ACKNOWLEDGEMENT

Alhamdulillah, praises and thanks to Allah because of His Almighty and His utmost blessings, I was able to finish my industrial training within the time duration given. It is always a pleasure to remind the fine people in the App Lab Sdn Bhd for their sincere guidance to do my industrial training. First, thanks to my parent for giving encouragement, enthusiasm and invaluable assistance to me. Without all this, I might not be able to complete this subject properly. Second, I would like to thanks to for Puan Anis Shobirin Binti Abdullah Sani give me the opportunity and gives me her guidance and support. I would like to give my gratitude to all of my colleagues who helped me in within the time in completing the training. Finally, I apologize all other unmade who helped me in various ways to have good training

CHAPTER 2

INDUSTRIAL TRAINING TASK

1.1 Tools that have been used during the internship

1.1.1 Software installation and setup

Before developing the module of the system, the software need to be setup as shown in the figure below.

Figure 2.1 Android Studio

Figure 2 Android Studio

Figure 2.1 above shows the Android Studio IDE we used in the company. Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on Intellij IDEA. It contains the java source code files, including Junit test code and contains all non-code resources such as XML layouts, UI strings, and bitmap images.

1.1.2 RESTful services

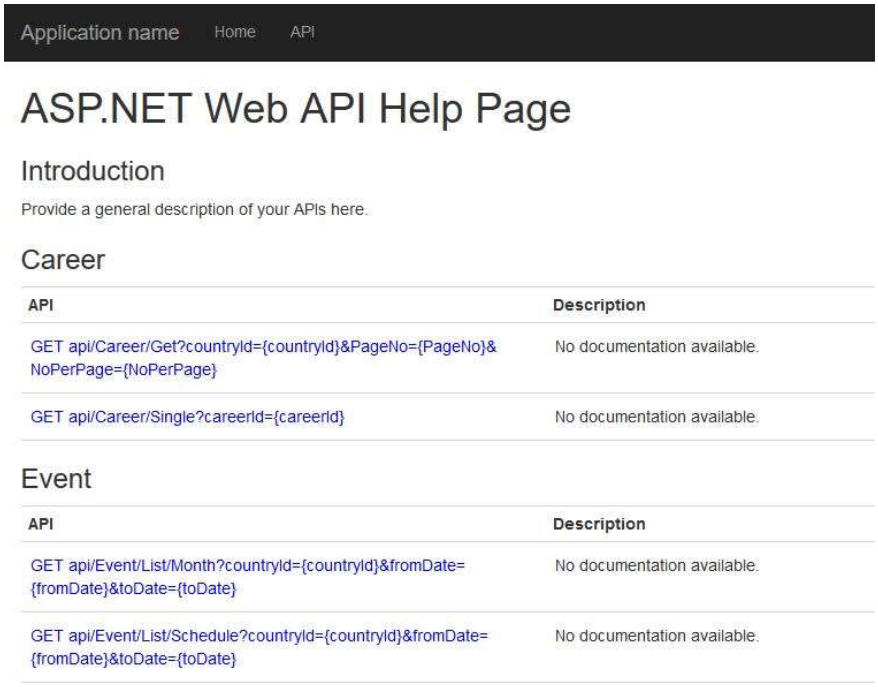
RESTful acronym stands for Representational State Transfer. In the latest years REST is emerging as a predominant Web service design model. As another alternatives we have Web Services built around SOAP.

RESTful services are fully built around HTTP protocol, and use the basics HTTP commands like: GET, POST, PUT, DELETE in order to define the "action". In simple terms, a REST Web Service is all about a Resources that can be accessed or changed by using the above-mentioned HTTP methods.

What do those HTTP commands represent:

GET	• **Retrieves** a resource
POST	• **Updates** a Resource: if you are requesting the server to update one or more subordinates of the specified resource. • **Creates** Resource = POST if you are sending a command to the server to create a subordinate of the specified resource, using some server-side algorithm.
PUT	• **Creates** a Resource. Use PUT if you are sending the full content of the specified resource (URL). • **Update** a Resource = PUT if you are updating the full content of the specified resource.
DELETE	• **Deletes** a Resource.

1.1.3 ASP.net Web API



ASP.NET Web API is a framework that makes it easy to build HTTP services that reach a broad range of clients, including browsers and mobile devices. ASP.NET Web API is an ideal platform for building RESTful applications on the .NET Framework.

ASP.NET Web API is built around the newest ASP.NET MVC 4 framework and for the time being is the most powerful Microsoft tool when it comes to creating RESTful services.

