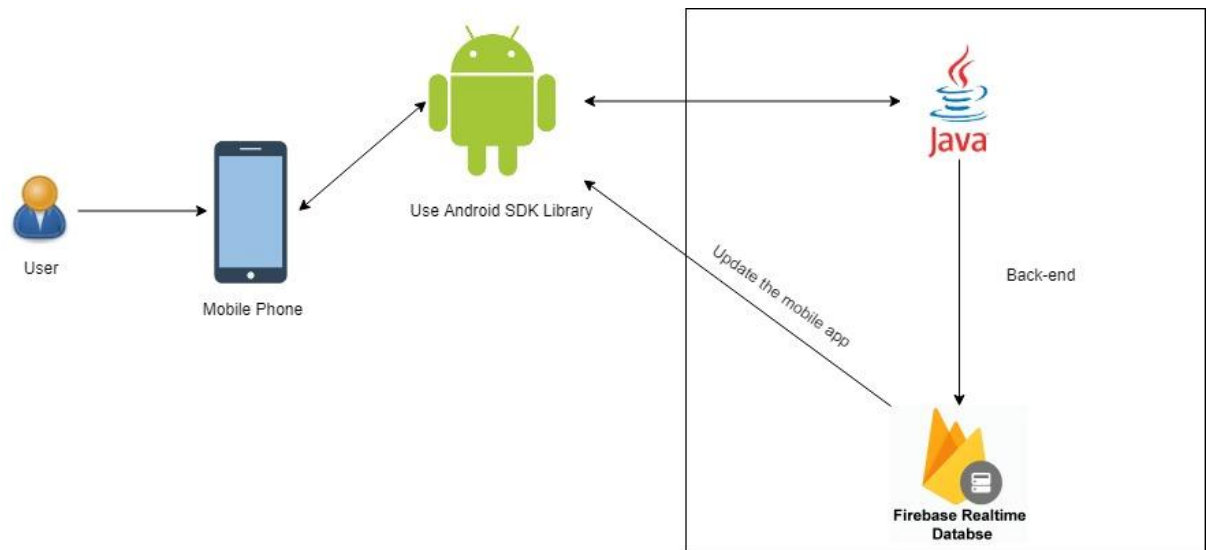


Figure 3.1 System Architecture Diagram

3.1.2 Use Case Diagram and Description

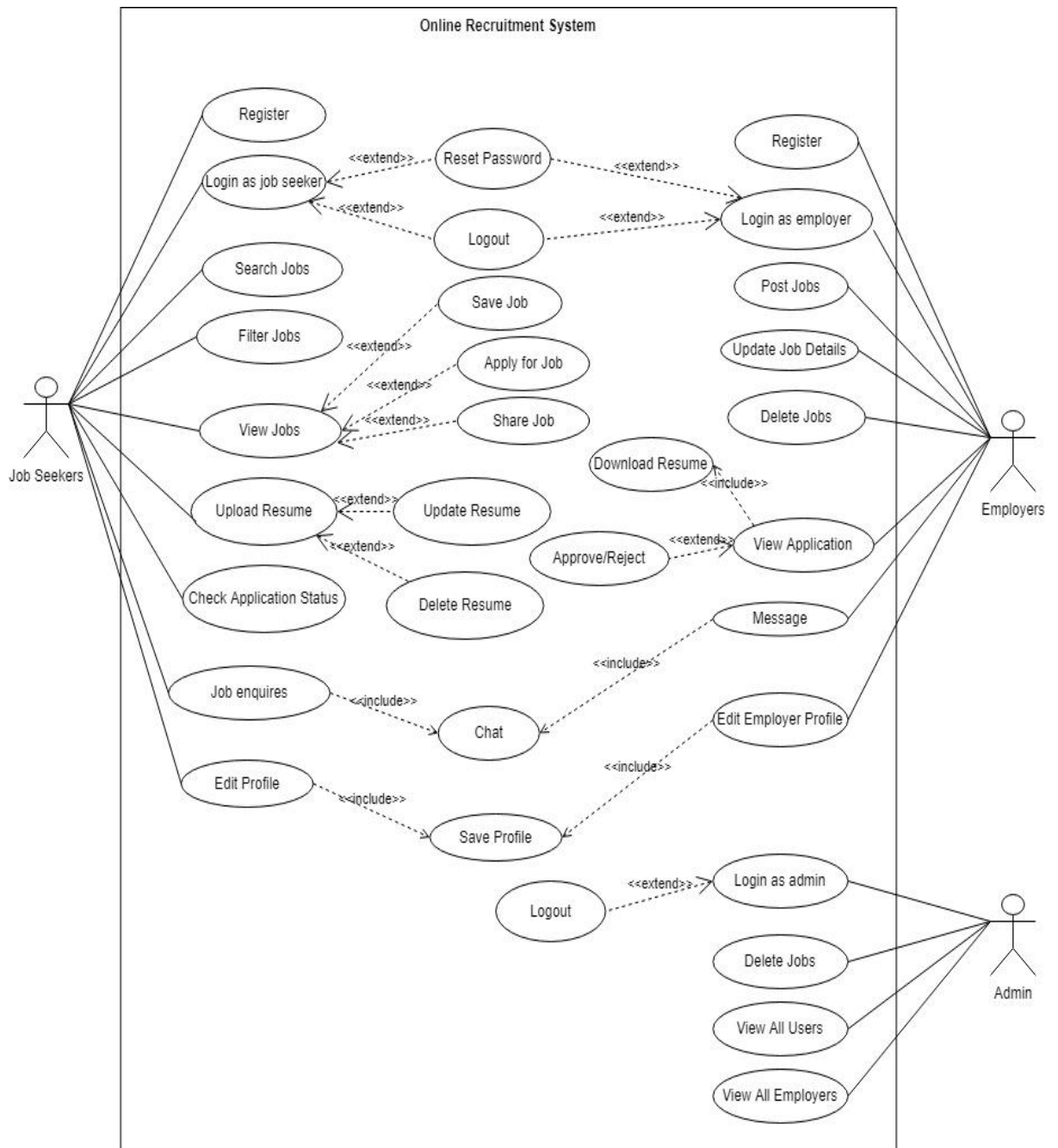


Figure 3.2 Use Case Diagram

Use case	Register
Purpose	Register an account as a job seeker
Actor	Job seekers
Trigger	When user don't have an account
Main flow	<ol style="list-style-type: none"> 1. Go to login screen of application 2. Go to register screen 3. Enter email and password 4. Click confirm button 5. Register successfully
Alternate flow	none

Table 3.1 Use case description of Register

Use case	Login as job seeker
Purpose	Login as a job seeker to the mobile app
Actor	Job seekers
Trigger	When user want to login to the home screen of the mobile app
Main flow	<ol style="list-style-type: none"> 1. Go to login screen of application 2. Fill in the email and password 3. Click login
Alternate flow	<ol style="list-style-type: none"> 1. Job seekers reset the password when they forgot the password 2. When job seekers want to logout from the application.

Table 3.2 Use case description of Login as Job Seeker

Use case	Search Jobs
Purpose	To search job postings based on its job title or company name
Actor	Job seekers
Trigger	When user want to search for jobs
Main flow	<ol style="list-style-type: none"> 1. Click the search icon on the top right-side toolbar 2. Enter keyword to search for the jobs 3. Job posting that matched the keyword will be shown.

Alternate flow	None
-----------------------	------

Table 3.3 Use case description of Search Jobs

Use case	Filter Jobs
Purpose	To filter jobs according to its job types
Actor	Job seekers
Trigger	When user want to filter for the job
Main flow	<ol style="list-style-type: none"> 1. Click the filter icon in the bottom right to open the navigation drawer. 2. Choose to filter the job postings based on the job type.
Alternate flow	none

Table 3.4 Use case description of Filter Jobs

Use case	View Jobs
Purpose	To view for the job posting list
Actor	Job seekers
Trigger	When user want to view for the job postings list
Main flow	<ol style="list-style-type: none"> 1. Go to user home screen of the mobile app 2. Jobs list will be show out. 3. Click the job to go to the job details page.
Alternate flow	<ol style="list-style-type: none"> 1. Job seekers save or favourite the job postings if they willing to 2. Job seekers apply for the jobs when it is suitable 3. Job seekers share job to others.

Table 3.5 Use case description of View Jobs

Use case	Upload Resume
Purpose	To upload resume to the mobile app.
Actor	Job seekers
Trigger	When user want to apply for the job.
Main flow	<ol style="list-style-type: none"> 1. Go to me screen of the mobile app 2. Click my resume

	<ol style="list-style-type: none"> 3. Click upload icon 4. Click select from storage 5. Select resume in pdf form 6. Click upload
Alternate flow	<ol style="list-style-type: none"> 1. Job seekers want to update their resume by uploading a new resume 2. Job seekers want to delete their resume by clicking the delete button

Table 3.6 Use case description of Upload Resume

Use case	Check Application Status
Purpose	To check and view for the job application status
Actor	Job seekers
Trigger	When user want to check for the application status after applied jobs
Main flow	<ol style="list-style-type: none"> 1. Go to the me screen of the mobile app 2. Click my application history 3. Check for the application status
Alternate flow	None

Table 3.7 Use case description of Check Application Status

Use case	Job Enquires
Purpose	To ask questions regarding to the job
Actor	Job seekers
Trigger	When user have question about the jobs and want to chat with the employers or other users.
Main flow	<ol style="list-style-type: none"> 1. Go to message screen 2. Click add button 3. Select employer 4. Start to chat

Alternate flow	None
-----------------------	------

Table 3.8 Use case description of Job Enquires

Use case	Edit profile
Purpose	To edit the user profile
Actor	Job seekers
Trigger	When user want to update or edit their own profile
Main flow	<ol style="list-style-type: none"> 1. Go to the me screen 2. Click my profile 3. Click edit profile 4. Enter the details 5. Click save button to save profile
Alternate flow	None

Table 3.9 Use case description of Edit profile

Use case	Register as employer
Purpose	To register as an employer in the mobile app
Actor	Employer
Trigger	When user want to register as an employer
Main flow	<ol style="list-style-type: none"> 1. Go to login screen 2. Click employer 3. Go to register screen 4. Enter email and password 5. Click confirm button 6. Register successfully
Alternate flow	none

Table 3.10 Use case description of Register as Employer

Use case	Login as employer
-----------------	-------------------

Purpose	To login as an employer in the mobile app
Actor	Employer
Trigger	When user want to login as an employer
Main flow	<ol style="list-style-type: none"> 1. Go to login screen 2. Click employer 3. Enter email and password 4. Click login
Alternate flow	<ol style="list-style-type: none"> 1. Employer forgot password and want to reset password. 2. Employer want to logout from the application.

Table 3.11 Use case description of Login as Employer

Use case	Post jobs
Purpose	To create a new job in the mobile app
Actor	Employer
Trigger	When employer want to hire new employers and post for jobs.
Main flow	<ol style="list-style-type: none"> 1. Go to employer home screen 2. Enter details of the job posting 3. Select image for the job posting 4. Click add button to save to Realtime database
Alternate flow	none

Table 3.12 Use case description of Post Jobs

Use case	Update job details
Purpose	To update job details of the created job in the mobile app
Actor	Employer
Trigger	When employer want to update the job details of the existing job posting
Main flow	<ol style="list-style-type: none"> 1. Go to employer me screen 2. Click my jobs 3. Click the job that wanted to be deleted

	<ol style="list-style-type: none"> 4. Select update in the dialog box 5. Change the details 6. Click update button
Alternate flow	1. Error message will prompt out if all of the job details is not filled

Table 3.13 Use case description of Update Job Details

Use case	Delete jobs
Purpose	To delete jobs that created previously in the mobile app
Actor	Employer
Trigger	When employer want to delete the job posting
Main flow	<ol style="list-style-type: none"> 1. Go to employer me screen 2. Click my jobs 3. Click the job that wanted to be deleted 4. Select delete in the dialog box
Alternate flow	none

Table 3.14 Use case description of Delete Jobs

Use case	View Application
Purpose	To view the application details of the applicant
Actor	Employer
Trigger	When new applicant has applied for its job posting
Main flow	<ol style="list-style-type: none"> 1. Go to employer me screen 2. Click my applicant 3. View applicant list 4. Download and view applicant's resume 5. Choose to approve or reject the applicant
Alternate flow	<ol style="list-style-type: none"> 1. Choose to approve or reject applicant 2. Download resume of applicant for more details

Table 3.15 Use case description of View Application

Use case	Message
-----------------	---------

Purpose	To answer the questions and chat with the job seekers.
Actor	Employer
Trigger	When having message/questions from the job seekers.
Main flow	<ol style="list-style-type: none"> 1. Go to employer message screen 2. Select the users who have sent messages 3. Reply the users or chat with the users
Alternate flow	none

Table 3.16 Use case description of Message

Use case	Edit employer profile
Purpose	To edit the employer profile and fill in the details of the employers.
Actor	Employer
Trigger	When employer want to update or edit their profile.
Main flow	<ol style="list-style-type: none"> 1. Go to the employer me screen 2. Click my profile 3. Click edit profile 4. Enter the company details 5. Click save button to save profile
Alternate flow	none

Table 3.17 Use case description of Edit Employer Profile

Use case	Login as admin
Purpose	To login as an admin to the admin home screen
Actor	Admin
Trigger	When admin want to login to the mobile app
Main flow	<ol style="list-style-type: none"> 1. Go to admin login screen 2. Enter email and password 3. Click login button 4. System verify account 5. Click save button to save profile
Alternate flow	1. Admin want to logout from the application

Table 3.18 Use case description of Login as Admin

Use case	Delete jobs(Admin)
Purpose	To delete jobs that are invalid, or employer forgotten to delete for the job postings.
Actor	Admin
Trigger	When employers don't want the job postings anymore or invalid job postings
Main flow	<ol style="list-style-type: none"> 1. Login as admin to the admin home screen 2. View the job list 3. Click the job that wanted to delete 4. Click confirm 5. Deleted successfully after the job posting is deleted
Alternate flow	none

Table 3.19 Use case description of Delete Jobs(Admin)

Use case	View all users
Purpose	To view all users who have registered in the mobile app.
Actor	Admin
Trigger	When admin want to view all users in a list.
Main flow	<ol style="list-style-type: none"> 1. Go to the admin all users' screen 2. View the user list
Alternate flow	none

Table 3.20 Use case description of View all users

Use case	View all employers
Purpose	To view all employers who have registered and how many job postings they created in the mobile app.
Actor	Admin
Trigger	When admin want to view all employers in a list.
Main flow	<ol style="list-style-type: none"> 1. Go to the admin all employers' screen

