THE DAILY DOSE OF CAFFEINE

APPLICATION

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CHAPTER I

INTRODUCTION

1.1 PROJECT OVERVIEW

As we all know, caffeine drinks is a popular drinks for all consumers since long time ago because in the past, most people will drink teas and coffee only, but now there are many beverages that is a choices to drinking such as soda, sparkling, cocoa ,milo,ovaltine and chocolate as well. General people often think that, the source of receiving caffeine come from drinking tea or coffee only, but actually “Caffeine” is a chemical of alkaloids types which can be extracted from various parts of plants more than 60 types, is a white effect nature, bitter and can melt in the water. Caffeine is stimulant that when entering the body will be absorbed into the bloodstream and activate quickly within 15 minutes and activate for a long time 3-4 hours. Caffeine has power to stimulate activity of brain, make the nervous system watchful and muscle relax. Which caffeine will stimulate the feeling of energetic, reduce drowsiness, and increase endurance to exercise by retardation stagnancy make drinkers can exercise or work longer. Therefore, these beverages are not popular for the elderly like before, but became more popular and continuously higher in the group of worker, middle-aged, women, teenager, and students as well. Usually, people choose to consume caffeine in different ways for stimulating the nervous system to alert and reduce exhaustion.

Although, caffeine consumption before exercise can increase ability and extend the time to increase exercise. In addition of the consumption period, important thing that unforgettable is “Consumption”. Without a doubt that caffeine consumption too much can be negatively on your health and may affect the whole body for example nervous system, hypertension, heart and risk to take of water imbalance disease in the body. The factors that make consumption caffeine come from many reasons and many factors which difference in each person. According from searching information about caffeine and questionnaire, most consumers reflect that caffeine consumption stimulates the brain, lost sleepy and can work more or longer as well.

However, there are few consumers who perceive that caffeine can cause palpitations. In addition, it was found that some consumers do not know caffeine is harmful to the body if drinking more than the nominal quantity also. To reduce side effect from over quantity of caffeine consumption in each day of consumers. Therefore, there are experimental results or research from various sources render to the European Food Safety Institute (EFSA) recommended to increase physical fitness for consuming caffeine should not exceed 3-4 milligram per 1 kilogram of body weight. So that, people who weigh around 50 kilograms should not consume more than 150-200 milligrams of caffeine per day. However, with the problems that found conflicting information for example caffeine can be found in various forms of beverages, packaging, unequal ingredients and the time to weigh the raw materials of coffee powder or tea sachet and so on. For this reason it is difficult to calculate the amount of caffeine each time because unequal both of intensity and brew amount of raw material. As mentioned above, this project has been extended from previous applications by classifying type of beverage and choosing standards of glass sizes in the coffee shop

and glasses size which consumers really like to drink at home. Awaken me caffeine application is the project for calculate three types of beverages such as coffee drinks, tea drinks, and another drinks that containing cocoa or chocolate. And likewise, the water types that can be divided into three types as well: hot drinks, cold drinks, and frappe drinks. (1). Coffee is a drink that we remember well as a representative of excellent caffeine sources. The espresso with a small glass 30 milliliters can provide caffeine up to 40-60 milligram per glass. In addition, filtered coffee that is brewed through a filter tool or drip coffee provides up to 85 milligrams of caffeine in a size of 125 milliliters per cup. And also Americano coffee that is favored by coffee drinkers instead of water, which provides an average of 65 milligrams of caffeine per serving size, 125 milliliters etc. (2). Tea leaves are considered as another option for health lovers. Because caffeine is considered one component of tea leaves. However, since the consumption of tea leaves is mainly water-based, the consumption of 1 cup of 150 milliliters or 5 ounces of tea can produces only 32 milliliters of caffeine per cup. We will get less caffeine. If we choose to consume iced tea, because 1 bottle of 330 milliliters or 11 ounces of tea, there are caffeine 20 milligrams of caffeine etc.

(3). Cocoa is considered a beverage that is high in antioxidants. There is little caffeine, such as 1 ounce of cocoa is equal to 25 milliliters of caffeine. Chocolates are cocoa, which are the main components of chocolate, which are rich in natural caffeine in very high amounts because 1 cup of hot chocolate, 150 millimeters or 5 ounces of chocolate, providing caffeine only 4 milliliters. But at the same time, if consumers consume 30 grams of dark chocolate per bar will get up to 60 milliliters of caffeine etc. However, the information mentioned above is compiled from searching information and experiment result cannot be fixed because it may mix other

ingredients that cause increased caffeine values, such as condensed milk, sugar, cream etc. The types of beverages that can be calculated in this application can be divided into three types as well, such as hot, cold and frappe beverages. The raw materials that we use to calculate are both kind of seed, powder and sachet etc. Thus, when users want to use this application, users must fill out basic information that important for the application will save daily drinking data, which to choose the status of the drinker (user) such as user weight, sex, age, disease, which is very important for setting values in this application because the caffeine values that should be received and displayed on a daily basis are not the same. For example, if users fill out have heart disease or being sensitive to caffeine, the result is shown: Do not get more than 50 milliners. So, if drinking more than the limit this application will show a symbol to alert the drinker to know etc. Aside from adding information to users, there's a greater purpose of this application is to change the behavior of the drinkers and reduce problems that occur in the future as well.