1.1.4 Advanced Rest Client

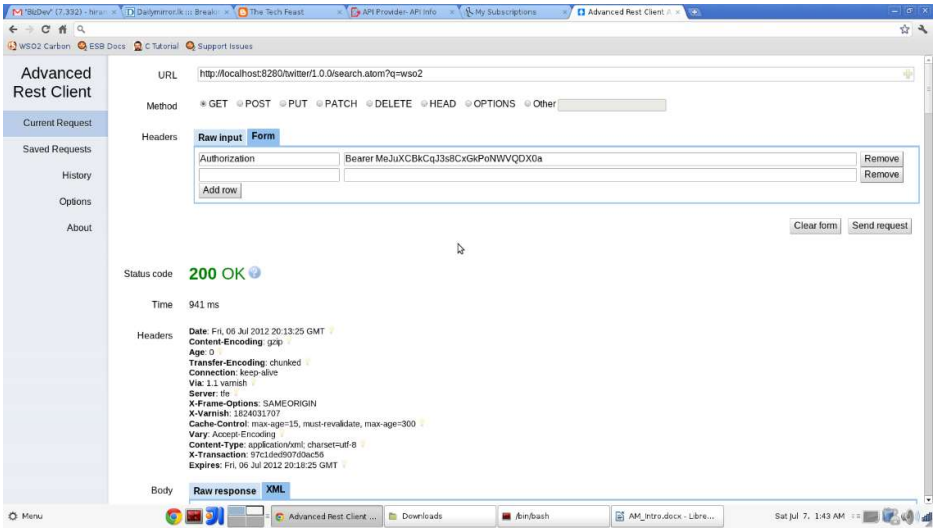


Figure 2.3 Advanced Rest Client

Figure 2.3 above shown Advanced Rest Client. It is a program to create and test custom HTTP request. It also makes connection directly on socket that give full control over the connection and request or response headers.

1.1.5 Jsonschema2pojo

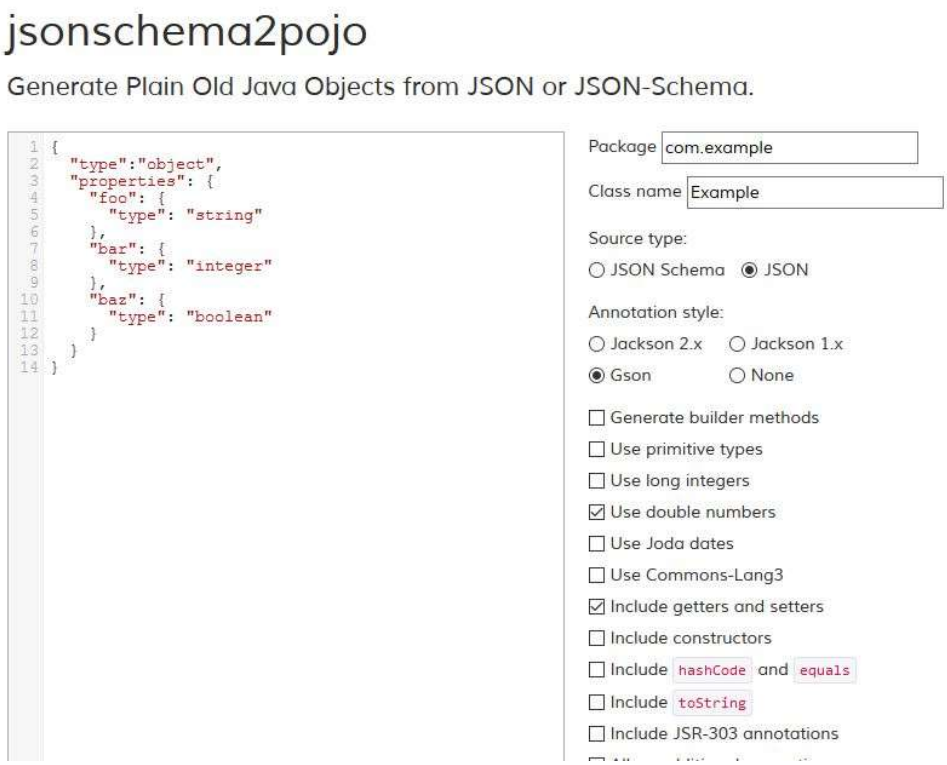


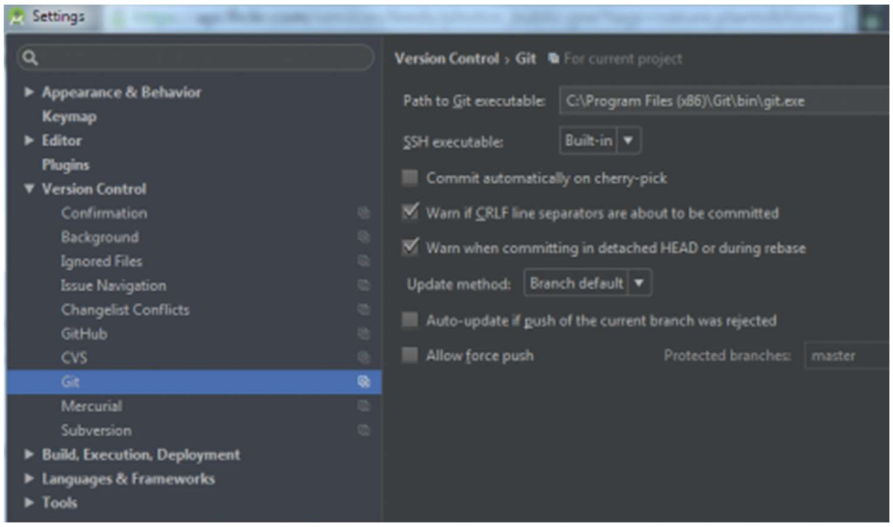
Figure 2.4 jsonschema2pojo

There are lots of tools to generate POJOs from XML Schema files (XSD) and even DTDs. This is helpful for mapping XML directly to Java classes automatically example by using JAXB.