	2. View the employer list 3. View the number of job postings that each employer has
Alternate flow	none

Table 3.21 Use case description of View all employers

3.1.3 Activity Diagram

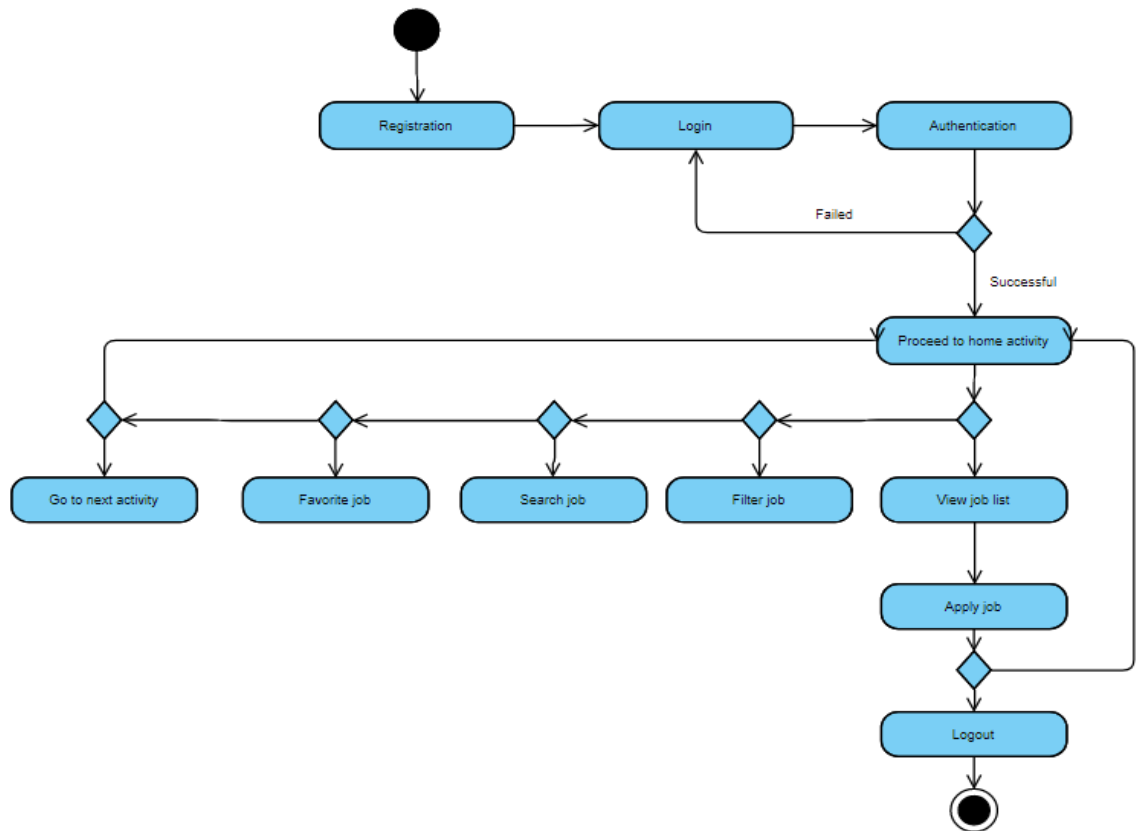


Figure 3.3 Activity diagram of job seeker login

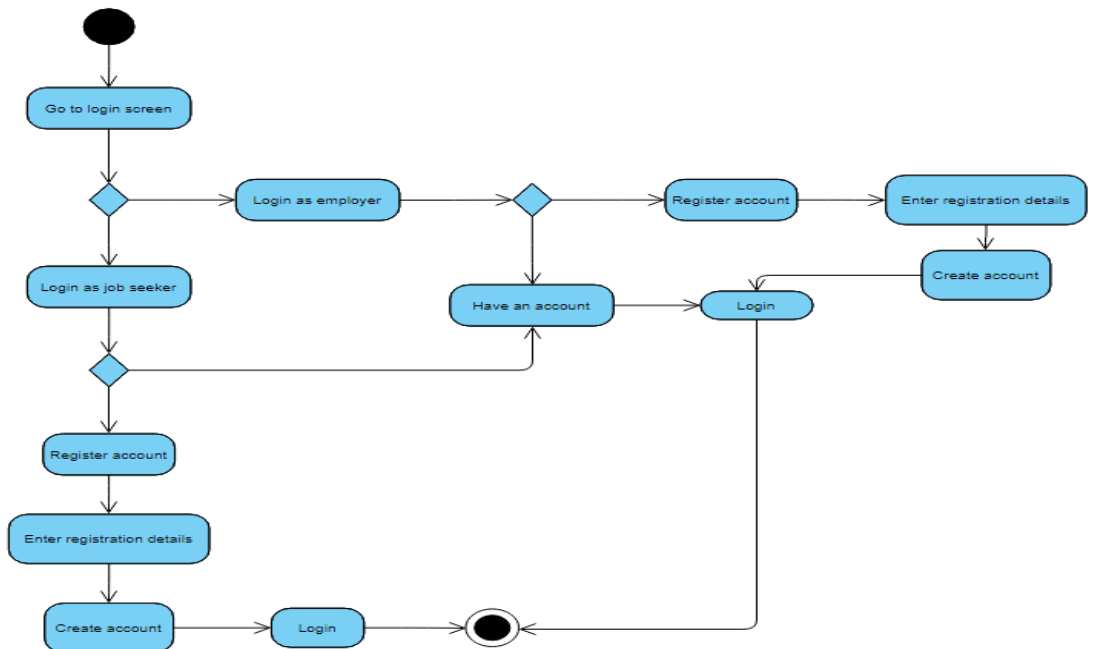


Figure 3.4 Activity diagram of login validation

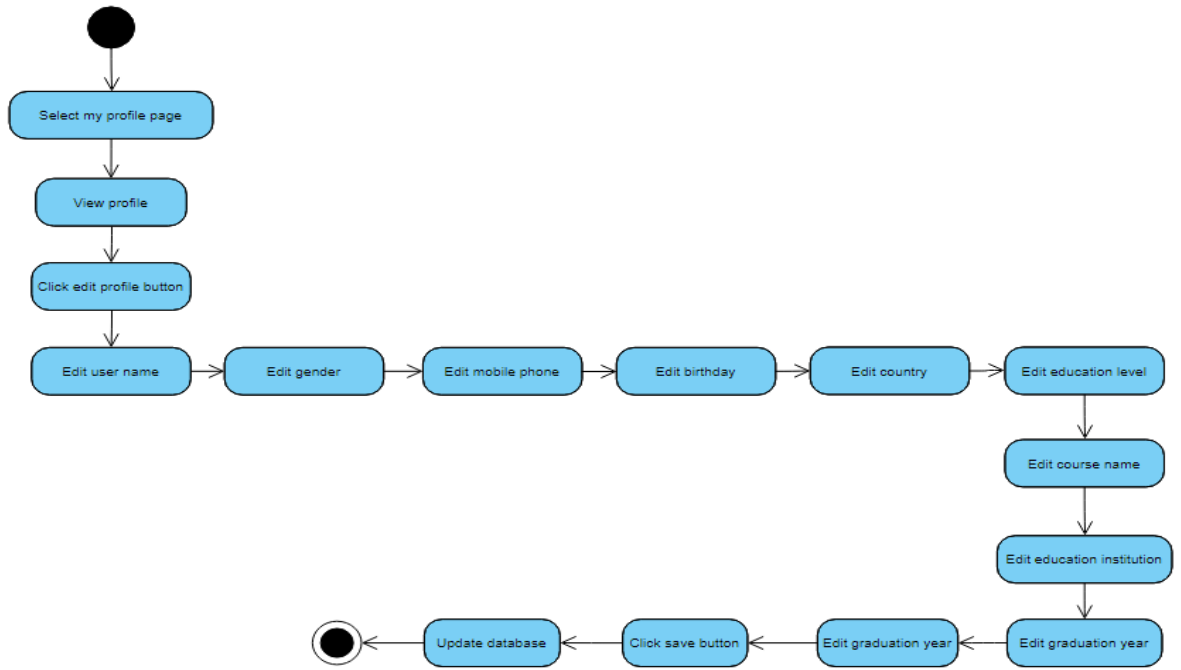


Figure 3.5 Activity diagram of edit profile page for job seeker

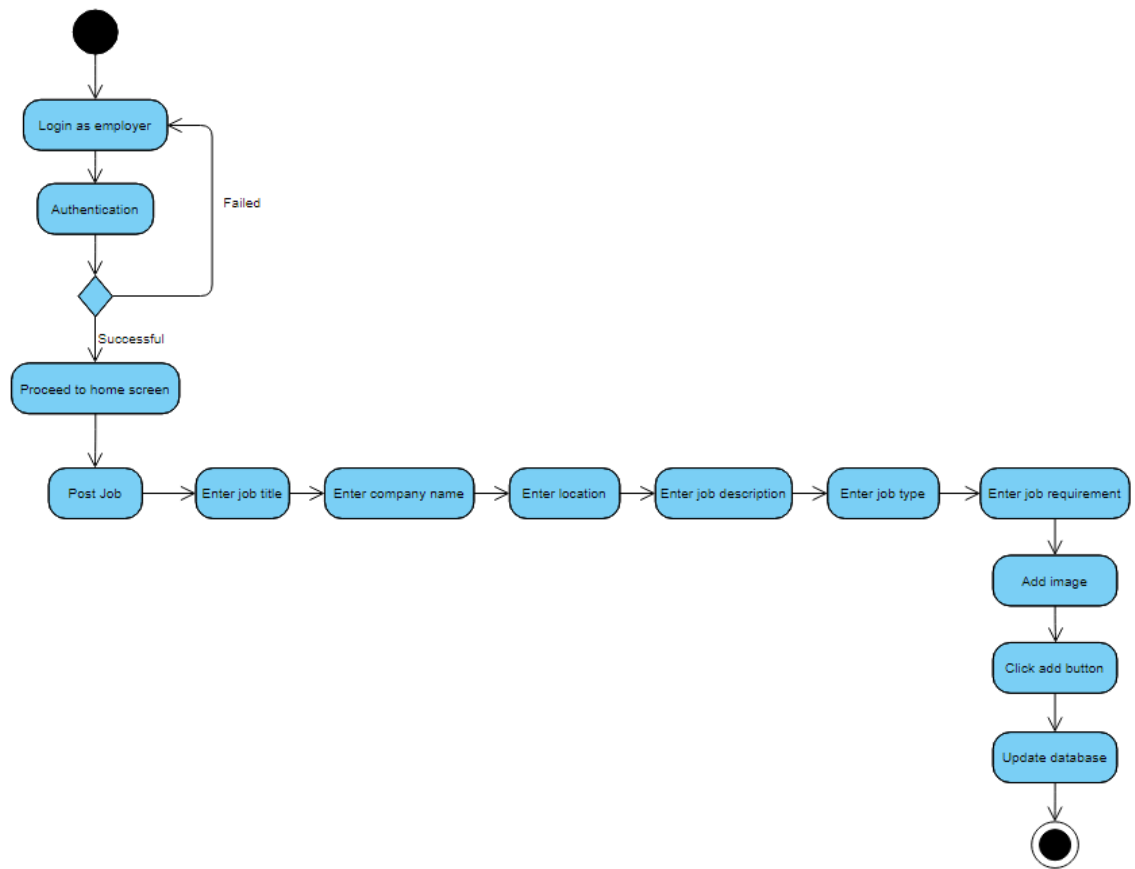


Figure 3.6 Activity diagram of posting job

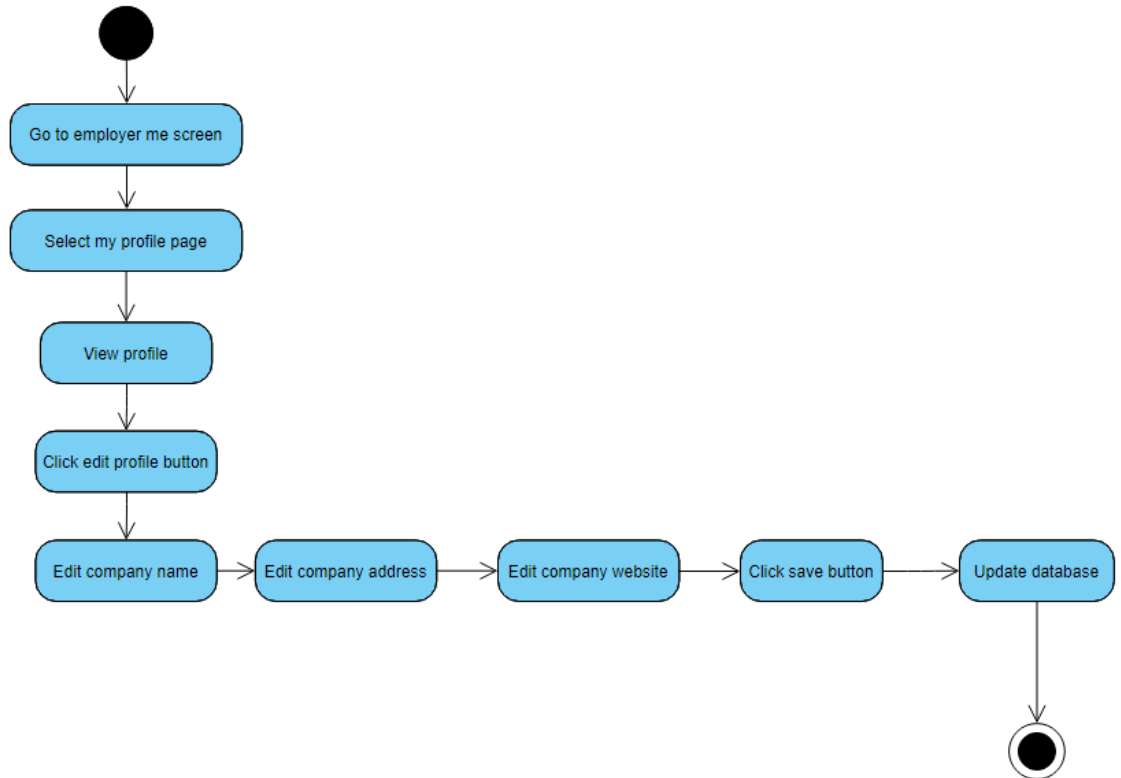


Figure 3.7 Activity diagram of edit employer profile

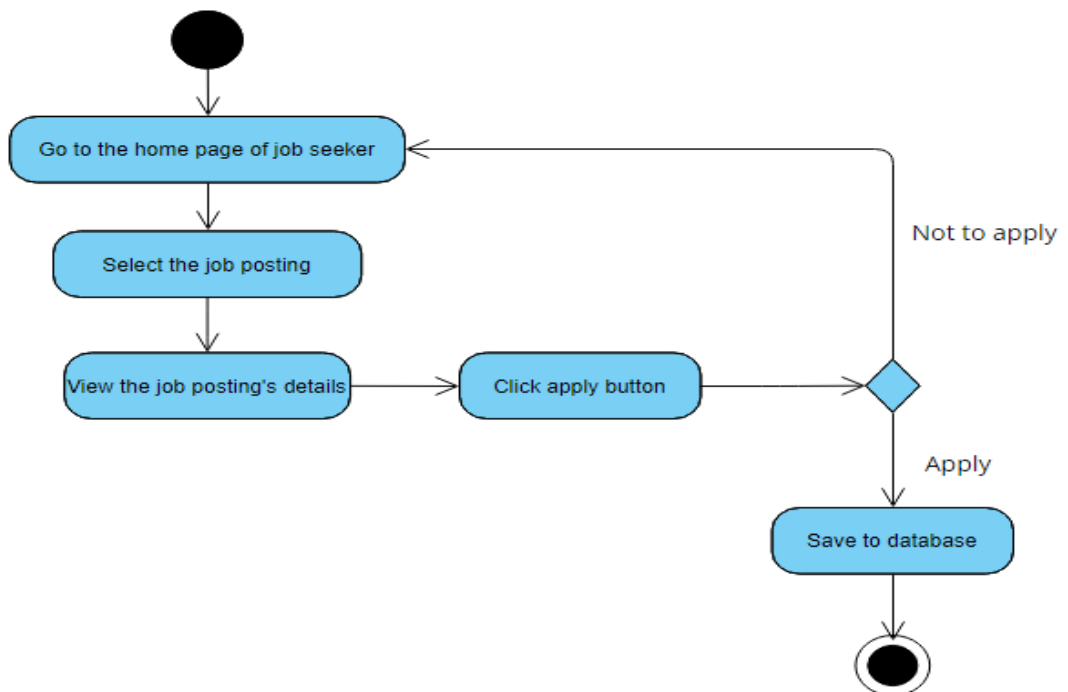


Figure 3.8 Activity diagram of apply job

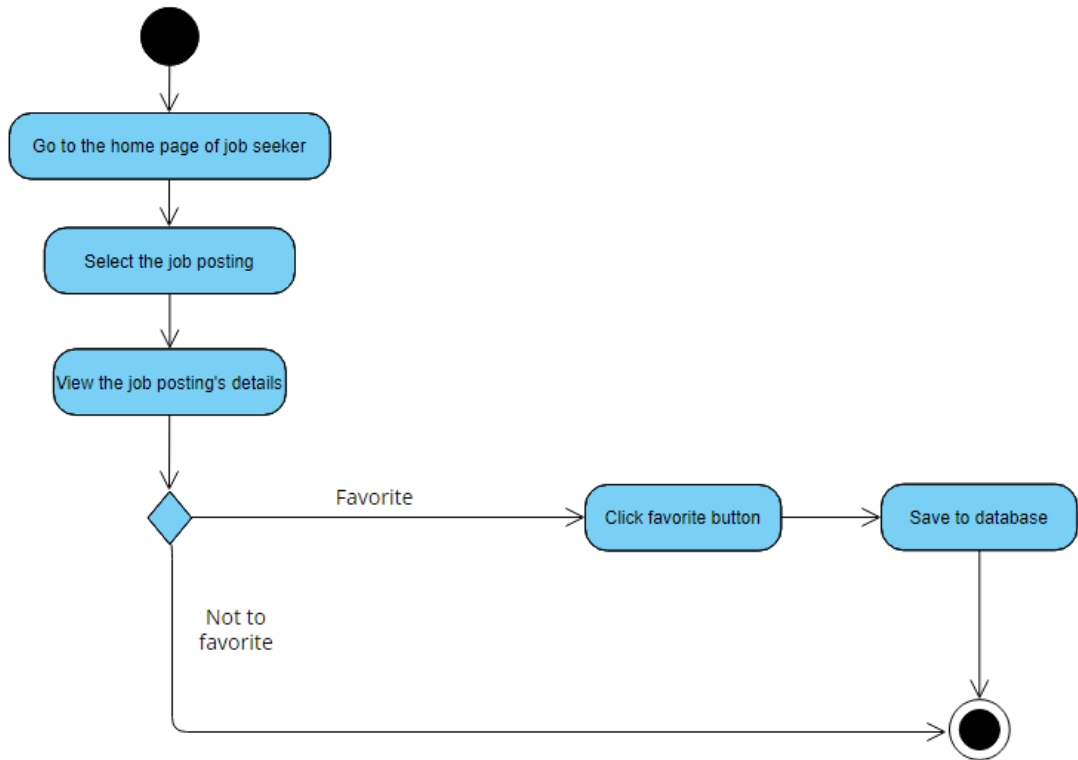


Figure 3.9 Activity diagram of Favourite job

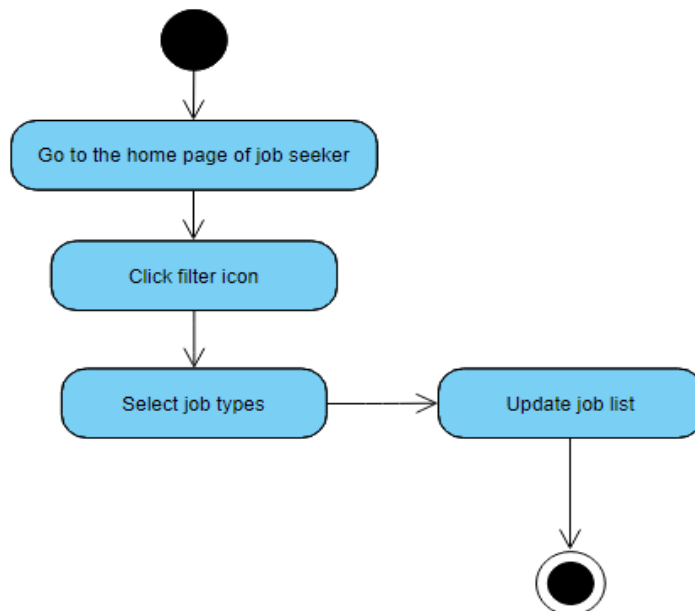


Figure 3.10 Activity diagram of Filter job postings

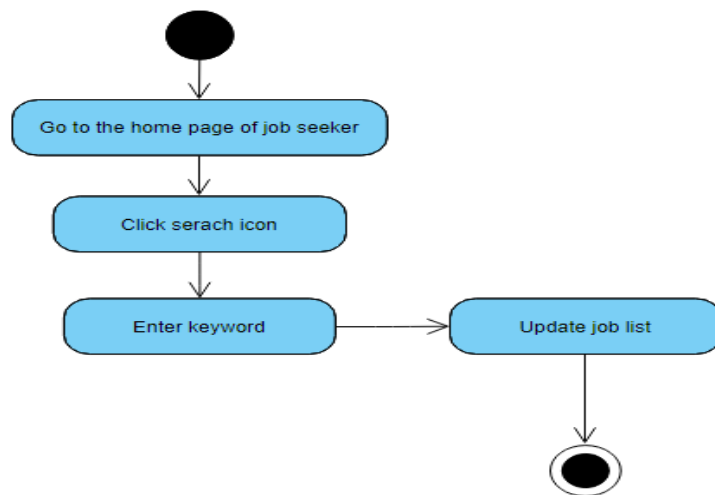


Figure 3.11 Activity diagram of Search job postings

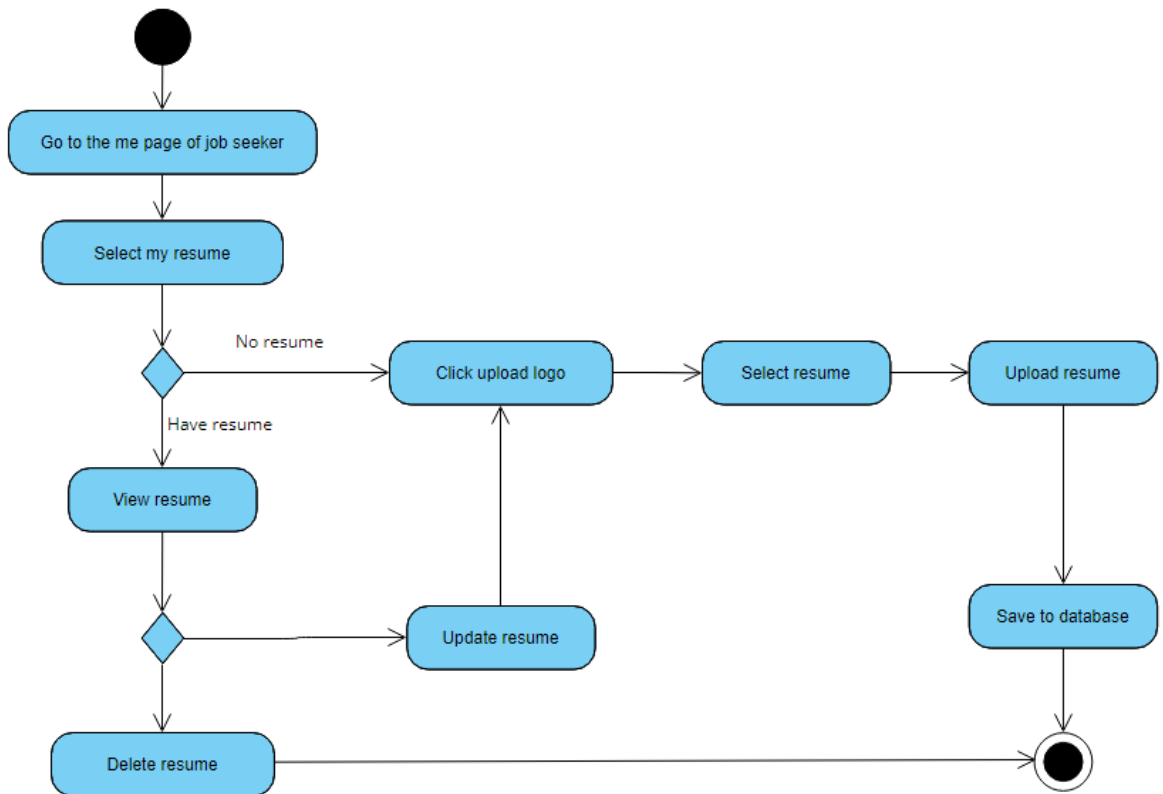


Figure 3.12 Activity diagram of Upload resume

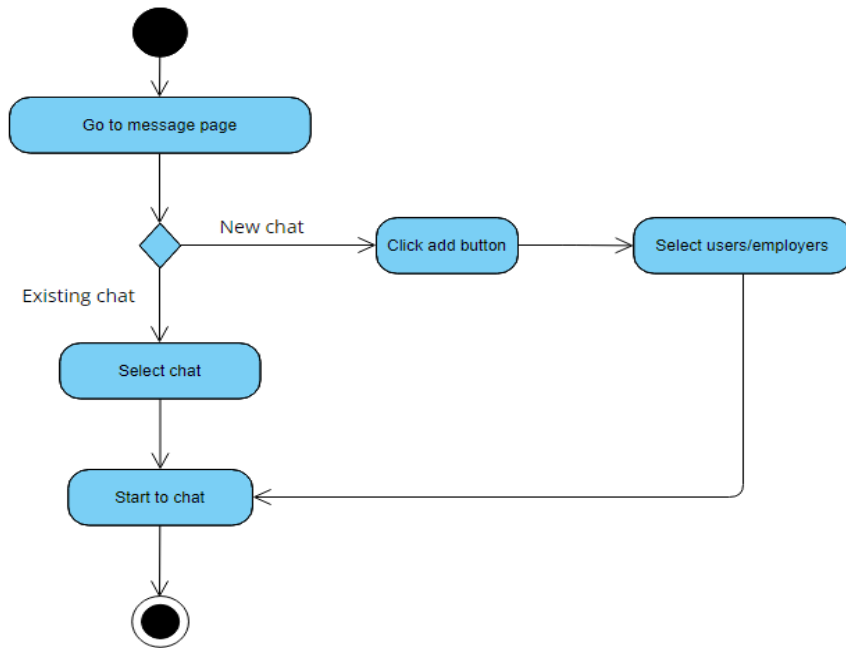


Figure 3.13 Activity diagram of Chat

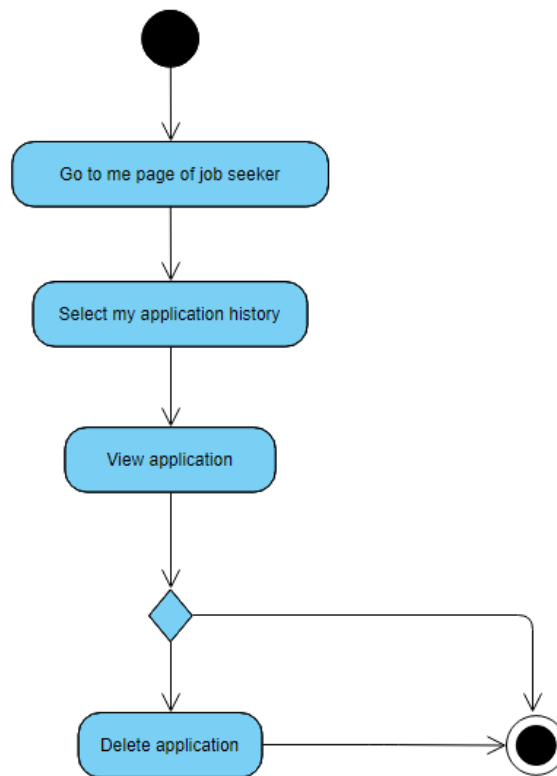


Figure 3.14 Activity diagram of View Application history

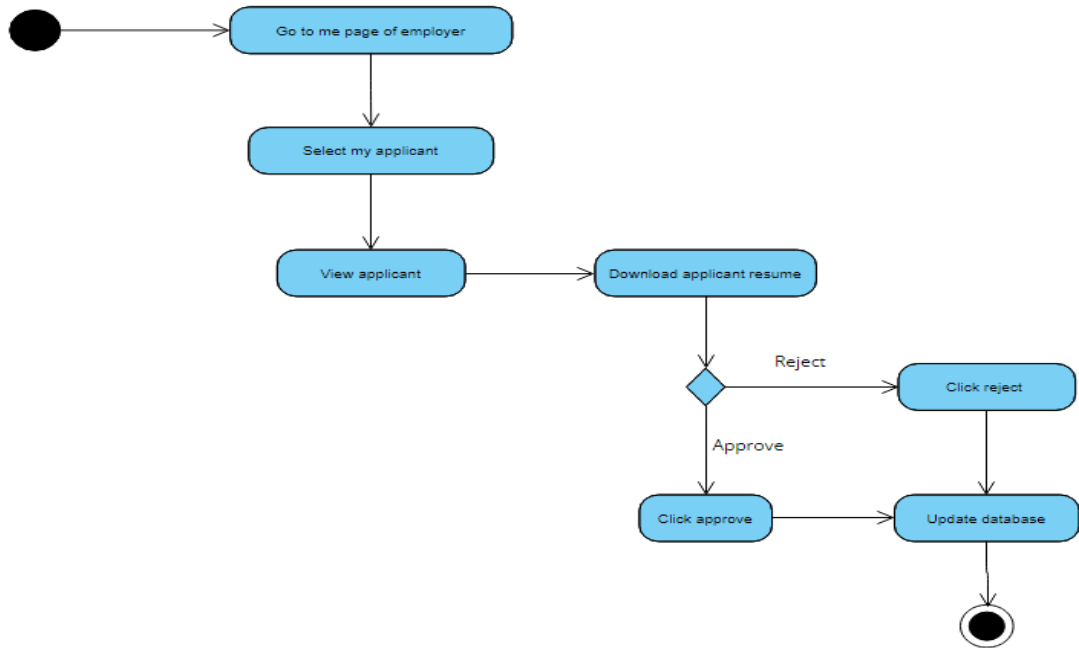


Figure 3.15 Activity diagram of approve or reject application

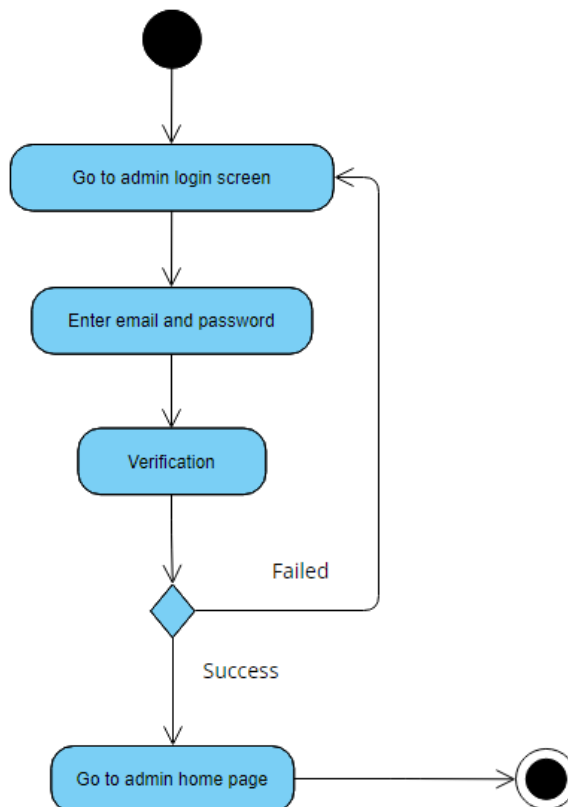


Figure 3.16 Activity diagram of Login as admin

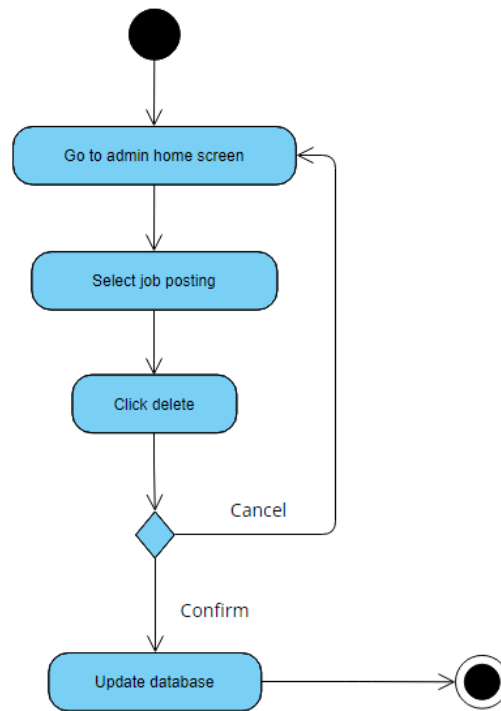


Figure 3.17 Activity diagram of Delete job postings(Admin)

Chapter 4: System Design

4.1 ERD Diagram

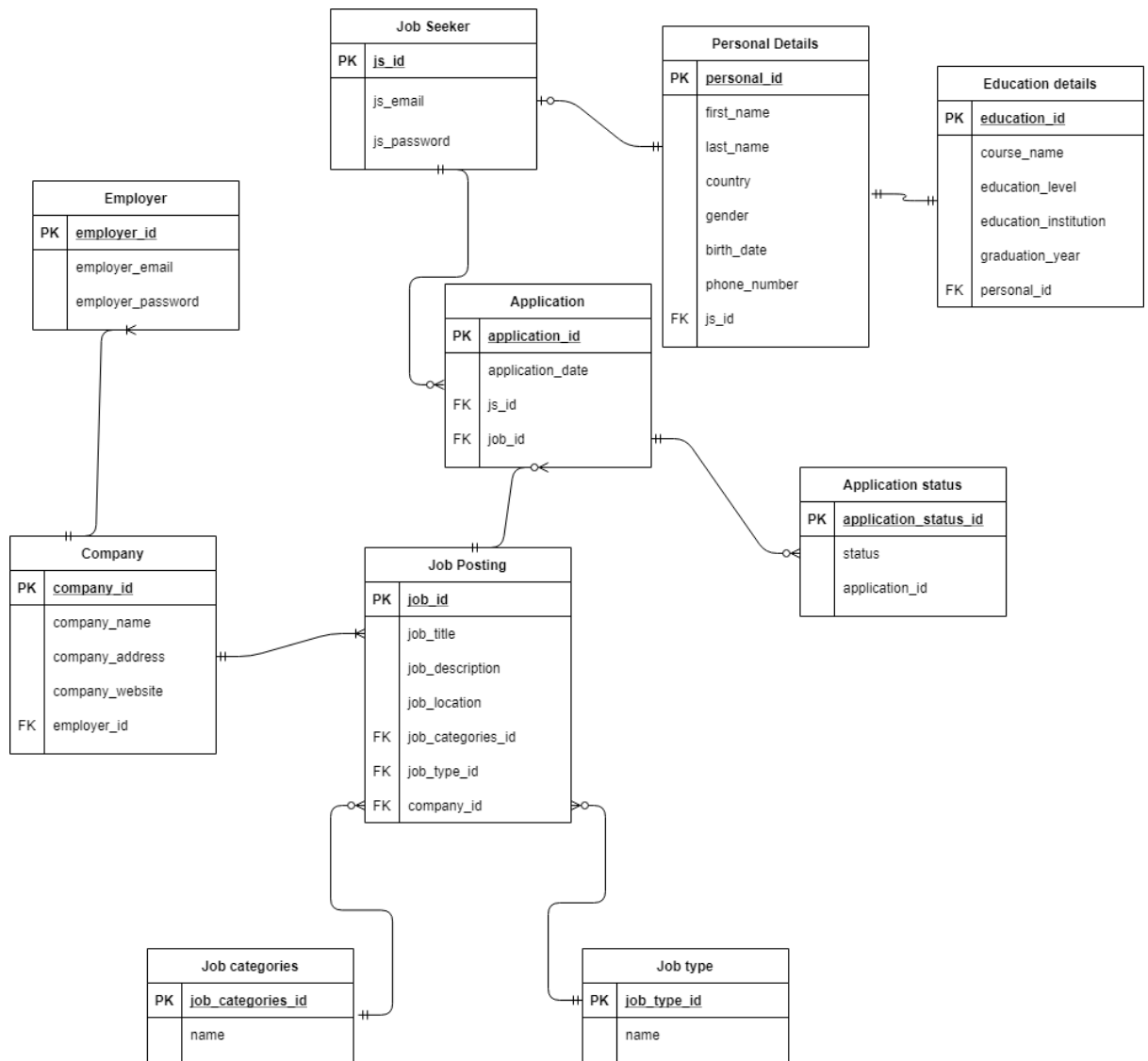


Figure 4.1 ERD Diagram

4.2 System Block Diagram

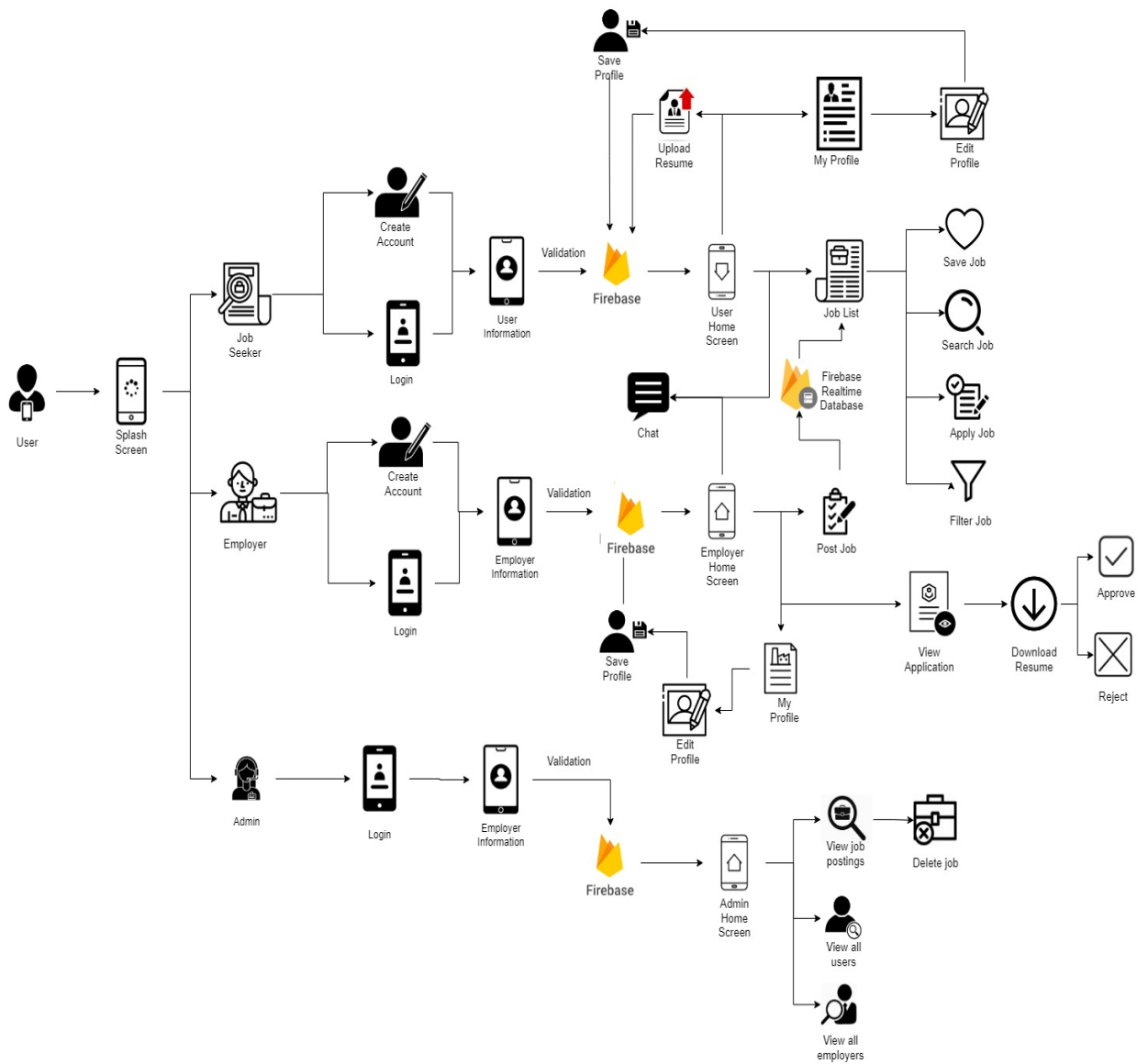


Figure 4.2 Block Diagram

4.3 System Flowchart

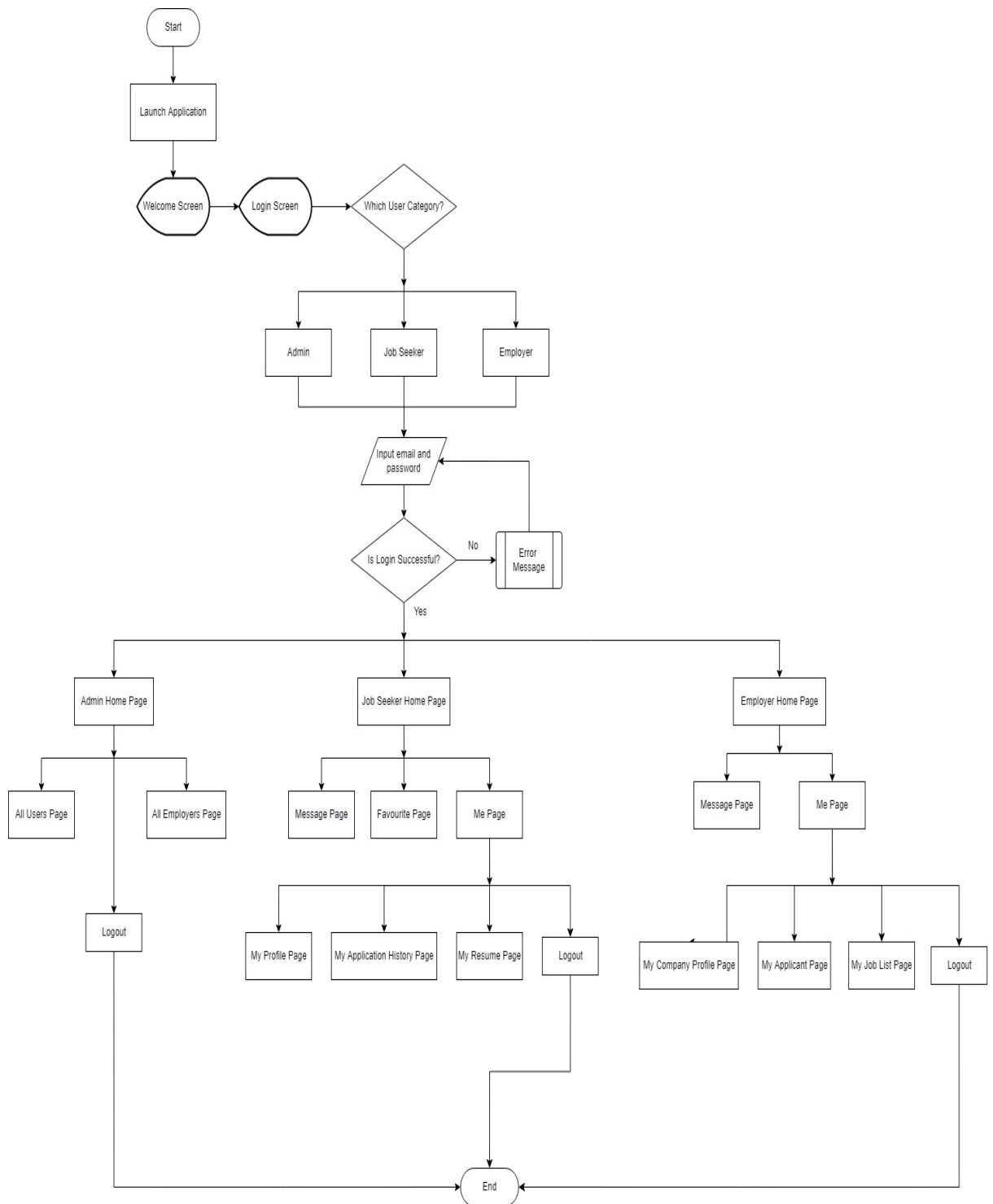


Figure 4.3 System Flowchart

The system flowchart diagram above shows the overall flow of the mobile application. When launching the application, it will show a splash screen before entering to the login screen of the application. At the login screen of the mobile

application, there are 3 types of user category for the user to choose to login in the applications such as job seeker, employer and admin. After that, the user is required to enter email and password to login for the mobile application. However, the user can create a job seeker account or employer account if the user doesn't have an account. When the login is successful, the user will proceed to the home page based on the user category that the user has selected and login. Admin will proceed to the admin Home page to view for the job postings and the range of days that the job postings have been created by the employers. Furthermore, the admin can go to All Users page or All Employers page to view for the users or employers in a list. Besides, job seeker will proceed to the job seeker Home page after login successful. Job seeker can also go to other pages such as Message page, Favorite page and Me page in the application. Not only that, job seeker can go to the other pages such as My Profile page, My Application History page and My Resume page when the job seeker is at the Me page. Lastly, employer will proceed to the employer Home page and the employer can go to the other pages after login successful. For instance, Message page, Me page and other pages in the Me page.