Recently I wanted to do the same for JSON and stumbled upon a neat tool called jsonschema2pojo. On their website they have an easy to use JavaScript app that allows you to quickly generate POJOs from JSON Schema even from JSON itself.

What makes this tool awesome is its support for both of the most widely used JSON mappers in the world Java world, namely Jackson and GSON. Jsonschema2pojo can annotate the generated POJOs for both libraries. There are some others useful features such as support for commons-3 when generating example toString and generating builder pattern methods.

1.1.6 Git



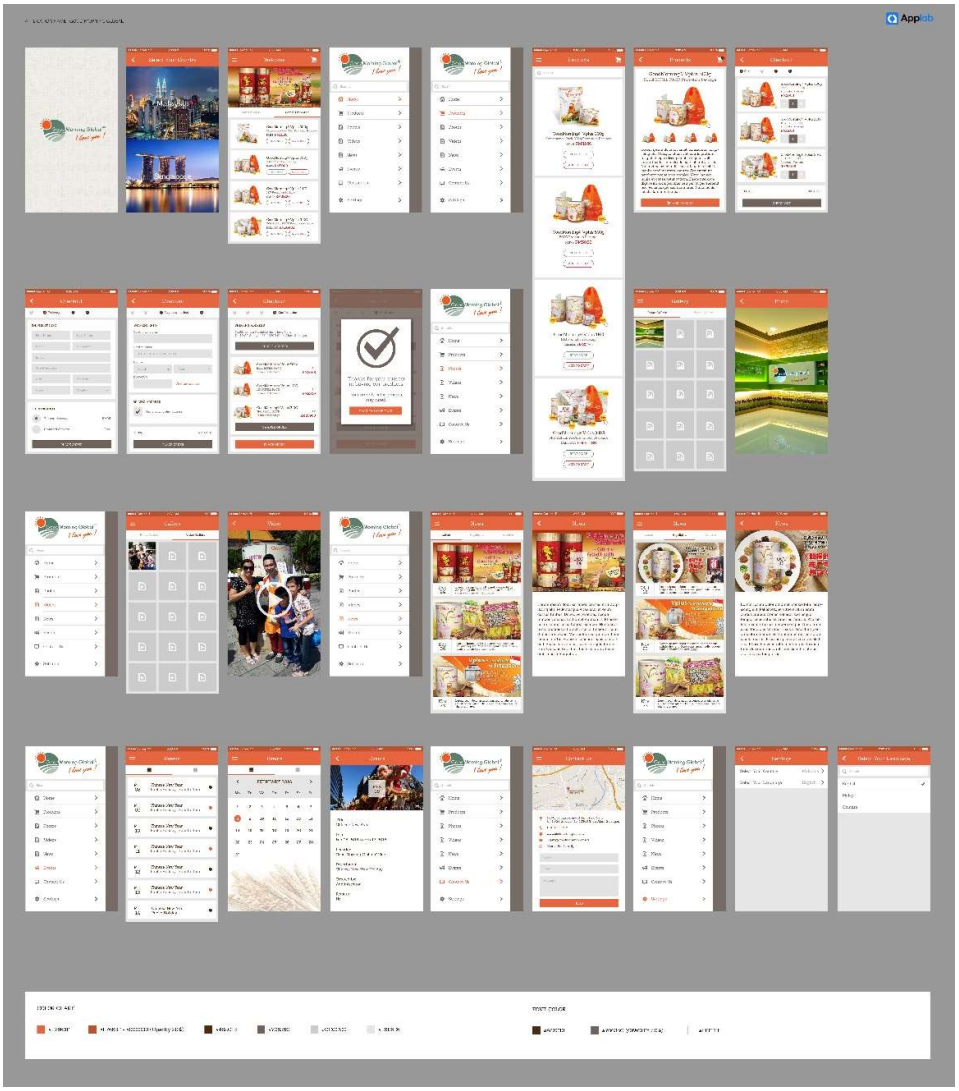
Git is a version control system that is used for software development and other version control tasks. As a distributed revision control system, it is aimed at speed, data integrity, and support for distributed, non-linear workflow.

Git allows a team of people to work together, all using the same files. And it helps the team cope with the confusion that tends to happen when multiple

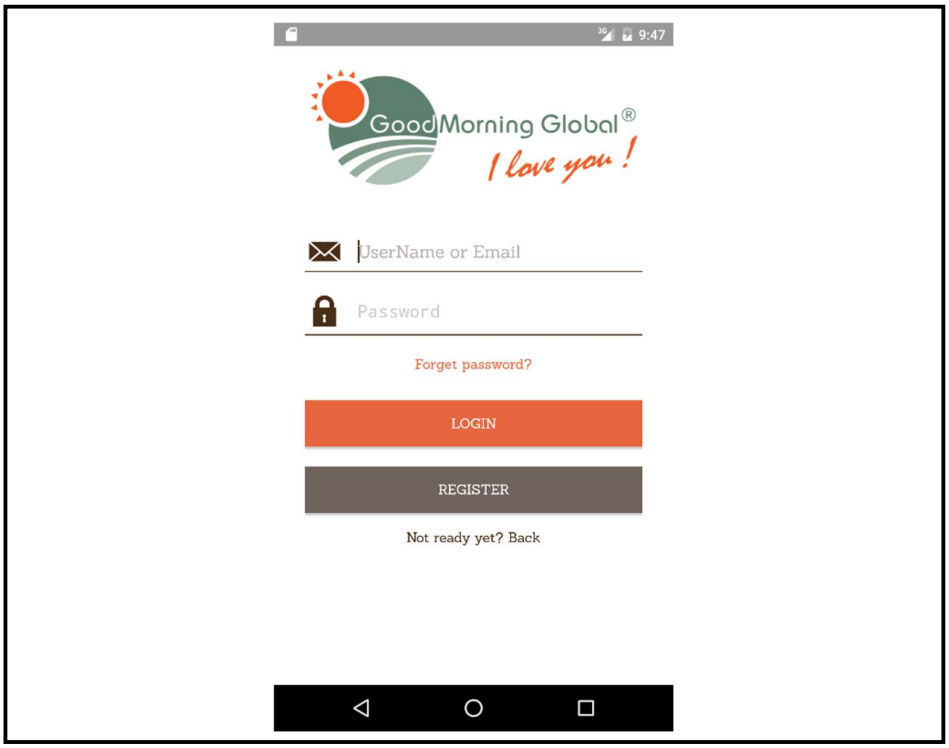
people are editing the same files. There are many ways it can be set up and configured such as CVS, Github and Bitbucket.

1.2 Good Morning Global Sdn Bhd

Good Morning Global is the company that producing wholegrain product and health supplement, dietary and beauty products with the latest technology. App Lab was hired by Good Morning Global to develop a web and mobile application for their business. This is my first project in App Lab. I did interfaces first. I did login, forgot password, checkout, and others. It took about 4 weeks to finish all interface in Good Morning Application. After we done, we used web API that use RESTful services that provided by ASP.NET Web API. Overall to complete the project around 2 month and half. The project also frequently changes the interface and method because user interface or process is not suitable. Users can download Good Morning Global Android Apps at Goggle Play.

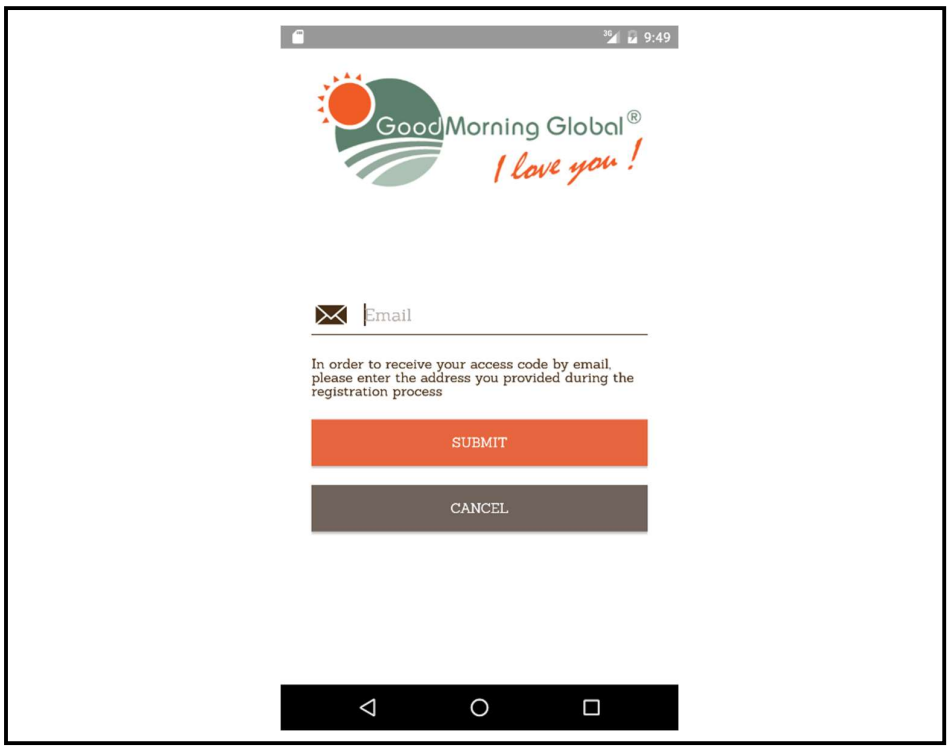


1.2.1 Login Module



In this module, user have to login before to proceed buy. If the user is registered, he should enter the email id and password to log in. The user can also click on the Register button to register for the member. The user may also click on Forgot password if he does not remember his password and wants to reset it.