Chapter 5: System Implementation

5.1 System Development Methodology



Figure 5.1 Agile Development

Agile development methodology

Agile development methodology will be involved in this proposed project. Agile methodology is an iterative of development and it required huge collaboration of customer in order to develop a better system [10]. The testing and development process will be done concurrently in this methodology. The development phases involved in this methodology are requirements, design, development, testing, deployment, and review. This methodology can provide a benefit which is faster process in delivering business value and good quality of system. Besides, it can also provide flexible responses for changes because it follows client's requirement changes. Agile methodology is one of the simplest development methodologies in delivering a better value of software according to client needs and business goals.

First phase – Requirements

During the requirement analysis phase, all possible requirement such as functional and non-functional requirement of this system will be gathered, and user requirement will also be collected for further analysis. Besides, a deep analysis of the requirement will be done to find out the most suitable requirement to develop for the system. In this proposed project, requirements will be gathered from the clients and users to analyse it. The example users will be job seekers and employers who in charge for the recruitment of new staff. Moreover, system requirements will be changing dynamically, thus this proposed project will adapt to the situations.

Second phase – Design

After studied and analysed the requirements from first phase, a system design need to be prepared. Hardware and system requirement can be included in the system design in order to define the overall system architecture. Furthermore, block diagram, use-case diagram and UML diagram can be designed to get the ideas of the overall system in this proposed project.

Third phase – Development

With the data and information from system design, the system will be developed in a small unit for the testing phase. Other than that, each of the unit will be developed and tested for its functionality to make sure that it is working well before moving to the next phase. In this phase, a mobile application for job recruitment platform will be developed to test for the system.

Fourth phase – Testing

The units developed in the development phase will be integrated into a system and a system testing will be carried out. If any problems or failures occur during the system testing, a solution must be carrying out to solve the problems. It must be well-tested before deploying the system to users. In this phase, the proposed system will be tested

very frequently through the iterations. It can minimize the risk of any major failures in future.