1.2.2 Forgot Password Module



In case the user has forgotten his password, the user can reset it by clicking on forgot password on the Login screen. After that, it would go forgot password screen to reset password page as above. The user can provide his email id and click on the submit button. A recovery email containing a temporary password is sent to the user on his email id.

1.2.3 Check Out Module

Check out module is the process when user want to proceed payment after done shopping. Users will click cart's icon at toolbar and will go check out page. In this module, users must enter user information and payment method. Users can choose between PayPal and Bank Transfer such as Maybank, Public Bank and other to make payment.

1.2.4 Account Module

Account module will retrieve user's information after users finished entering their details. I used GET method in HTTP methods to retrieve data using Restful Web Service then it will save data in SQLite.

1.2.5 Language Module

This application used in two countries which is Malaysia and Singapore. The application had to use three language which is English, Malay and Chinese. I handled in Malay language in this project. The application was used English words first. After finishing English part, I translated English words into Malay words.

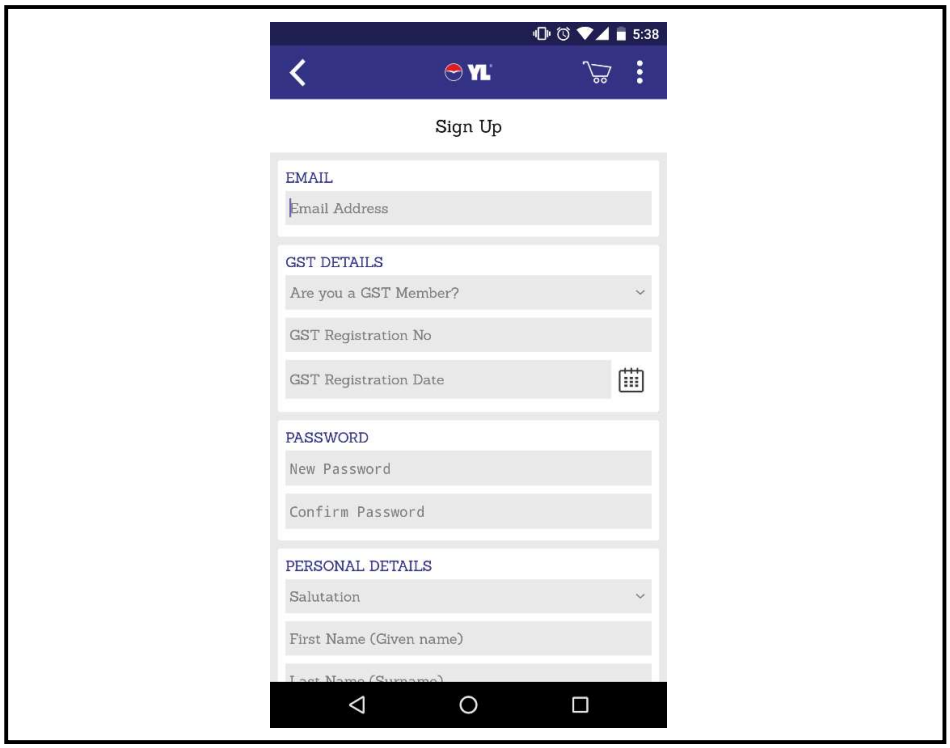
1.3 YL Image Graphics Sdn Bhd

YL provides high quality digital inkjet printing on various signage materials. There are general categorisation of various signage materials such as bunting, banner, large banner, sticker and fleet graphics. YL also supplies various display systems for the convenience of our valuable customers. All display systems supplied are highly flexible and user friendly such as roll up bunting stand, X – bunting stand, and others.

After finished good morning project, I did YL application. This application same as Good Morning application. It is shopping cart application. My part are Sign Up, Profile, FAQ, Shipping Charges and Change Password module.