Fifth phase – Deployment

Once the system testing is done, the system can be deployed to the user. User can download the application to use on its features. An online recruitment mobile application will be deployed for users to test and use the features on it. In this phase, job seekers and employers can download the mobile application and start to use it.

Sixth phase – Review

After system deployment, a review of the system will be done to collect the information about the system such as system error exists and feedback about the system. In this phase, a survey questionnaire will be carried out to review about the system. Job seekers and employers will be our respondents of the survey questionnaire to collect feedback about the mobile application for online recruitment system.

5.2 Hardware Setup

Description	Specifications
Operating System	Window 10
Processor	Intel(R) Core(TM) i7-9750H CPU @ 2.60GHz 2.59 GHz
Ram	24.00 GB
Input	Keyboard and Mouse
System Type	64-bit operating system, x64-based processor
Storage	512 GB SSD

Table 5.1 Description and Specifications of Hardware Setup

5.3 Software Setup

<u>Software/Technologies</u>	<u>Description</u>
Android Studio	This online recruitment app will be built using Android Studio. It will be available for Android platform. Android Studio is an integrated development environment for all Android applications, and it is easy to use. Android Studio provides drag-and-drop interface which is easy to use in designing user interface.
Firebase	Firebase is a Backend-as-a-Service, and it provides the tools which cover a lot of the services that developers needed in developing and improving their mobile apps [11]. There are many features provided by Firebase. Analytics, authentication, databases, configuration, file storage, push messaging, and so on are all examples of this.
Firebase Realtime Database	Firebase Realtime Database will be used in this online recruitment app. It is a cloud-hosted database. With Firebase Realtime Database, data can be stored in the cloud and synced among various devices. Data is synchronized in real time across all clients and is available even if the app is turned off. It is run on Google's Firebase platform.

Table 5.2 Software Setup

5.4 User Requirement

Functional requirement	Description
Able to search for jobs	Allow job seekers to search for job postings that available from the database.
Able to create job postings	Allow employers to create their job postings in the app. The data of the job postings will be save into MySQL database.
Able to apply for jobs	Allow job seekers to apply for jobs more easily. Job seekers with complete profile and resume can apply for jobs with one click.
Able to upload resume	Allow job seekers to upload their resumes in the system to apply for jobs.
Able to message employers or job seekers	Allow job seekers to message employers directly if they are having questions of the job. Employers can also message the applicant to communicate with them using phone.
Able to filter job postings	Allow job seekers to filter job postings to make searching process more effective and easier.
Able to save job postings	Allow job seekers to save for the job postings that they like. They can view for the saved postings easier.
Able to check application status	Allow job seekers to check for the application status after they apply for the job such as successful or rejected.
Able to manage profile	Allow job seekers and employers to manage their personal profile or company profile.

Able to login as admin	Allow admin to login to the admin home page in the application.
Able to approve or reject application	Allow employers to approve or reject application after they made decision.
Able to download applicant's resume	Allow employers to download the applicant's resume in the application.
Able to register account	Allow users to create an account as a job seeker or an employer in the application.
Able to login as job seeker or employer	Allow users to login to the application based on their user category.

Table 5.3 Functional Requirement

Non-functional requirement	Description
Performance	Mobile application should be able to operate with the mobile system and response for the user's request within 3 seconds.
Availability	The system can be accessed for 24 hours a day and it should also have 24*7 availability.
Learnability	Users should be able to learn how to use the application easily and intuitive.
Usability	The appearance of the user interface should be clean and easy to use. Suitable font size for better visualization.
Security	The data and personal information of the users should be protected to prevent stolen by others.

Table 5.4 Non-functional Requirement

5.5 Project Timeline

Task	Week													
	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
Chapter 1: INTRODUCTION														
Problem Statement and Motivation														
Objectives														
Project Scope														
Impact, Significance and Contribution														
Background Information														
Report Organization														
Chapter 2: LITERATURE REVIEW														
Fact Finding														
Review of the existing applications														
Compare Existing Systems														
Chapter 3: System Methodology/Approach														
System Architecture Diagram														
Use Case Diagram and Description														
Activity Diagram														
Chapter 4: System Design														
ERD Diagram														
System Block Diagram														
System Flowchart														
Chapter 5: System Implementation														
Hardware & Software Setup														
Develop system														
Finalise system														
System Operation														
Chapter 6: System Evaluation and Discussion														
Black box testing & Performance Metrics														
Testing setup and result														
Project Challenges														
Objectives Evaluation														
Chapter 7: Conclusion and Recommendation														
Conclusion														
Recommendation														
Finalise FYP2 Report														
FYP2 Report Submission														
Test Prototype														
FYP2 Presentation														

Figure 5.5 Project Timeline

5.6 System Operation (With Screenshot)

i. Job seeker



Figure 5.6 Splash Screen

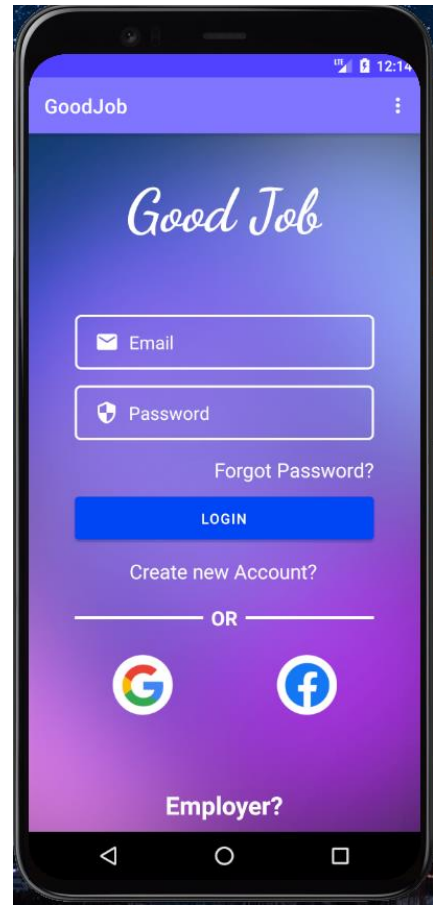


Figure 5.7 Login Screen(Job Seeker)

Figure 5.6 shows the splash screen of the application which named GoodJob. It will show an animation splash screen at the first start of the application. After the animation splash screen finished, the application will proceed to the job seeker login screen as in Figure 5.7. From this page, users can choose to login as employer by clicking the employer text in the bottom. Not only that, job seeker can choose to login with Google or Facebook by clicking the icons.

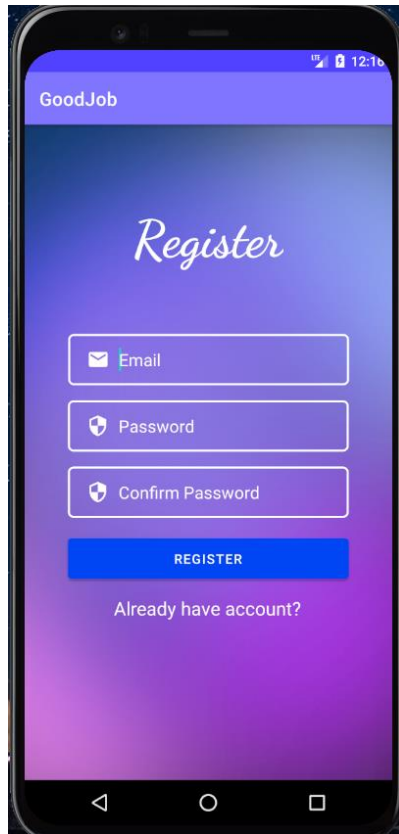


Figure 5.8 Register Screen

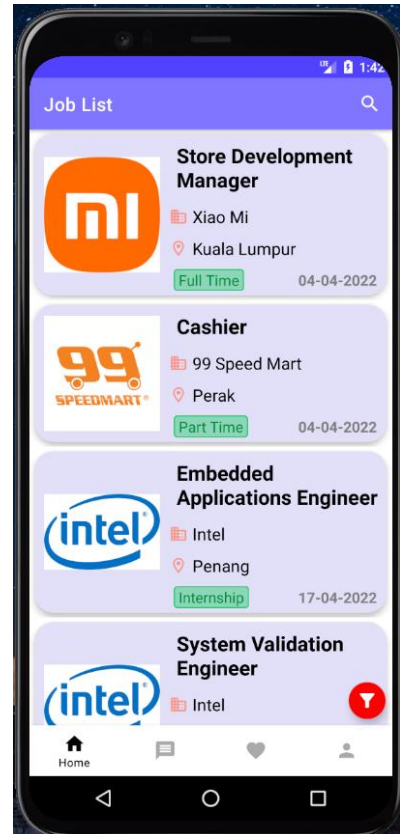


Figure 5.9 Home Screen

Figure 5.8 shows the register screen for job seeker. Job seeker can create an account by entering email, password and confirm password in the fields provided. Figure 5.9 shows the home screen of job seeker after the job seeker login successfully or register successfully in the application. From the home screen, it will show a job postings list for the job seeker to view, search or filter for the job postings. Besides, job seeker can click the job posting to view for more details about the job.

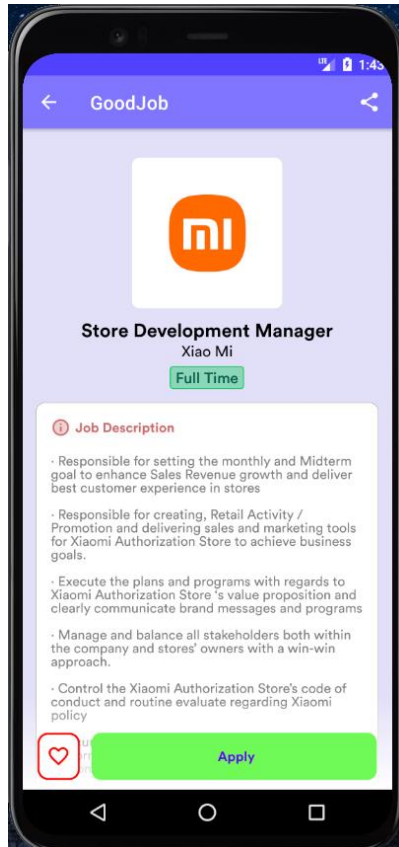


Figure 5.10 Job Details Screen(1)

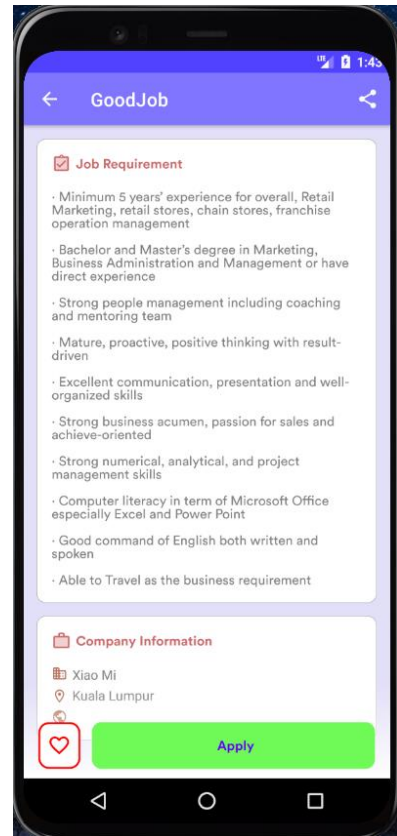


Figure 5.11 Job Details Screen(2)

Figure 5.10 and Figure 5.11 show the job details screen after the job seeker clicked the job. In the job details screen, it will display the job details such as job description, job requirement, company information and so on for the job seeker. Moreover, job seeker can share, favorite and apply jobs in this screen.

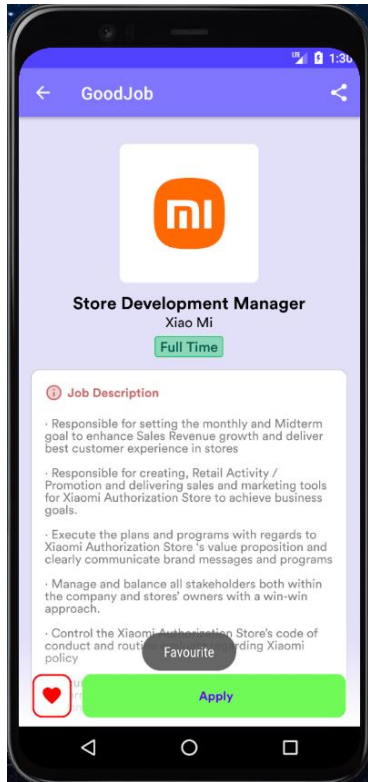


Figure 5.12 Favourite Screen

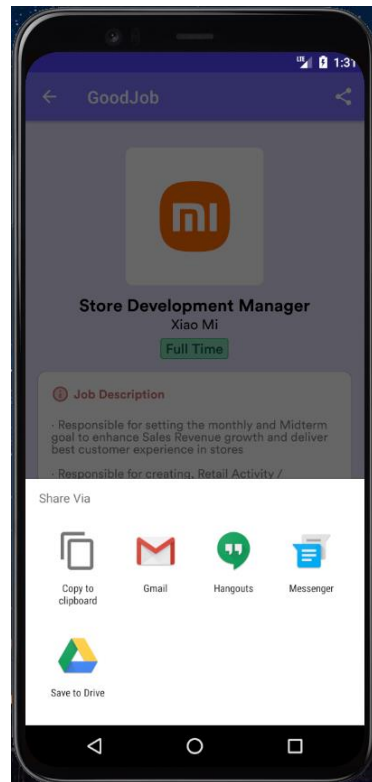


Figure 5.13 Share Job Screen

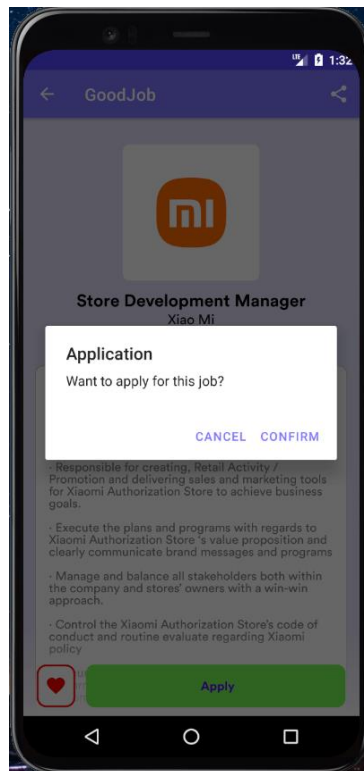


Figure 5.14 Apply Job Screen

If the job seeker interested in the job and he/she want to save it for later viewing, then the job seeker can click the favourite icon at the bottom left corner of the job details screen and the result will show as in Figure 5.12. The favourite icon will be filled with red colour once the job seeker has favourited the job. Besides, the job seeker can share the job to others by click the share icon at the top right corner of the job details screen. As shown in Figure 5.13, job seeker will be provided with the options to share the job via different methods after the job seeker clicked the share icon. Furthermore, figure 5.14 shows a confirm application message when the apply button is clicked. Job seeker can apply the job by clicking the apply button and OK in the message prompted. However, there is a rule that job seekers are required to follow before applying the job where the job seekers must upload their resumes first.

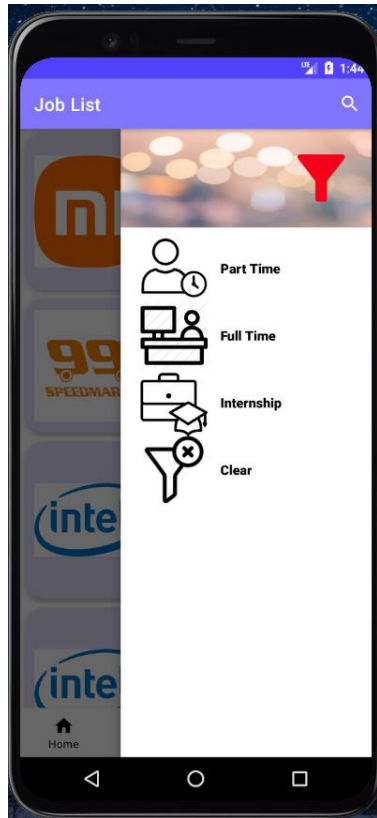


Figure 5.15 Filter Screen



Figure 5.16 Search Screen

Figure 5.15 shows a filter drawer opened from the right side of the screen. It will provide a job filter based on the job types. Job seeker can choose to filter the job posting by part-time, full-time and internship. A clear filter is provided in the application after the job seeker has filtered the job posting and wanted to clear the filter. Figure 5.16 shows the job seeker searched for the Intel's job postings. Job seeker can search the job postings by clicking the search icon at the top right corner of the screen. After that, the job seeker can search the job postings by typing the keyword such as the company name and job title of the job postings. The search function is not a case-sensitive search where the job seeker can search the job postings more easily without caring the case of words.

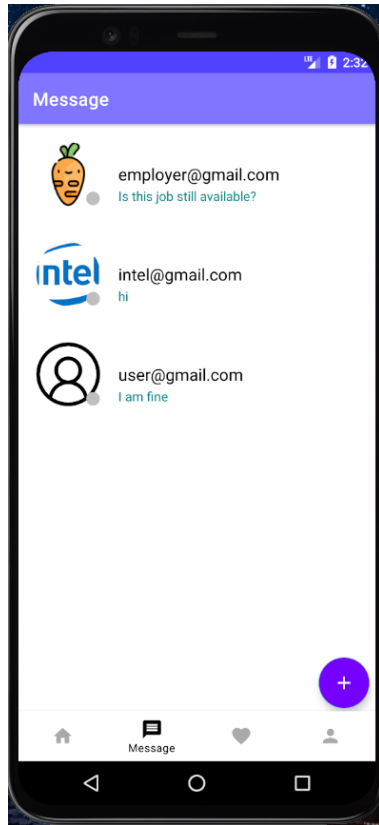


Figure 5.17 Message Screen

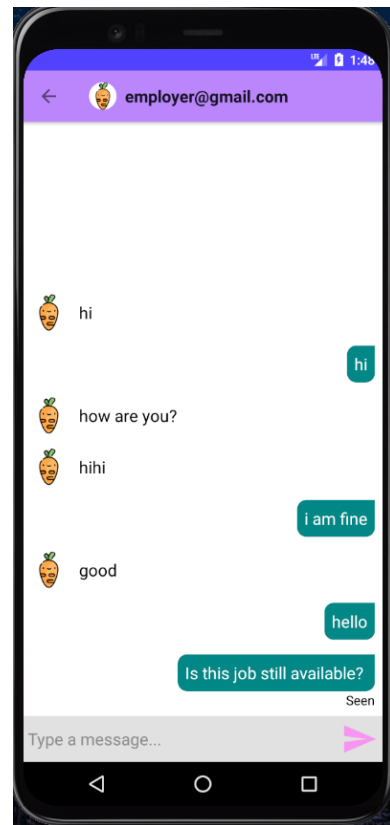


Figure 5.18 Chatting Screen

Figure 5.17 shows the message screen when the job seeker clicks the message icon at the bottom of the screen. All the messages history will be shown in this screen. Figure 5.18 shows the chatting screen when the job seeker select the employer@gmail.com in the Figure 5.17 The job seeker can start to chat with the employer by typing a message as shown in Figure 5.18.