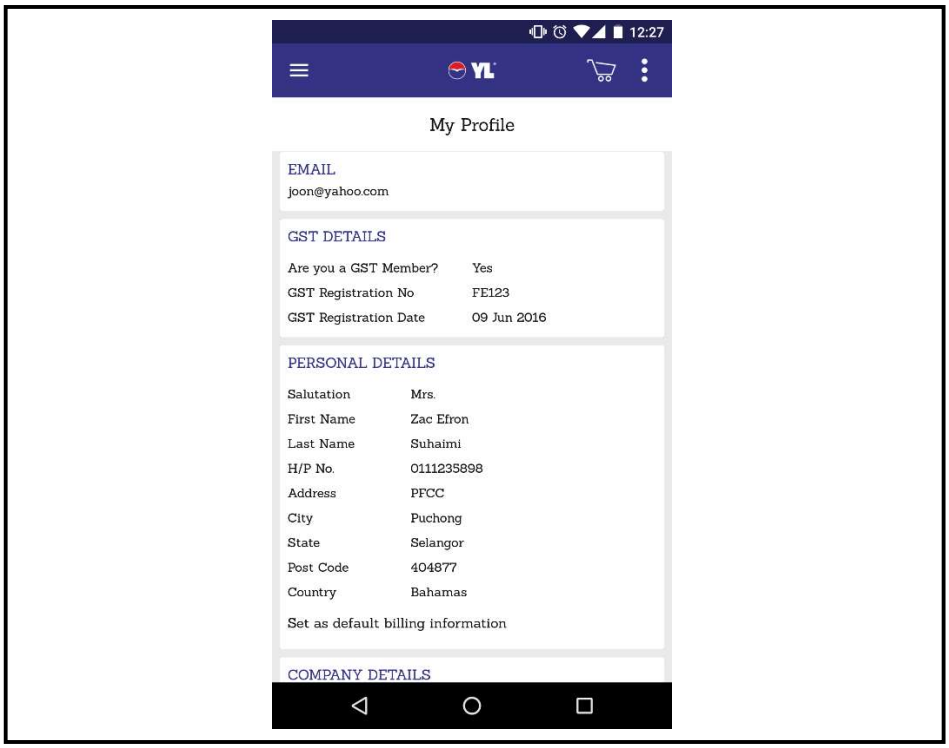
Applab

1.3.1 Sign Up Module



User sign up first before to proceed buy things. Based on picture above, user enter the details such as email, GST details, password, personal details, and others. I also put date picker to make user choose which date user register GST.

1.3.2 Profile Module



After done sign up, in this section it will display all user's information that have been insert in sign up page. I used to recycle view and card view.

1.3.3 FAQ Module

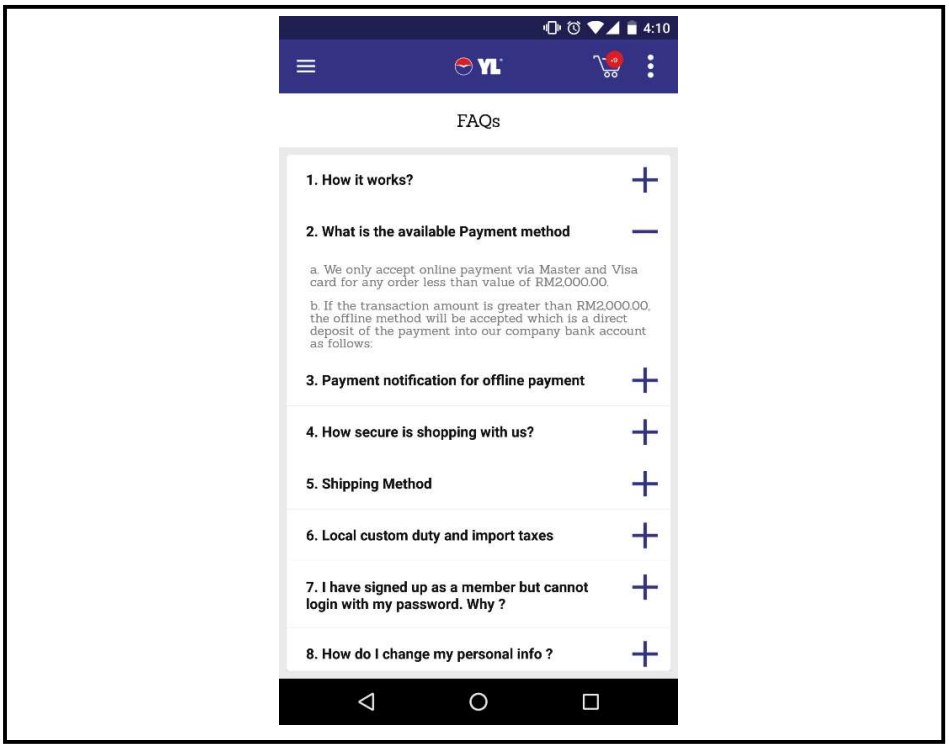


Figure 2.1

In FAQ module, I used custom expandable recycle view. When user click questions, it will expand and display the information. All texts in FAQ module was write at string.xml using string array.

1.3.4 Shipping Charges Module

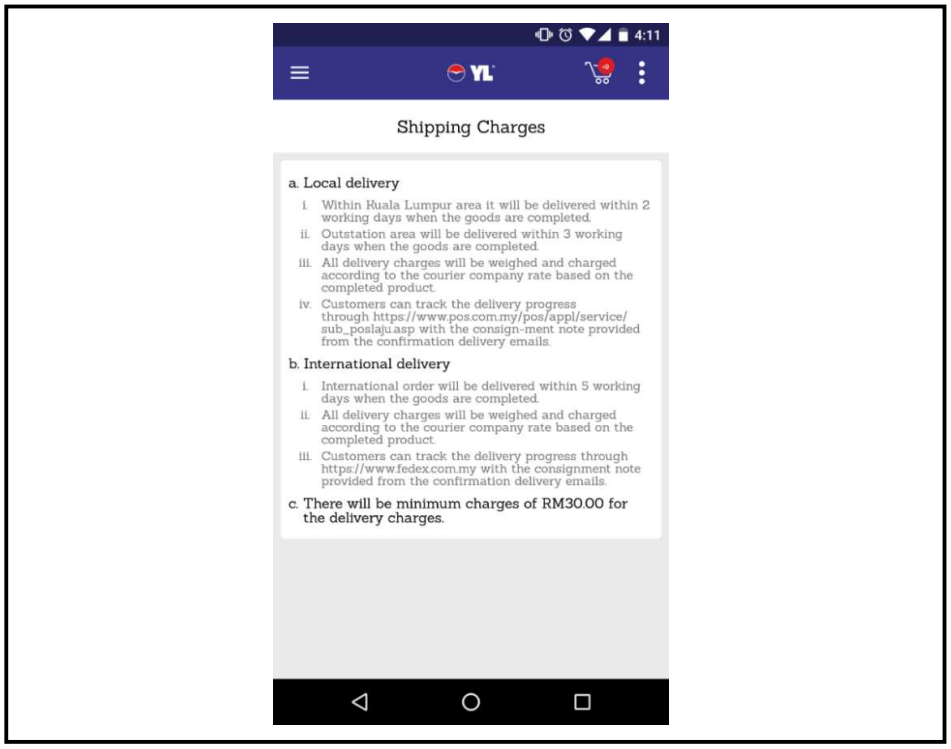


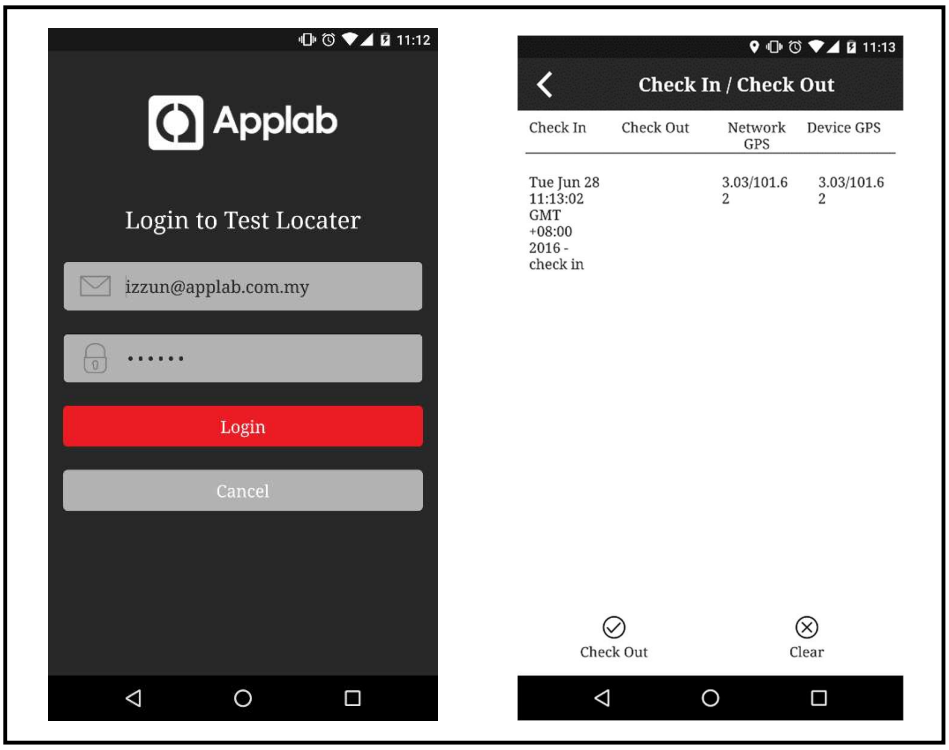
Figure 1.3

Display Shipping Charges information such as local delivery, international delivery.

1.3.5 Side Menu Module

Side Menu has same function as navigation drawer. It is a menu to guide user to go another page. At first, I put side menu at each activity. It is not a proper way and it take a lot of time to put at all activities in Good Morning Project. Mr Lau helped me and put side menu function at Utilities class. All activities will use side menu function in Utilities class with a proper way and structured.

1.4 Location Tester (Prototype)



Location Tester is an app for attendance. Worker in App Lab used this apps to check in attendance. The application used GPS and network connection to check in and check out. This application was built by Edwin. He was practical student at App Lab. After he finished his internship, I continued his project and fix the problem in the project. What I have detected in the project is some phone cannot detect network connection. I look the source code and change the method to retrieve network connection. I used another method and it is going well. Besides that, I also put custom dialog fragment that will pop up when the user did not enable GPS and when the user click button okay it goes into setting menu to enabled GPS