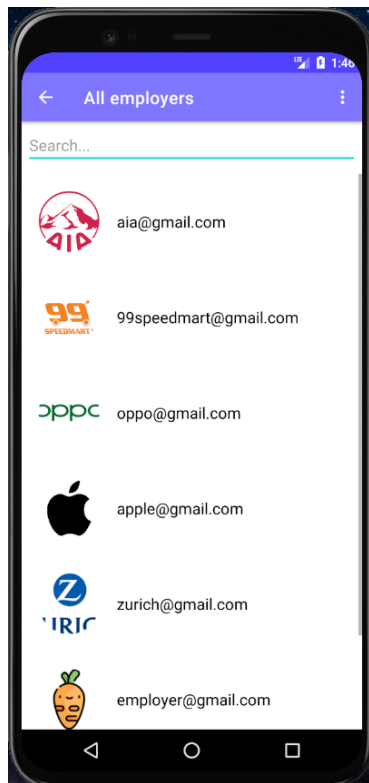


Figure 5.19 Select Employers Screen

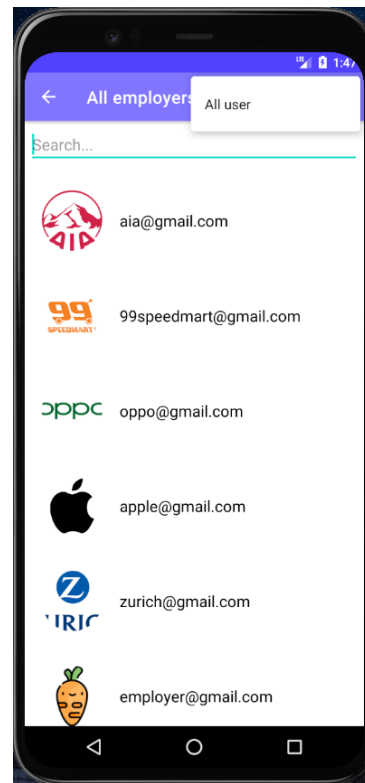


Figure 5.20 All User Options Screen

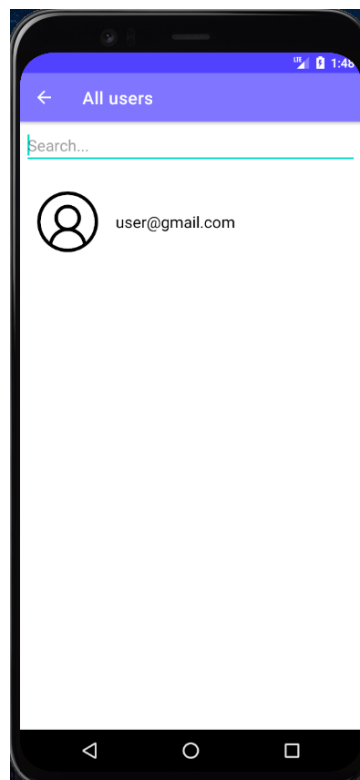


Figure 5.21 All Users Screen

If the job seekers want to start a new chat with other job seekers or employers, they can click the add icon at the bottom right corner of the screen as shown in Figure

5.17. Figure 5.19 shows all of the employers after the job seeker clicked the add icon. An all user options has been shown in the Figure 5.20. If the job seekers want to chat with other job seekers, then they can click the three dot icon at the top and select All User. After selected All User, it will direct the job seeker to the All User screen as shown in Figure 5.21.

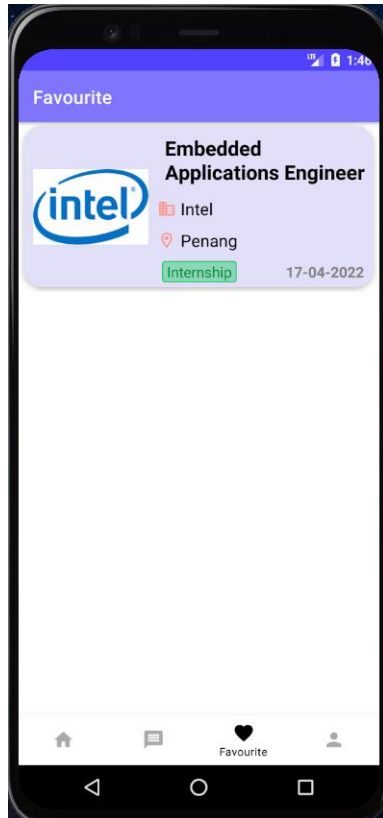


Figure 5.22 Favorite List Screen

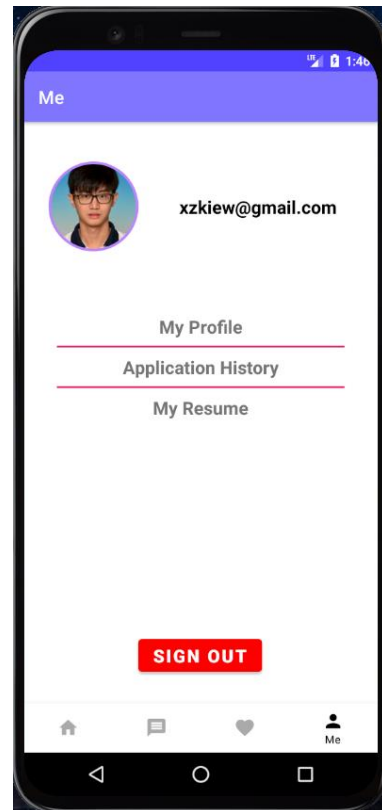


Figure 5.23 Me Screen

Figure 5.22 shows the favorite list of job seeker. In the favorite screen, it will display all the favorited jobs of the job seeker in a list. Job seeker can view the favorited job easily by going to this screen. Figure 5.23 shows the me screen of job seeker. Profile image and email will be shown at the top of this screen. Job seekers can change their profile image easily by clicking the image and the application will direct the job seeker to select their image. To sign out in this application, a sign out button is provided in this screen for the job seeker to sign out.

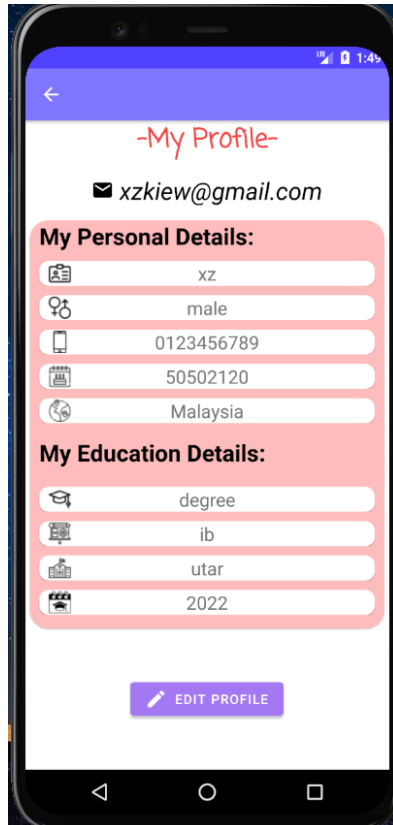


Figure 5.24 My Profile Screen

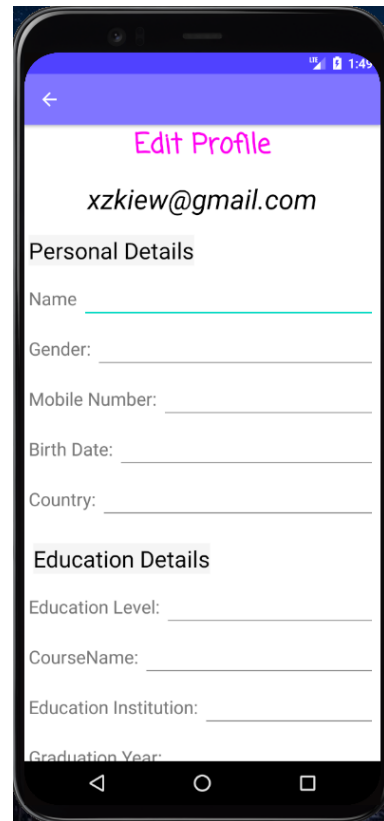


Figure 5.25 Edit Profile Screen

Figure 5.24 shows the job seeker's profile screen. Job seeker can proceed to this screen by clicking My Profile in Figure 5.23. It shows the personal details and education details of the job seeker. Job seekers can click the edit profile button if they willing to edit their details. Figure 5.25 shows the edit profile screen for the job seekers to edit their profile by entering their personal details and education details. After filled in all of the details, the job seeker can scroll down the screen and click save.

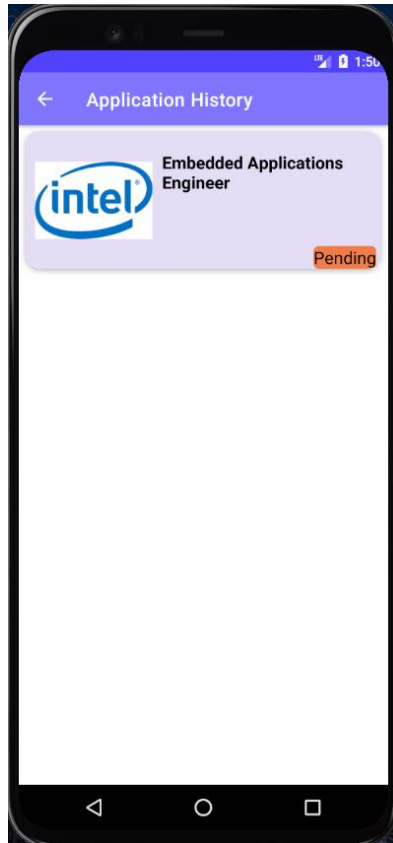


Figure 5.26 Application History Screen

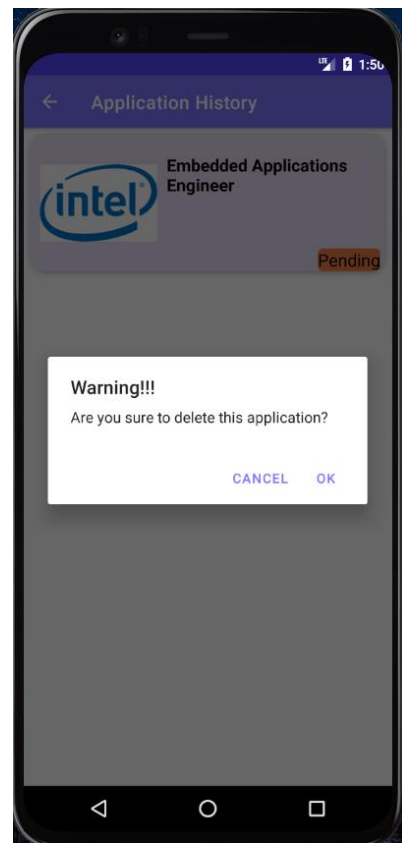


Figure 5.27 Delete Application Screen

Figure 5.26 shows the application history of job seeker. In the application history screen, all the application history of job seeker will be shown out in a list. Other than that, status of the application will be shown out for the job seekers to know what the status of their application is. If the job seekers want to delete their application of job, then the job seeker can click the application and a warning message will prompt out as shown in Figure 5.27.

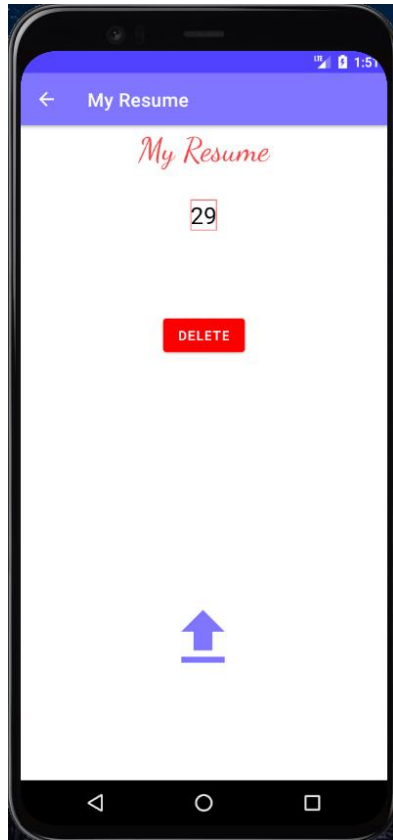


Figure 5.28 My Resume Screen

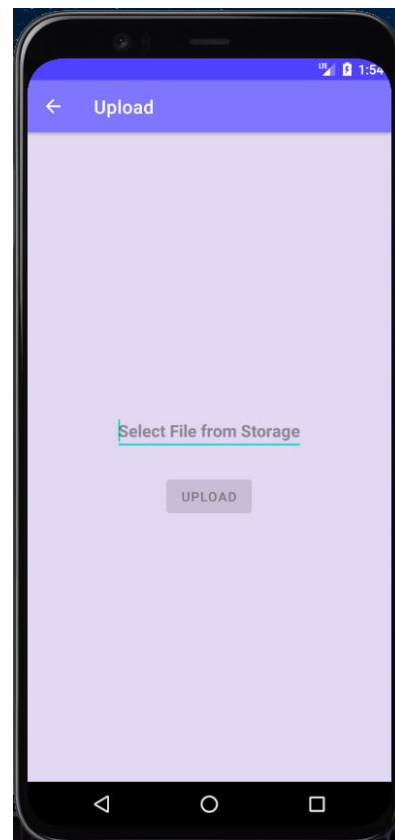


Figure 5.29 Upload Resume Screen

Figure 5.28 shows the resume of job seeker. If the job seekers never uploaded their resumes in the application before, the delete will not show up. Besides, job seekers can upload their resumes by clicking the upload icon and they will be directed to the next page as in Figure 5.29. In Figure 5.29, job seekers can upload their resumes by clicking Select File from Storage and the application will direct the job seekers to select their resume. After selected the resume, the upload button will be available to click in order to save the selected resume to Realtime database.

ii. Employer

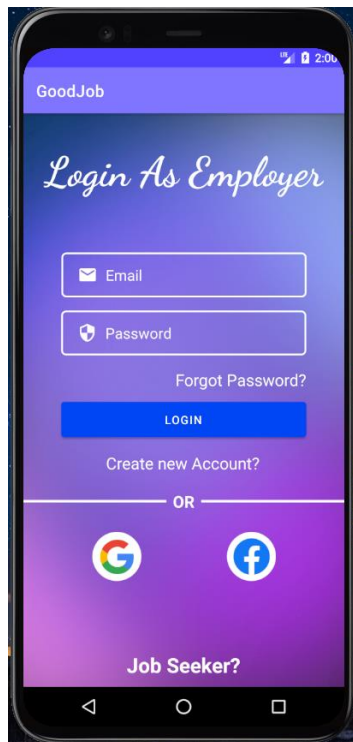


Figure 5.30 Login Screen(Employer)

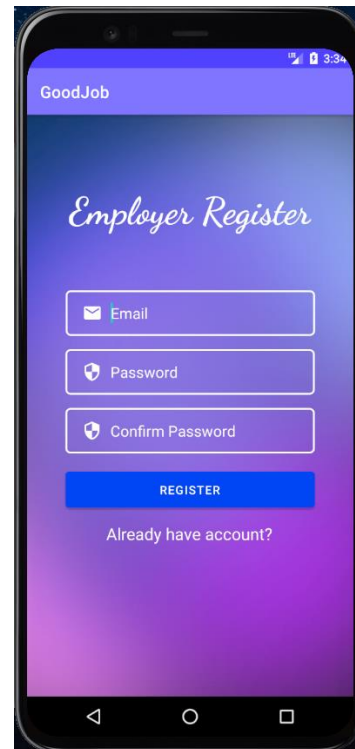


Figure 5.31 Register Screen(Employer)

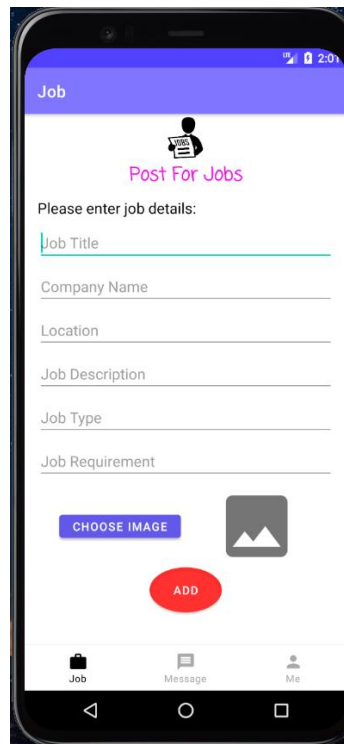


Figure 5.32 Post Job Screen

Figure 5.30 shows the login screen for employer. Users can login as employer in this screen. If the users want to create an account as employer then they can click Create

New Account and it will direct the users to employer register screen as shown in Figure 5.31. After login and register successfully, the users will proceed to the post job screen as in Figure 5.32. They can post jobs easily by filling the details of job. Besides, they can select an image for the job.

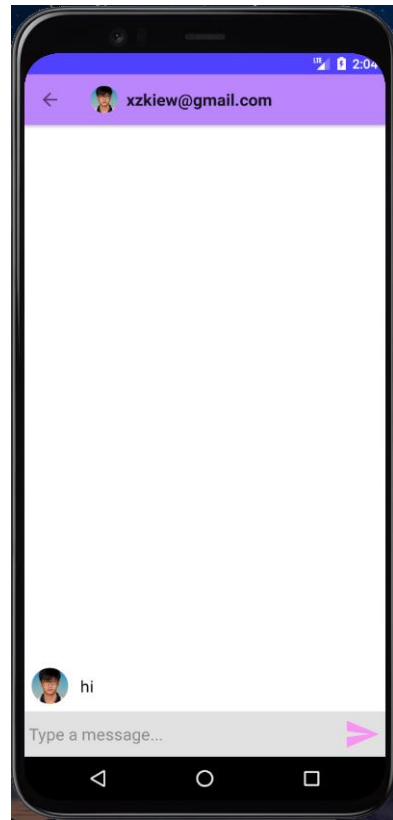
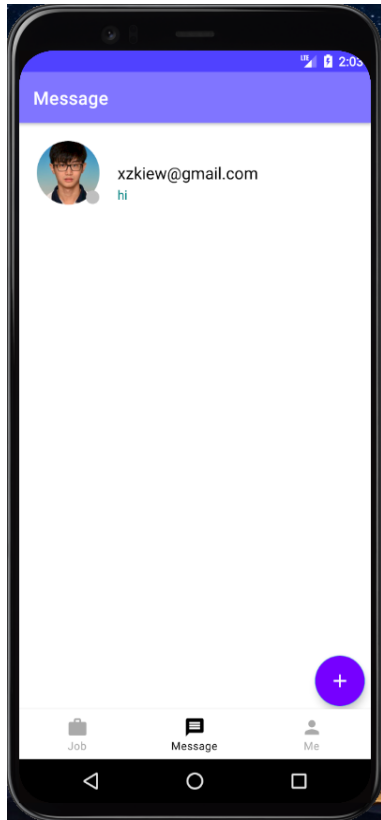


Figure 5.33 Message Screen(Employer)

Figure 5.34 Chat Screen(Employer)

Figure 5.33 shows the message screen for employer. Message history will be shown in this screen. It will show the profile image and email of the users. Figure 5.34 shows the chatting screen with xzkiew@gmail.com. Employers can chat easily with others in this screen by typing a message and click the send icon to send message.

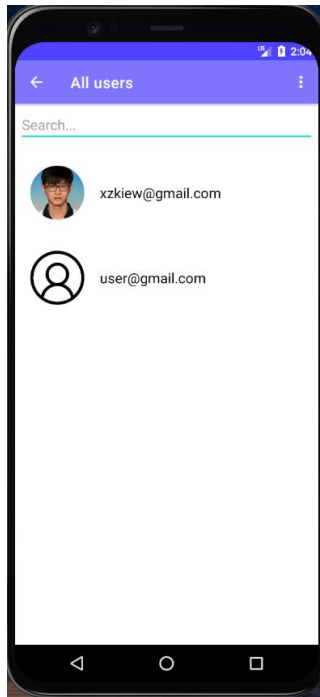


Figure 5.35 Select User Screen(Employer)



Figure 5.36 All Employer Options

Figure 5.35 shows all of the job seekers in the application and the employers can select or search the job seeker to chat with. Employer can be directed to this screen by clicking the add button at the bottom right corner of the screen in Figure 5.33. If the employers want to chat with other employers, they can click the three dot icon at the top right corner of the screen, and it will show All employer option as in Figure 5.36.

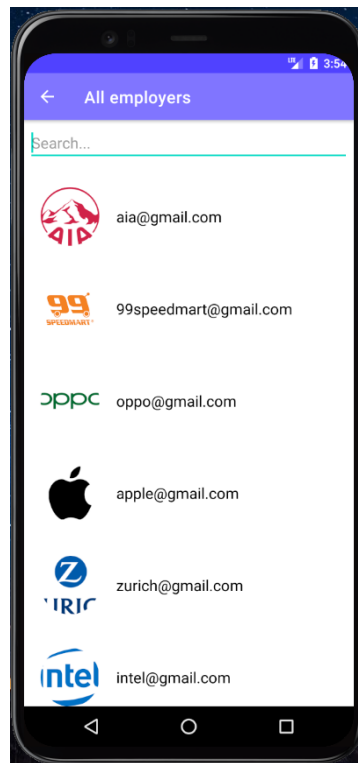


Figure 5.37 All Employers Screen

Figure 5.37 shows all of the employers in a list for the employer to select and chat with. Not only that, a search function is provided to search for the employers. To search for other employers, employer can easily type in the other employers' email in the search view provided.