1.5 Barcode Reader (Prototype)

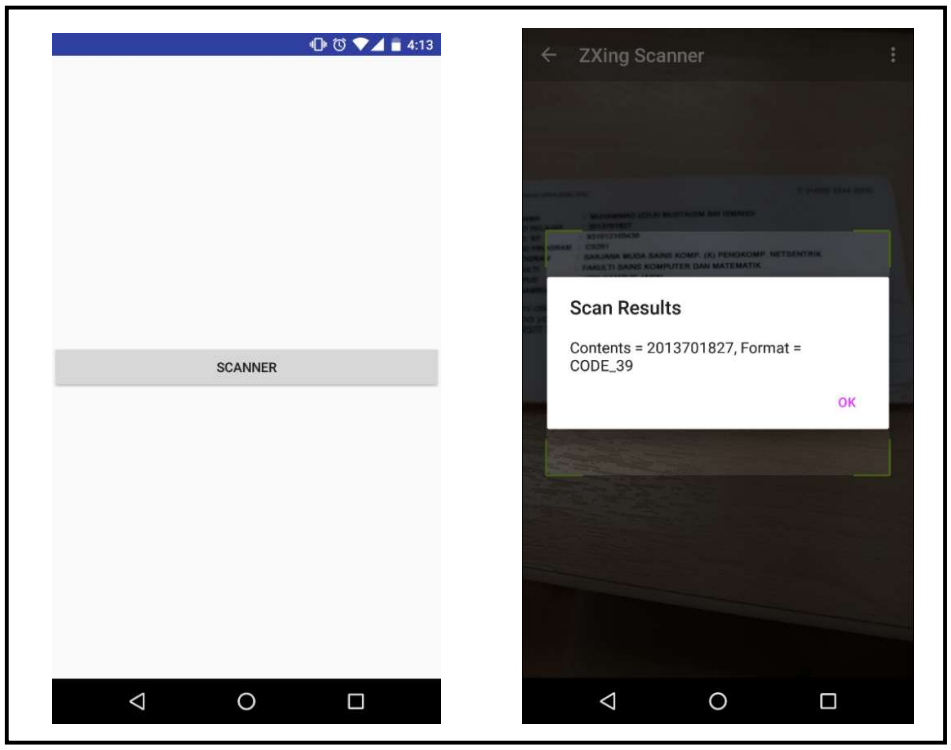
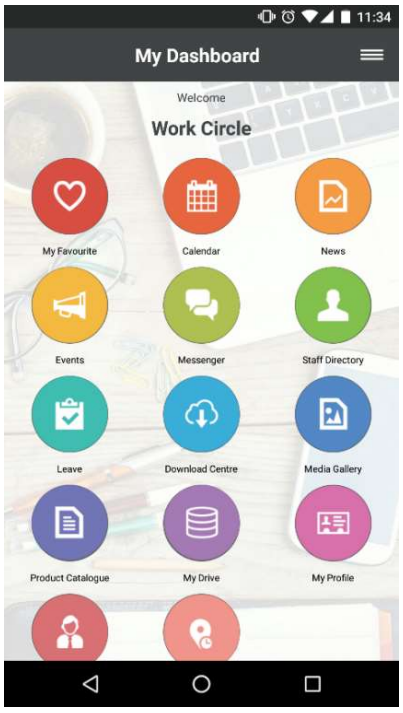


Figure 2.1

I had given the task about barcode scanner. Firstly, I had to do research about barcode. After I have done research, I had to do example project for barcode. I used ZXing and ZBar library in my project. It took 2 weeks to complete this prototype project. During development, I used both library and I decide to use the ZXing library because the company want to use these type which is EAN-13 and EAN-8, UPC-A and UPC-E, Code128, ITF-14, Code39, QR Code and Zxing library has all these types of barcode. I tried scan my student card by using barcode scanner and the output like figure 2.1.

1.6 Work Circle



I had given the Work Circle's source code and understand all module in Work Circle before I start developed. After I done, we must add new features in Work Circle application such as messenger, drive, attendance and others. My task in this project is arrange the source code and new method. This project was led by Vicky and me as intern helped and supported him.

Chapter 3

BENEFIT AND SUMMARY

2.1 Benefits of Industrial Training Task

The Internship program was quite beneficial for me. It helped me in improving my current knowledge in Android development and enhanced my knowledge in new areas such as Restful Web Service, Git, and others.

2.2 Summary of Industrial Training

From my experience, App Lab Sdn Bhd is a good place for practical students to finish their internship programmed as well as a place to work. This is because there was so much knowledge and experience to learn from the company about network and web and how to survive in the working area. The staffs were friendly and they like sharing knowledge with other people. Students will be expose to a real working environment and they will gained a lot of new experience and knowledge. New experiences include

- Teamwork

  In these projects all people worked together thus providing enough opportunity for proper teamwork and coordination. This was a good experience for me as the team was very cooperative and understanding.

- Responsibility and keeping commitments

  The importance of honouring commitments and time of others was an important thing. Especially, while working as a team it is very important to keep these points in mind.

As conclusion, what I had learn throughout this entire period of internship programme at App Lab is the real working environment which this is a good experience for me as a fresh graduate to find a job after graduate. To compare the education that we learn in university from our lecturer this is more on practically training and used mostly what I have learn at university.

During internship period, I was found my strength and also my weakness that I had learned and should be overcome to make me become more confident by myself. Furthermore, I have been trained

2.3 Recommendations

Industrial training gives a new dimension to the students about how the world would they go through after their graduation. Therefore, some aspects of industrial training can be improved in the future to improve the quality of this module

2.3.1 Recommendations to University

In terms of the scope of the industrial training, recommendation for improving the quality of industrial training at the university level is to broaden the scope of learning not only in theory but should be balanced by practical.