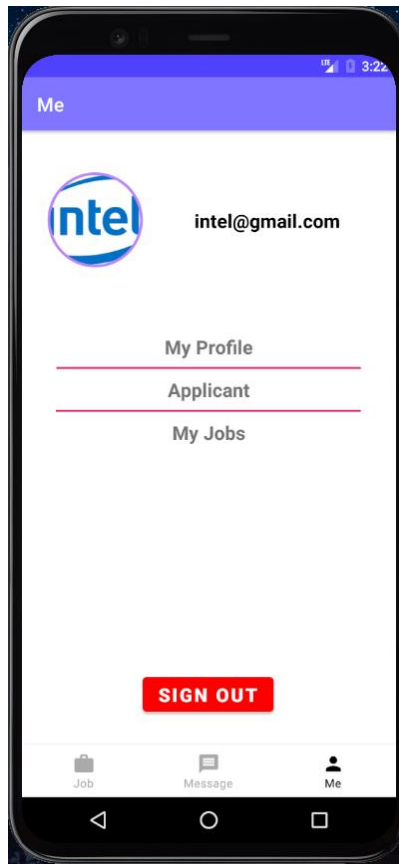


Figure 5.38 Me Screen(Employer)

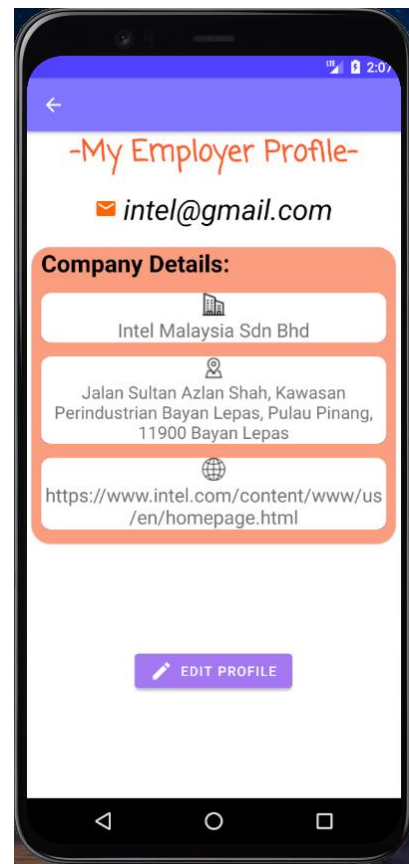


Figure 5.39 My Employer Profile Screen

Figure 5.38 shows the me screen of employer. Profile image and email will be shown at the top of this screen. Employers can change their profile image easily by clicking the image and the application will direct the job seeker to select their image. To sign out in this application, a sign out button is provided in this screen for the employer to sign out. Moreover, employers can view their profile by clicking My Profile and it will proceed to my employer profile screen as in Figure 5.39. It will show the company details of employer in My Employer Profile screen. Besides, employers can edit their profile by clicking the edit profile button.

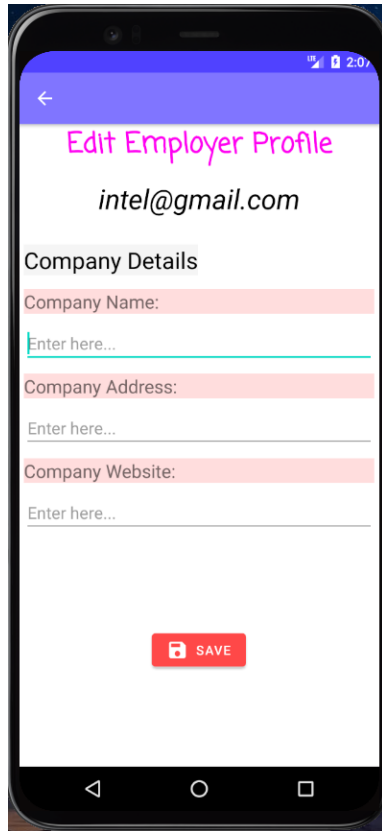


Figure 5.40 Edit Employer Profile Screen *Figure 5.41 My Job Applicant Screen*

Figure 5.40 shows the edit employer profile screen which is for the employers to edit their company details and save it to the Realtime database. In Figure 5.41, it shows the job applicant who applied for the jobs created by the employers. The job applicant will be displayed in a list and employers can download the applicant's resume by clicking the download icon next to the "Resume" text.

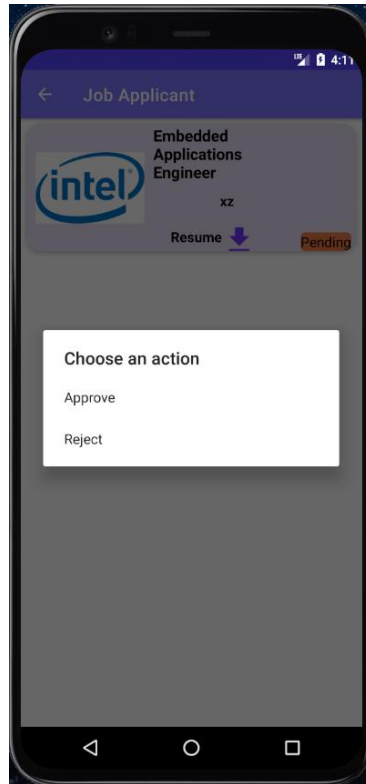


Figure 5.42 Approve/Rejctet Screen



Figure 5.43 Approve Applicant Screen



Figure 5.44 Reject Applicant Screen

Figure 5.42 shows the options to approve or reject application screen. If the employer select approve and the result will show as in Figure 5.43. However, it will show as in Figure 5.44 if the employer reject the application.



Figure 5.45 My Job List Screen

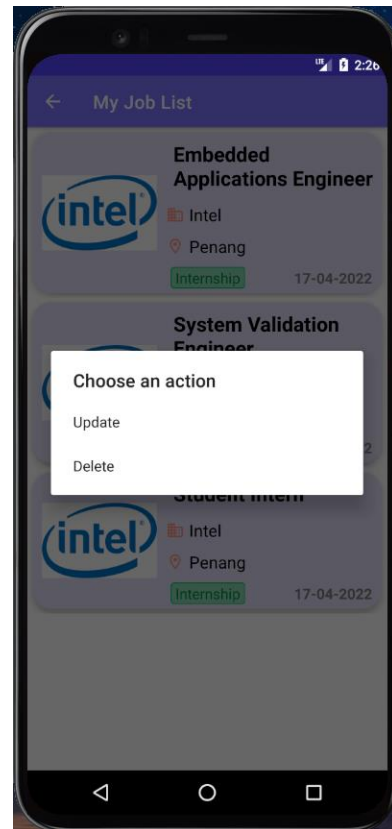


Figure 5.46 Update/Delete Options Screen

Figure 5.45 shows a job list where contains all the job postings that created by the employer. Employers can view their job postings in this screen. Figure 5.46 shows the actions wanted to be done to the job after employer clicked the job. There are 2 actions can be done to the jobs such as update and delete.

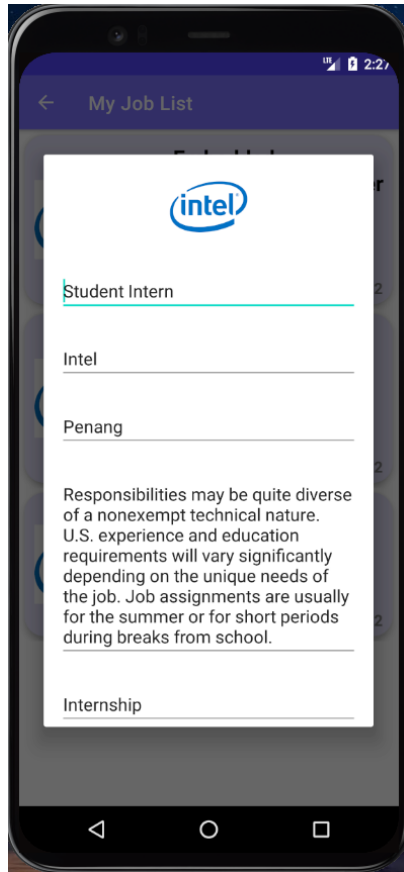


Figure 5.47 Update Job Screen

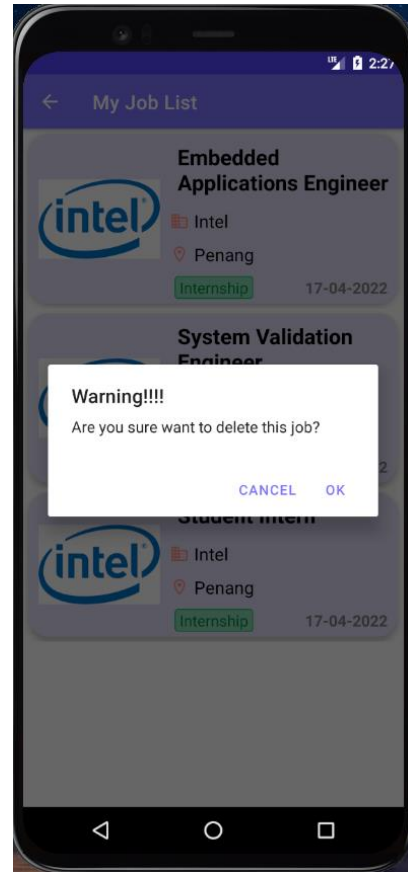


Figure 5.48 Delete Job Screen

Figure 5.47 shows a dialog for the employers to edit the details of their job. It will appear when the employer choose to update the job. Employers can scroll down the dialog to click save button when they finished editing. Figure 5.48 shows a warning message when the employer choose to delete the job. Employer can select OK in the warning message if he/she willing to delete the job posting.

iii. Admin

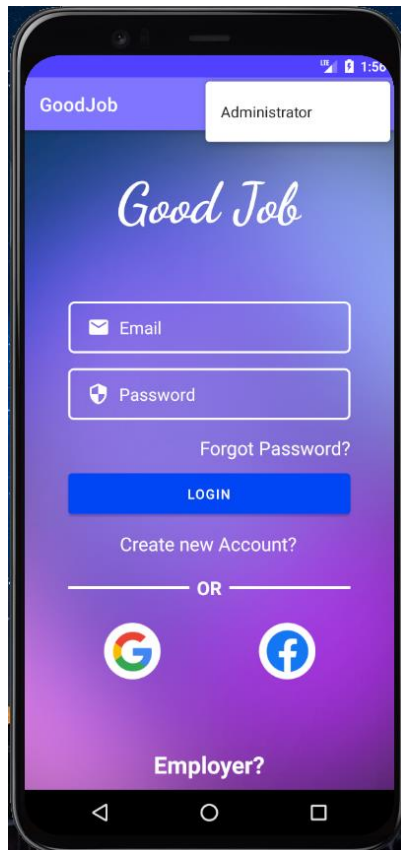


Figure 5.49 Administrator Options



Figure 5.50 Admin Login Screen

Figure 5.49 shows the administrator options for the admin to go to the admin login screen. It will prompt out after the 3 dots icon is clicked. After user clicked the administrator options in Figure 5.49, then the user will proceed to the admin login screen as shown in Figure 5.50. At the admin login screen, only the admin's email and password can login the to admin home screen.

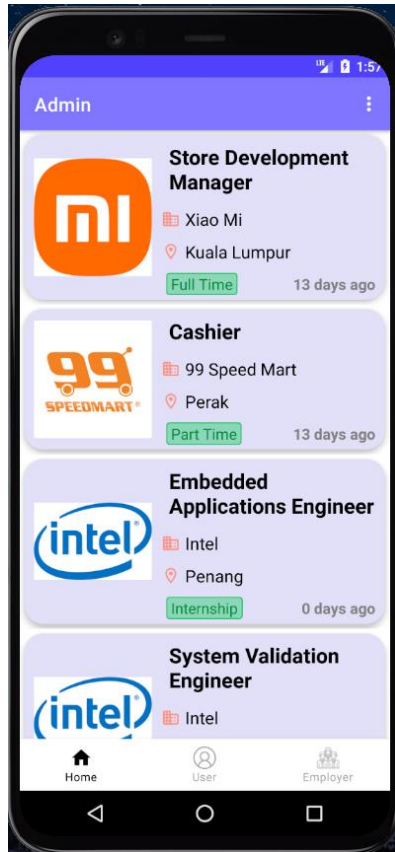


Figure 5.51 Admin Home Screen

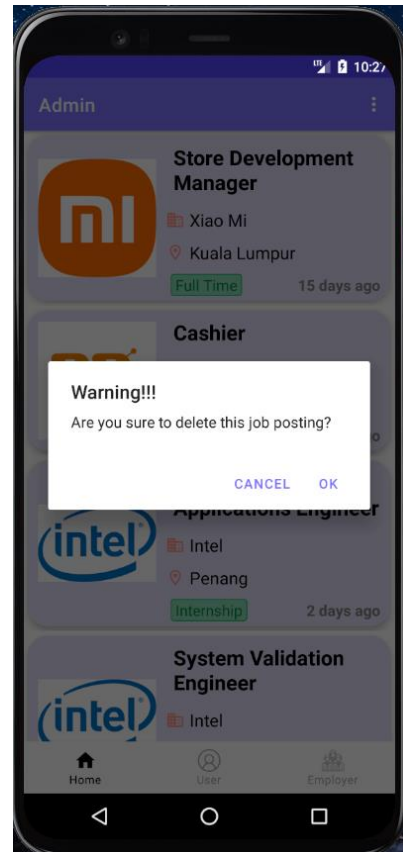


Figure 5.52 Delete Job Screen(Admin)

Figure 5.51 shows the admin home screen when the admin login successfully from the admin login screen. All of the job postings that posted by the employers will be shown in the admin home screen. The days between the creation and current day will be shown for each of the job posting. For example, 13 days ago shown in the Xiao Mi Store Development Manager is mean that Xiao Mi created the job posting 13 days ago. Furthermore, Admin can delete the job postings by clicking the jobs and it will prompt out a warning message as in Figure 5.52. If the admin clicks OK in the warning message, then the job will be deleted from the Realtime database.

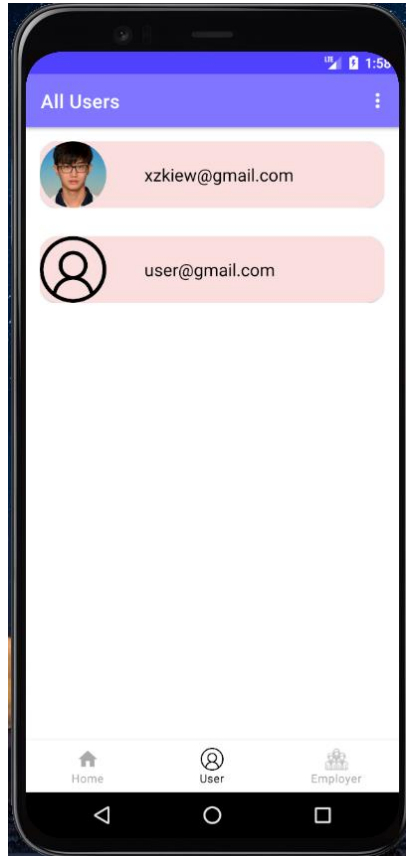


Figure 5.53 All Users Screen



Figure 5.54 All Employers Screen

Figure 5.53 shows a list of all the users/job seekers who have registered an account in the application. It will display a profile image and email for each user. Admin can check and view all of the users/job seekers in this page. Besides, Figure 5.54 shows all of the employers in the application. The number of jobs will also be displayed for each of the employer that they have created in the application.



Figure 5.55 Employer Job Screen

Figure 5.55 shows the job postings that created by AIA company. Admin can click the employers as in Figure 5.54 and it will proceed to this screen. It will show all the job postings that the employer have created in the application

Chapter 6: System Evaluation and Discussion

6.1 System Testing and Performance Metrics

6.1.1 Black Box Testing

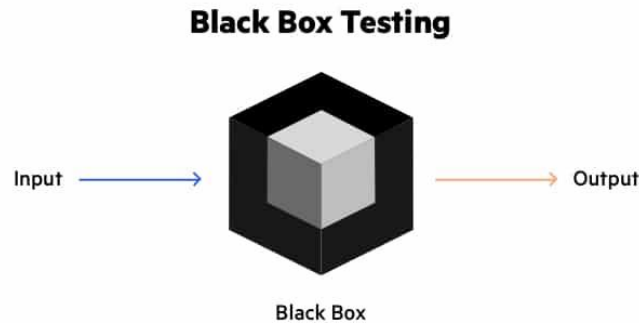


Figure 6.1 Black Box Testing

Black Box Testing is a software evaluation technique that includes testing the operations of software applications without understanding the underlying code structure, implementation details, or internal paths. Black Box Testing is a kind of software testing that focuses on the input and output of software applications and is entirely driven by software requirements and specifications. Another term for it is behavioural testing. [12]. This proposed project will benefit from using black box testing since it tests a system from start to finish and is a powerful testing method. End-users will not care how program is written or how it's organised; they just want to know that they'll get what they're looking for when they ask for it. The web server or application server, the database, dependencies, and integrated systems are all evaluated as part of the black box test process.

6.1.2 Performance Metrics

Performance metrics assist in determining some elements that have an influence on an application's performance. There are 8 key performance metrics to monitor and measure the performance of an application such as user satisfaction, average response time, error rates, count of application instances, request rate, application & server CPU, application availability and garbage collection [13]. However, few key performance metrics will be used to measure in this proposed project. For example, user satisfaction, ease of use,

loading speed and error rate. In this proposed project, the following performance metrics will be measured using survey questionnaires to get response and feedback from the users in rating the application based on the following metrics.

6.2 Testing Setup and Result

<u>No</u>	<u>Test Case</u>	<u>Expected Output</u>	<u>Actual Output</u>	
1	Login as job seeker	Login to home page of job seeker screen	Login successfully	Pass
2	Filter job	Filter job postings based on its job types correctly	Filter correctly based on job types	Pass
3	Search job	Search job postings according to its job title and company name correctly	Search correctly without case sensitive	Pass
4	Favourite job	Favourite job posting and save it into a favourite list	Favourite job posting and show in the favourite page successfully	Pass
5	Apply job	Apply job posting with resume and save it to Realtime database	Apply successfully when resume has been uploaded.	Pass
6	Delete application	Delete job application in the Realtime database	Deleted successfully	Pass
7	View job details	Able to view details of the job posting correctly by clicking the job in job posting list	View details of the job posting correctly.	Pass
8	Upload resume	Able to upload resume to Realtime database successfully.	Uploaded the resume successfully to the	Pass

			Realtime database.	
9	Delete resume	Delete resume that has been uploaded in the Realtime database	Resume has been deleted	Pass
10	Edit profile	Edit the profile details to Realtime database for both user and employer.	Edited the profile details successfully and update in Realtime database	Pass
11	Upload profile picture	Upload profile picture to Realtime database and show it.	Upload picture to Realtime database and show it successfully.	Pass
12	Chat	Able to chat with users or employers correctly and receive message.	Chat with users and employers correctly and able to receive message from sender.	Pass
13	Login as employer	Login to home page of employer screen	Login successfully	Pass
14	Post job	Add job to Realtime database	Added successfully	Pass
15	Edit job	Edit job details successfully and correctly into Realtime database	Edited successfully	Pass
16	Delete job	Delete job from Realtime database	Deleted job successfully	Pass

17	View applicant	View applicant who had applied the job posting correctly in a list	Applicant lists show out correctly in a list	Pass
18	Download applicant's resume	Able to download the resume of the applicant successfully and correctly	Download applicant's resume successfully and correctly.	Pass
19	Approve or reject applicant	Approve or reject the applicant and change the status of the application.	The status of application changed after approved or rejected.	Pass
20	View all users that want to chat with	Show all the users email in a list in order to chat.	All users has been showed out in a list	Pass
21	View all employers that want to chat with	Show all the employers email in a list in order to chat.	All employers has been showed out in a list	Pass
22	Reset password	Receive an email to reset for the password.	Received an email after confirmed to reset password.	Pass
23	Create user account	Create a new job seeker account in the mobile app successfully	Register and created a job seeker account successfully	Pass
24	Create employer account	Create a new employer account in the mobile app.	Register and created an employer account successfully	Pass

25	Login as Admin	Login admin account to admin home screen	Login successfully as an admin to the admin home screen	Pass
26	Share job	Share job posting with the app supported	Able to share job posting such as copy text, email, google.	Pass
27	View how many days the job postings have been created	Show the days different between today and the job created day correctly.	Show the days correctly	Pass
28	View all the users who had registered a job seeker account.	Display all users in a list.	Display all the users successfully	Pass
29	View all the employers who had registered an employer account	Display all employers in a list.	Display all the employers successfully	Pass
30	View the number of job postings that the employers have created	Number of job postings displayed for each employer	Display the number of job postings successfully	Pass

Table 6.1 Testing Result

6.3 User Testing and Feedback

To get feedback from the users, an APK (Android Application Package) file of this application is distributed along with a survey questionnaire to 23 respondents after the development of application is completed. All the respondents can download the APK file of this application and install it to their own mobile phone. After the respondents tested all of the functions and features of the application, a survey questionnaire is provided for them to give feedback.

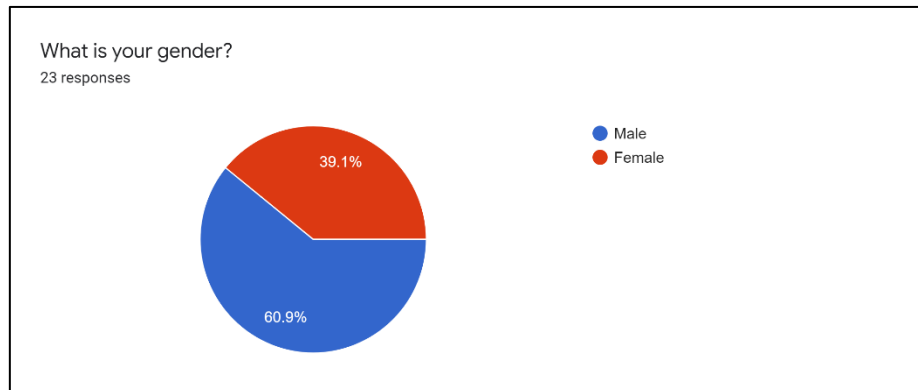


Figure 6.2 Gender of Respondents

From the figure 6.2 above, 60.9% of 23 respondents are male while 39.1% are female. The number of male respondents is higher than female respondents in this system testing section.

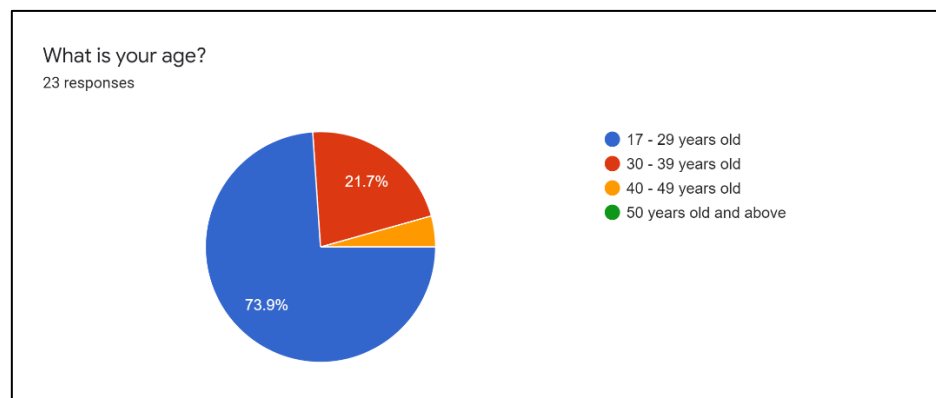


Figure 6.3 Age of Respondents

Based on the figure 6.3, there are 4 range for the respondents to select their age. Among 23 of respondents, many of them are between the age from 17 to 29 years old with the highest percentage 73.9% (17 respondents). The second highest is between 30 to 39

years old which has 21.7% (5 respondents). There are only 1 respondent with 4.3% is between 40 to 49 years old. However, there are no respondent from the age between 50 years old and above.

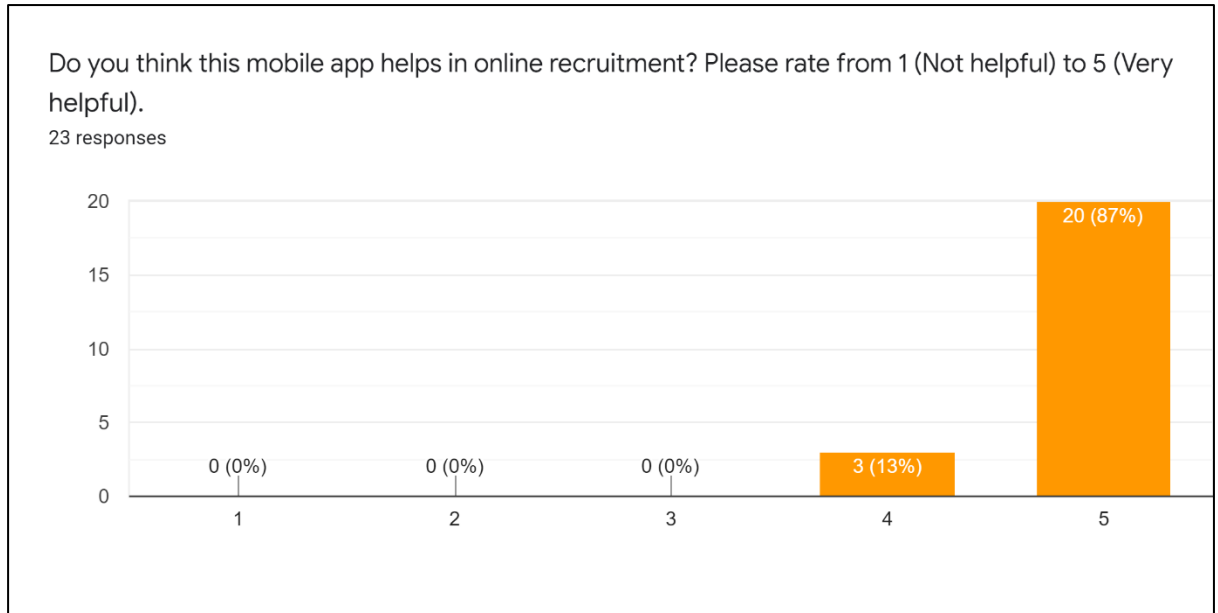


Figure 6.4 Rating of usefulness for the application

Based on the result in Figure 6.4, most of the respondents think that the application is helpful in providing online recruitment services. 87% of the respondents rating the highest rate which is 5 in the survey. It means that among 23 of respondents, there are 20 respondents think that the application is very useful in online recruitment. Besides, there are 13% of respondents rate for the second highest rate which is 4 in the survey. It means that 4 of the respondents think that the application is useful in online recruitment.

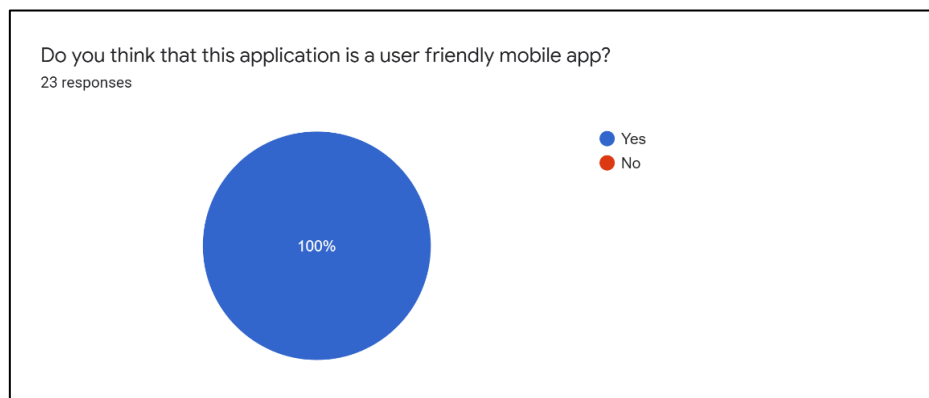


Figure 6.5 User Friendly of App

According to the survey result in figure 6.5, all of the respondents think that the application is a user-friendly mobile application. It means that the application is developed successfully in being a user-friendly mobile application which agreed by 23 respondents.

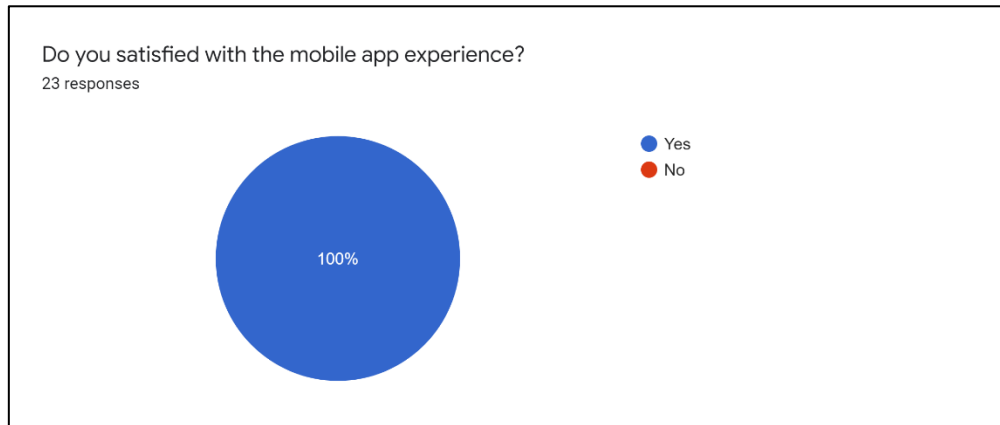


Figure 6.6 User Experience of App

Based on the result obtained in the survey, figure 6.6 showed that all of the respondents are satisfied with the mobile app experience. None of them dissatisfied with the mobile app experience.

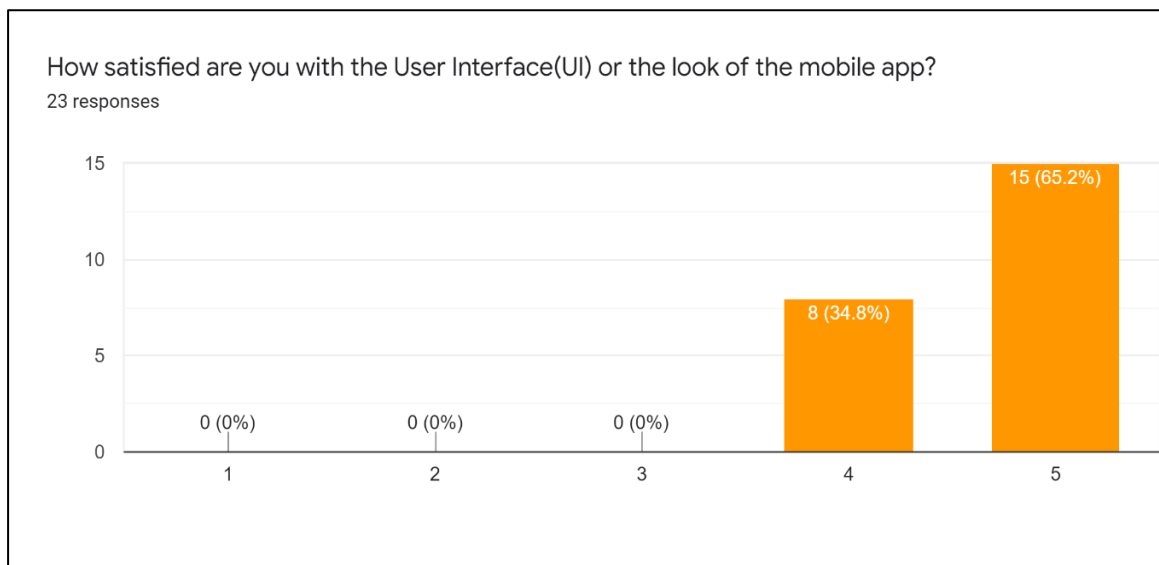


Figure 6.7 Rating of the UI

Based on the rating given by 23 respondents, 15 of the respondents are satisfied with the UI and the look of the mobile application. It has the highest percentages in giving a rate of 5 for the UI design. It means that 65.2% of the respondents are very satisfied

with the UI design of application. All the 8 remaining respondents provide a rating of 4 and it has 34.8 percentage of respondents. Although none of the respondents provide a rate of 1, 2 and 3 for the satisfaction of UI design for the mobile application, but 8 of the respondents giving a rate of 4. Hence, it means that the UI design of the mobile application has a room to be improved and enhanced.

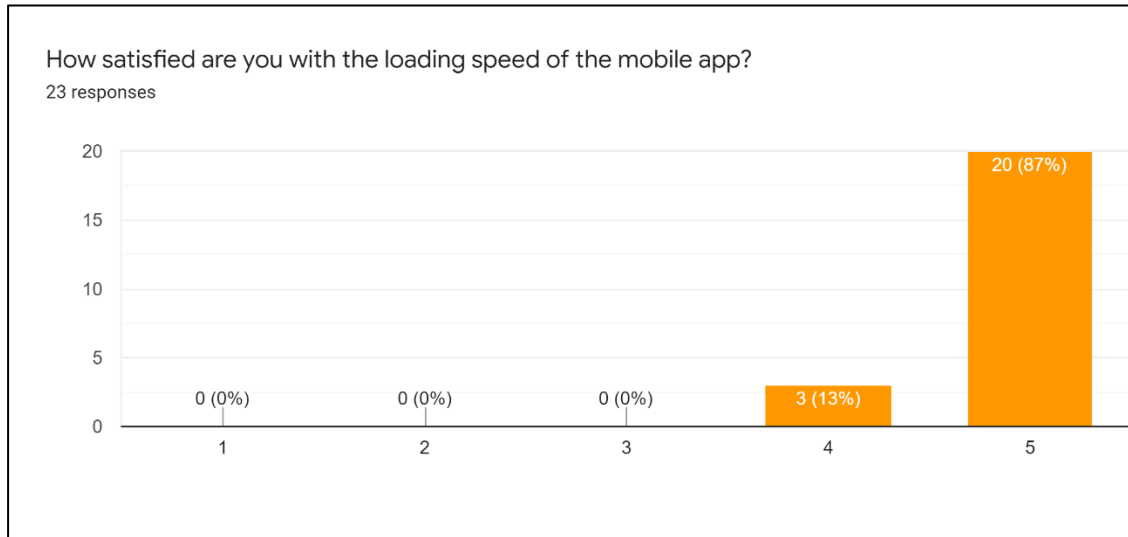


Figure 6.8 Rating of Loading Speed

Based on the survey result in figure 6.8. Almost all of the respondents provide the highest rating of 5 with the satisfaction of the loading speed of the mobile application. It has the highest percentage of 87% respondents. It means that the loading speed of the mobile application can satisfied enough for most of the respondents. There are 3 remaining respondents giving the rating of 4 in satisfying with the loading speed of the mobile application and none of the respondents provide a rating lower than 4 such as 1, 2 and 3.

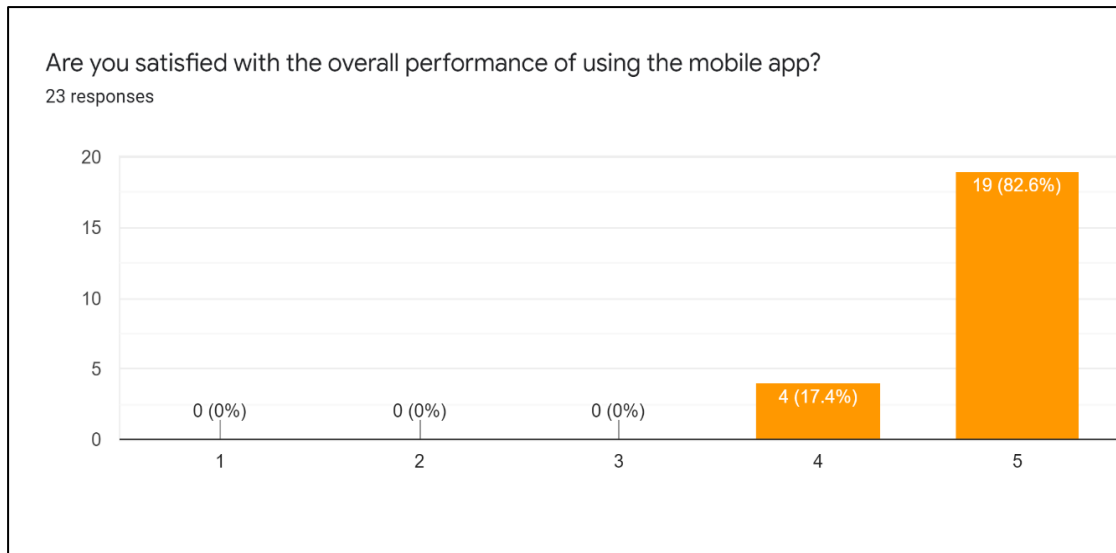


Figure 6.9 Rating of Overall Performance

According to the rating of overall performance, 82.6% of the respondents are satisfied with the overall performance in using the mobile applications. It shows that among 23 respondents in the survey questionnaire, there are 19 respondents gave the highest rating in satisfying the overall performance of the mobile application. Furthermore, there are 4 respondents gave the second highest rating which is 4 and none of the respondents rate the overall performance with the values of 1, 2, and 3. Overall, most of the respondents are satisfied with the application performance.

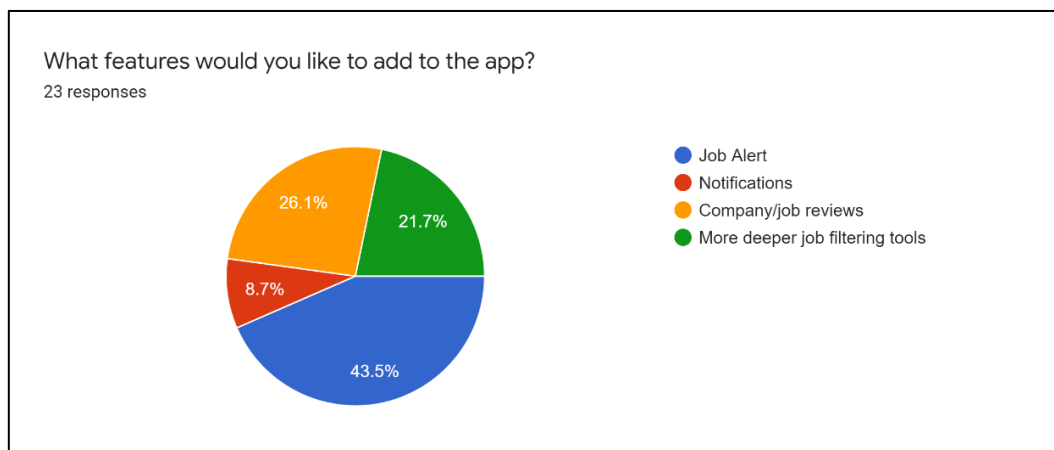


Figure 6.10 Features Selection

For the questions shown in figure 6.10, it is for the respondents to suggest the features that they willing to add to the mobile application. Many of the respondents would like to add the job alert features to the application because it has the highest percentage of

43.5%. 26.1% of the respondents prefer company or job reviews feature to the application, 21.7% of the respondents prefer more deeper job filtering tools to the application and the notifications feature contains the lower percentage of respondents which is 8.7%.

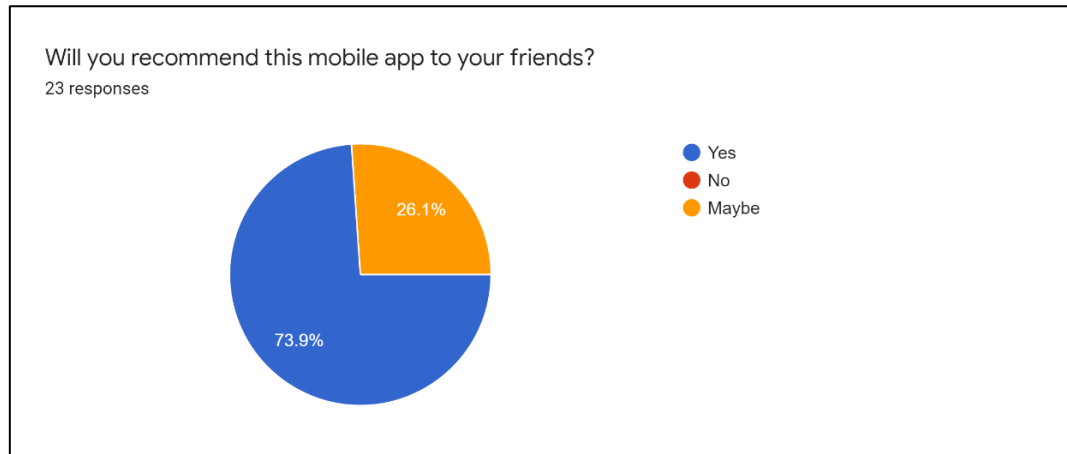


Figure 6.11 Recommend App

Based on the result in figure 6.11, 73.9% of the respondents would like to recommend the mobile application to their friends and 26.1% of the respondents responded maybe for this question. None of the respondents gave the answer of no in recommending the mobile applications to their friends.

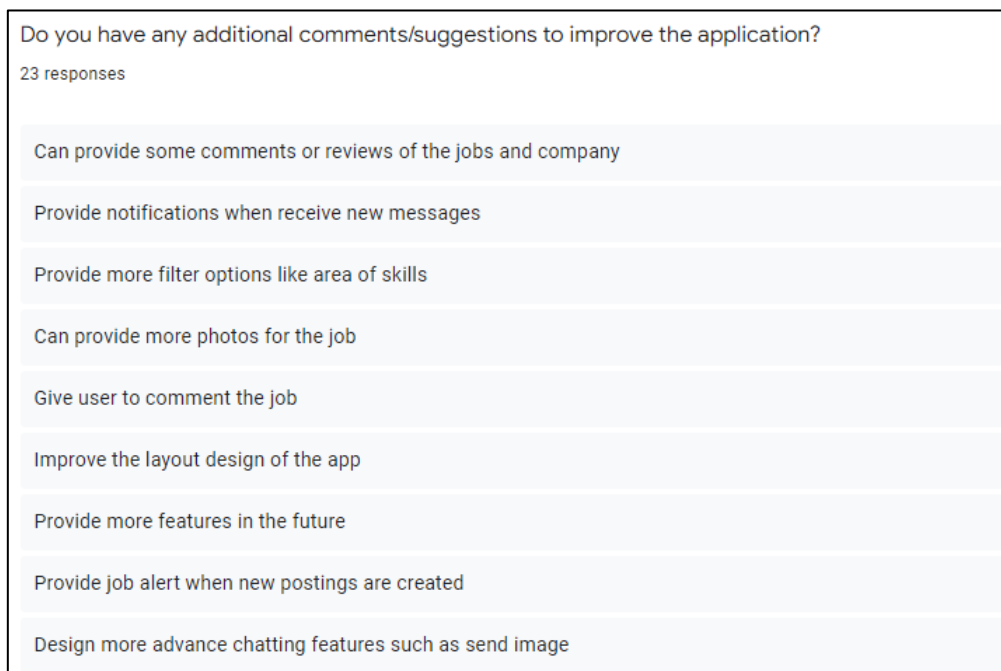


Figure 6.12 Comments/Suggestions by Respondents Part 1

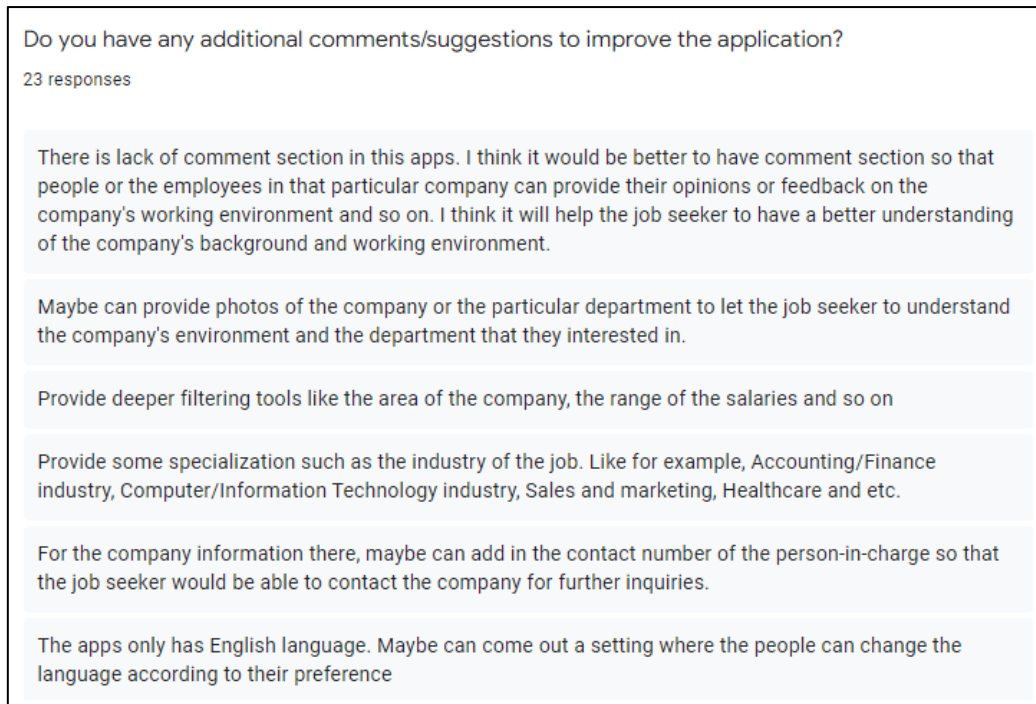


Figure 6.13 Comments/Suggestions by Respondents Part 2

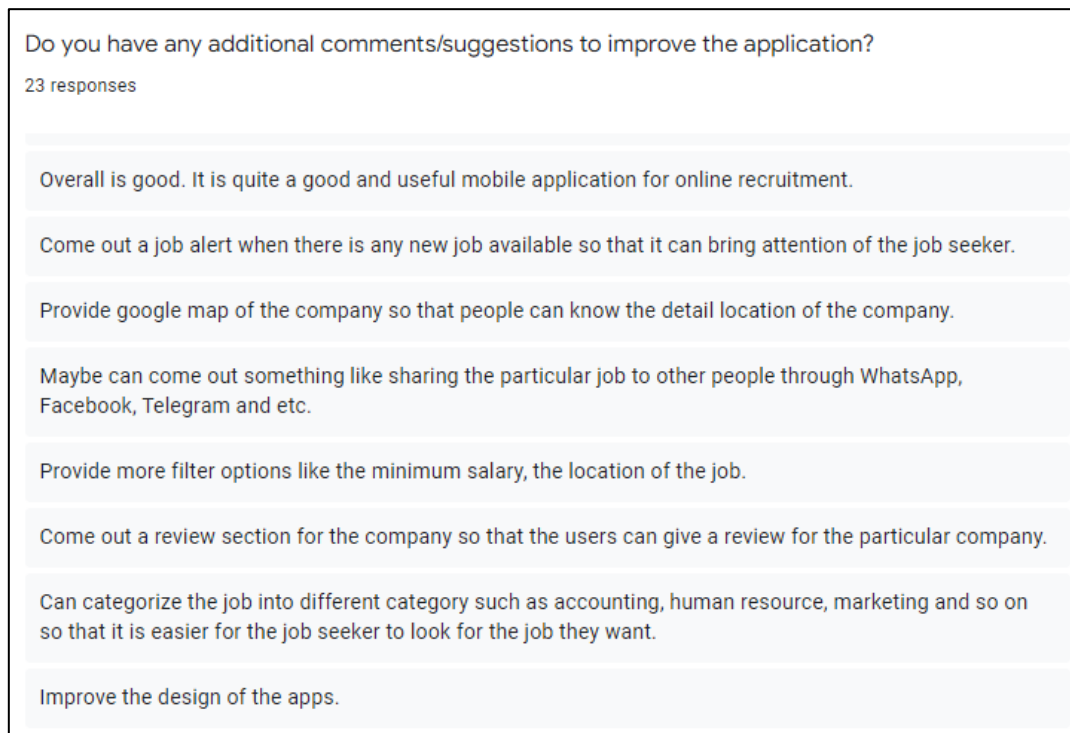


Figure 6.14 Comments/Suggestions by Respondents Part 3

For the last question in the survey, it is an open-ended question where the respondents can answer the question by giving any comments or suggestions that they wanted the

application to improve on. This question is important for the developers to improve their application. The comments or suggestions can be reviewed to consider to whether it is useful for the future works and improvement of application. Based on the figure 6.12, figure 6.13 and figure 6.14, it shows the comments and suggestions given by the respondents There are 23 responses for this question, and it is the most valuable answers for the developer to improve application. Based on the 23 comments and suggestions, many of the respondents suggested to provide review features in the application. It will be considered to added in the future in order to improve the application processes. Not only that, some of the respondents also suggested to add the company details for the job postings such as google map of company, photo of company environment, contact number and so on. It is a good suggestion to provide a better and attractive job postings with the information included for the job seekers in hunting the jobs. Furthermore, more complete filtering tools also suggested by the respondents in term of filter the job posting according to salary, location, and specifications. Last but not least, some respondent also suggested that the application can provide job alert features in the application to alert the job seeker when there is any new job available.

6.4 Project Challenges

There are some challenges in developing the mobile application. One of the challenges in implementing this project is the development of database to store all the job postings data that belong to the employers. The database must be updated when the job postings were deleted by the employers before passing it to the front-end. The designed layout needs to response to the changes in the database and shown in job seekers' screen. Besides, another challenge in implementing this project is the development of functions for the users to enhance user experiences. For example, the matching process to match the job seekers' profile to the suitable job postings according to their education field and qualifications is the most difficult parts in this project. To implementing a better matching process in this project, more times and effort must be done in order to make better mobile applications. Lastly, the last challenge is to show the job postings that related to the job seeker's specifications such as field of education. For example, show all job postings that related to Information Technology for an It job seeker in the job postings screen. More analysis and works should be done in order to implement this feature which can bring a lot of conveniences to the job seekers in searching job postings that related to their education field.

6.5 Objective Evaluation

At the end of the complete system, it has achieved all of the objectives of this project. The first objective of this project is to provide job seekers with active and available job postings all the time. The application has achieved this objective by providing an admin screen to check with the employers when their job postings have a long creation day between current day. If the job postings are invalid, then the admin can delete the job postings from the Realtime database. Not only that, employers can also delete their job postings when they found applicants successfully or the job posting become not available. Therefore, this can make the job postings become available and valid all the time. The second objective is to develop a user-friendly job recruitment system with a communication channel. A user-friendly chatting function has been developed in the application for the job seeker and employer to communicate. Job seeker can chat with other users easily even they are a job seeker or an employer. It can improve the communication ability in the application where the users can chat with

each other more easily. According to the system testing survey, most of the feedback from the respondent agreed that the application is a user-friendly application. Furthermore, the third objective in this project is to implement a better searching and filtering functions for job seekers and employers. The application has achieved this objective by developing and providing a search function where the job seeker can search the job posting more easily and faster by searching with its job title and company name without case sensitive. Moreover, the application also provides a job filter function for the job seeker to filter the job postings by its job types. For example, the job seekers can choose to filter the job postings according to part-time, full-time and internship jobs.

Chapter 7: Conclusion and Recommendation

7.1 Conclusion

Due to the COVID-19 pandemic, e-recruitment market is growing faster and slowly replacing the traditional methods of recruitment. Many recruitments' processes have been done through Internet. Therefore, it had motivated the development of this project. The proposed project is online recruitment system for mobile application based on Android platform. A mobile application named "Good Job" has been developed successfully at the end of this project. The purpose of this mobile application is to help job seekers and employers to simplify recruitment or application processes. It will also help job seekers to find their desired jobs and help employers to recruit the right and potential employees. The target users of this project are the job seekers and employers who are willing to find for desired jobs more easily through online and recruit employers through online.

The similar application that are reviewed in this proposed project are JobStreet, Indeed Job Search, Maukerja and Glassdoor. The proposed project will contain several basic features from the reviewed application. Besides, it also combines some of the add-on features that are useful and suitable in this project in order to provide a better user experience in the recruitment process. For example, this proposed project will provide a filter for job seekers to distinguish the type of job postings such as part-time jobs, full-time jobs and internship jobs. It is convenient for the job seekers to make their process of searching job postings become more faster and easier. Furthermore, the methodology that will be used in this project is agile development and it is based on iterative development. The proposed project will go through six phases which are requirement, design, development, testing, deployment, and review.

Moreover, there are some unique features in this proposed project in order to make it stand out among the existing application. For example, this proposed project provides three types of user category for the user to choose from and login to the application according to the chosen user category. Users will be provided different features that the users want to use in the application. All in one feature will be developed and provided in the application to make all of the process can be done easily through the application. It can save a lot of time for the users without needing them to use the features outside the application. For example, some application doesn't provide the post

Chapter 7 Conclusion and Recommendation

job functions for the employers in the application, but it provides the post job functions using website.

7.2 Recommendation

This application can provide and produce many basic functions like other online recruitment applications such as, the users can view, search, filter, apply, favourite, post for jobs and so on. However, there are still many areas that this application could improve on. There are many enhancements that can be done in future works in order to design and develop for a better online recruitment system. First and foremost, one of the most user-friendly functions can be developed for the job seeker in finding job postings is auto display the job postings that related to the specification of the job seeker. For instance, IT related job postings will be displayed automatically in the home page the job seeker that has an IT related field of education. It is convenience for the job seeker in finding job postings as most of them want to find and view for the job postings that related to their field of study. Not only that, it will save the time of job seeker in finding thousands or above of the available job postings in the application.

Besides, job alerts can also be done in the future as an enhancement to provide an alert for the job seeker to when there are any new job postings is created and related to the job seeker's field of education. It can help the job seeker to keep track of any new job postings and make sure the job seeker won't miss out any new job postings. It is useful for the job seeker in finding new job postings when it is fresh available that created by the employer. In addition, the User Interface design of the application can be improved in future works. A better UI can attract more users to involve in using the application for the online recruitment. For example, improve the overall design of the application to modern UI that contains animation and etc.

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APPENDIX

4/21/22, 3:53 PM

System Testing and Evaluation

System Testing and Evaluation

Dear respondent,

My name is Kiew Xian Zheng and my system is Mobile Application for Online Recruitment System. This questionnaire will take a few minutes to complete. Your response is highly appreciated in testing the mobile application to design a better system.

For further inquiries, feel free to reach me out at 016-5627415 through WhatsApp or kiewxz@1utar.my. Thank you. 🙌🙌

*** Required**

1. What is your gender? *

Mark only one oval.

- Male
 Female

2. What is your age? *

Mark only one oval.

- 17 - 29 years old
 30 - 39 years old
 40 - 49 years old
 50 years old and above

3. Do you think this mobile app helps in online recruitment? Please rate from 1 (Not helpful) to 5 (Very helpful). *

Mark only one oval.

	1	2	3	4	5	
Not Helpful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very Helpful

https://docs.google.com/forms/d/11bs6bPTS4m7JNZJ0ykMQxJ_TAOIITQJx3Yqy5Xh2ME/edit

1/4

Appendix

4/21/22, 3:53 PM

System Testing and Evaluation

4. Do you think that this application is a user friendly mobile app? *

Mark only one oval.

Yes

No

5. Do you satisfied with the mobile app experience? *

Mark only one oval.

Yes

No

6. How satisfied are you with the User Interface(UI) or the look of the mobile app? *

Mark only one oval.

	1	2	3	4	5	
Very dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfied

7. How satisfied are you with the loading speed of the mobile app? *

Mark only one oval.

	1	2	3	4	5	
Very dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfied

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2/4

Appendix

4/21/22, 3:53 PM

System Testing and Evaluation

8. Are you satisfied with the overall performance of using the mobile app? *

Mark only one oval.

	1	2	3	4	5	
Very dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very satisfied

9. What features would you like to add to the app? *

Mark only one oval.

- Job Alert
- Notifications
- Company/job reviews
- More deeper job filtering tools

10. Will you recommend this mobile app to your friends? *

Mark only one oval.

- Yes
- No
- Maybe

11. Do you have any additional comments/suggestions to improve the application? *

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3/4

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 1
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Improve the quality of FYP1 and copy the usable content over to the FYP1 report.
- Do research the mobile application.
- Review the user interface of similar application.
- Change the citation format

2. WORK TO BE DONE

- Review FYP1 report and copy the usable content to FYP2.

3. PROBLEMS ENCOUNTERED

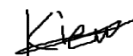
No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 2
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Review the layout design of application in YouTube.
- Try to design the layout of every page.

2. WORK TO BE DONE

- Design the layout of application

3. PROBLEMS ENCOUNTERED

- Need to think how to design the layout with simple and easy to use.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 3
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Change the SQL database to Firebase Realtime Database to store data.
- Completed save job postings to Realtime database function.
- Completed display job postings function.

2. WORK TO BE DONE

- Store the job postings data and user data into Realtime database.
- Upload resume

3. PROBLEMS ENCOUNTERED

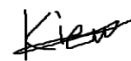
Faced some problems in using Firebase Realtime database to store data and retrieve data due to not familiar to it at the first time.

4. SELF EVALUATION OF THE PROGRESS

Progress need to be catch up. After learned to how to use the Realtime database, the progress in storing and retrieving the data become quite good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 4
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Developed the chat function between job seekers and employers

2. WORK TO BE DONE

- Chat function for job seeker and employer

3. PROBLEMS ENCOUNTERED

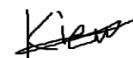
- There are some bugs found in developing the chat functions because the chat function involved 2 types of user category.

4. SELF EVALUATION OF THE PROGRESS

Progress is still good, however there are some problems faced during the development but the problems have been solved successfully.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 5
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Reviewed about the chat applications and its user interface to improve the chatting experience for job seekers and employers.
- Developed online and offline status function.
- Developed favorite job function.

2. WORK TO BE DONE

- Complete chat function
- Complete favorite function

3. PROBLEMS ENCOUNTERED

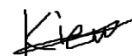
-Faced some problem in develop the favorite function. The job postings in the favorite page must be deleted at the same time when the job postings have been deleted by the employers.

4. SELF EVALUATION OF THE PROGRESS

The problem has been solved and the process is so far so good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 6
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Developed the apply function for the job seeker to apply job postings.
- Do research about the job application functions.

2. WORK TO BE DONE

- Complete apply job function

3. PROBLEMS ENCOUNTERED

No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 7
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Developed view job postings function and update or delete job postings function for the employers to manage the job postings.
- Developed the view applicant function for employers.
- Developed download applicant's resume and approve/reject applicant functions

2. WORK TO BE DONE

-Complete update/delete jobs function, view my job list function and view applicant function.

3. PROBLEMS ENCOUNTERED

No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good and need to spend more time in designing the user interface.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 8
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Enhance the user interface for job postings list.
- Fixed the bugs that appear in the job seeker and employer screen.

2. WORK TO BE DONE

- Complete the remaining features for both employer and job seeker.

3. PROBLEMS ENCOUNTERED


No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 9
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Designed admin Login, Home, All Users and all Employers screens.
- Completed the admin features

2. WORK TO BE DONE

- Complete admin screen and its features.

3. PROBLEMS ENCOUNTERED

No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 10
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Finished writing Chapter 1, 2 and 3

2. WORK TO BE DONE

- Complete Chapter 1, 2, 3 of FYP2 report

3. PROBLEMS ENCOUNTERED

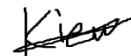
No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 11
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Finished Chapter 4 and Chapter 5
- Arranged system screenshot

2. WORK TO BE DONE

- Complete Chapter 4 and Chapter 5 of the FYP2 report

3. PROBLEMS ENCOUNTERED

No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good.



Supervisor's signature



Student's signature

FINAL YEAR PROJECT WEEKLY REPORT

(Project II)

Trimester, Year: Trimester 3, Year 3	Study week no.: 12
Student Name & ID: Kiew Xian Zheng 18ACB04478	
Supervisor: Mr. Su Lee Seng	
Project Title: Mobile Application for Online Recruitment System	

1. WORK DONE

[Please write the details of the work done in the last fortnight.]

- Finished FYP2 report
- Arrange FYP2 content according to the format.
- Finished poster

2. WORK TO BE DONE

- Design poster
- Complete chapter 6 and chapter 7 of the FYP2 report
- Complete report and check report format

3. PROBLEMS ENCOUNTERED

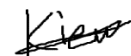
No problem encountered.

4. SELF EVALUATION OF THE PROGRESS

Progress is good and the goal is achieved .



Supervisor's signature



Student's signature

POSTER

ONLINE RECRUITMENT SYSTEM

Kiew Xian Zheng

INTRODUCTION

It is a mobile application for Online recruitment system that simplifies the recruitment process between job seekers and employers. It will provide a better job-seeking experience for job seekers and help employers to recruit employees more easily.

PROBLEM STATEMENT

1. Invalid or outdated job postings
2. Lack of communication channel
3. Inaccurate searching and filtering result

OBJECTIVE

- Provide job seekers with active and available job postings all the time.
- To develop a user-friendly job recruitment system with a communication channel.
- To implement better searching and filtering functions for job seekers and employers.

METHOD

- Agile Development
- Android Studio, Firebase, Realtime database

CONCLUSION

This system is developed with a user-friendly interface and necessary functions that are needed in simplifying the recruitment processes.

PLAGIARISM CHECK RESULT

Mobile Application for Online Recruitment System

ORIGINALITY REPORT

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SIMILARITY INDEX

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5%

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Student Paper

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6

Poornachandra Sarang. "Practical Liferay", Springer Science and Business Media LLC, 2009

Publication

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7

Maram Meccawy, Amani Alalasi, Deemah Alsaud, Maha Almoudi, Mashael Alessa, Muneera Alyami, Nuha Alsheikh. "The Graduate Helper: Using a Mobile Application

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as a Feasible Resource for Job Hunting Across Saudi Arabia", International Journal of Interactive Mobile Technologies (ijIM), 2018
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FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY

Full Name(s) of Candidate(s)	Kiew Xian Zheng
ID Number(s)	18ACB04478
Programme / Course	IB
Title of Final Year Project	Mobile Application for Online Recruitment System

Similarity	Supervisor's Comments (Compulsory if parameters of originality exceed the limits approved by UTAR)
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Based on the above results, I hereby declare that I am satisfied with the originality of the Final Year Project Report submitted by my student(s) as named above.

Su Lee

Signature of Supervisor

Signature of Co-Supervisor

Name: Su Lee Seng

Name: _____

Date: 20-April-2022

Date: _____



UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF INFORMATION & COMMUNICATION TECHNOLOGY (KAMPAR CAMPUS)

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Student Name	Kiew Xian Zheng
Supervisor Name	Mr. Su Lee Seng

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I, the author, have checked and confirmed all the items listed in the table are included in my report.

Kiew

(Signature of Student)

Date: 20-April-2022