1. 2 PROBLEM STATEMENT

According to the article of Report Health (2019), will see in nowadays consumer who's consume caffeine there are different consumption both types of drinking, categories, manner and frequency of consumption. Although, there are no matching conclusions about the effect of consumption caffeine on health, But when analyzed consumption behavior of consumers will find as simple example that can be seen clearly : Thai people aged 13-70 years, more than 70% prefer to drink tea, coffee and beverages containing caffeine increase continuously and not relaxing drink while working but most of those consumers drink according to the values of the popular brand of coffee such as Starbucks, Amazon and Ali cafe etc. As we know well that, the affecting factors consumption behavior includes information, beliefs, popularity and also attitudes etc. By the way, timing factors and the nature of their work, etc. At the same time, consuming for not be harmless caffeine on health, consumers should consume suitable for body about 50-200 milligrams per day which quantity making the body feel refreshed, energetic, not sleepy. But if over consumed or more than nominal quantity regularly will cause short-term and long-term physical harm to the body. So, abnormal symptoms which found in various reports such as abnormal heartbeat, palpitations, shortness of breath, high blood pressure, squeamish and can cause dehydration in the body so on. Especially in pregnant who consume caffeine discover that caffeine are miscarriage, birth of disabled child and also affect chronic disease including high blood pressure, heart disease, acid reflux and ulcers.

From online questionnaire 88 people fill out the information, from the graph of the number of people drinking coffee will see that people have been drinking caffeine for a long time .Some people start drinking from home and some people began to drink since high school and became harder when entering university. Some people who have never drunk began to practice drinking due to many factors that have resulted in starting to drink. Which every year, the drinking rate will be higher and the criteria will increase continuously. By the way most people like to drink coffee from Antique cafes because it's easy to find the cafes and cheaper and tasty. The menu that most people like to order is iced cocoa, iced green tea and lemon tea etc.In addition, 60% of some consumers do not know that caffeine is harmful to the body if drinking more than prescribed. From the above problem, it can be seen that if this application or project has been developed, the calculation of caffeine to stimulate and change the behavior of consumers to reduce the problem and solve the problem accordingly for bring towards good health also can increase information to consumers and reduce budget of future health as well.

1.3 PROJECT OBJECTIVES

The purpose of this project is to develop an application that will help the consumer to limit caffeine consumption

- To develop calculate caffeine application of user or consumer.
- To show symbol when consumer overdue.
- To show graphs of drinkers and summarized as a daily, weekly and monthly graph.

1.4 SCOPE OF STUDY

- Awaken me caffeine application was created to focus for calculate the caffeine contained in coffee, tea and cocoa-containing beverages.
- The applications calculate from the standard size of glasses that are popular for drinking and selling.

1.5 SIGNIFICANT OF STUDY

- To help user manage comfortable drinks comfortable and properly by using application.
- To increase knowledge of drinkers or consumer.
- To be an application that shows data and records drinking information of users.

1.6 ORGANIZATION OF THE DOCUMENT

The document consists of five chapters following:

• Chapter 1: Introduction

This chapter discusses about the overview, problem statement, project question, project objective, project scope, significance of study, and organization of the document.

• Chapter 2: Literature review

This chapter discusses the theories from many sources including articles, thesis, book, and etc. That guideline to devolve Awaken me Caffeine application.

• Chapter 3: Methodology

This chapter is described about methodology which to study that user to develop

Awaken me Caffeine application and describe in each phase.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The backgrounds for this project brief description of project setting were introduced in the previous chapter. This chapter will discuss the previous project which are related or study to this project, the daily dose of caffeine; Awaken me caffeine application**.**

2.2 RELATED WORK

Caffeine Calculator

According to Pay Andrew (2014), explain that this application an additional application for users that helps track life and introduce healthy lifestyles. The application will evaluate the ability to receive the caffeine of the body. When drinking coffee or caffeinated drinks such as tea or coke during the day, opening up coffee to record our drinking by choosing the type of drink that has a wide variety in the app to be as close to what we drink as possible, such as Cappuccino or Espresso which has a line showing caffeine levels that should not be exceeded and the caffeine level line that should be left before bedtime, this application will plot to graph the daily caffeine rate in the body. After using for a while, this application will collect statistics on coffee consumption to suggest appropriate drinking and living a better life (Caffeine Calculator, 2018)

Omni Calculator

According to Ramakrishna, S., Wesensten, J.N., Kamimori, H.G., Moon, E.J., Balkin, J.T., Reifman, J. (2016) them said “Caffeine is the most widely consumed stimulant in the world. The effects of single and multiple doses of caffeine on group-average performance across the continuum of sleep loss from limited nightly sleep to continuous sleep loss for multiple nights. From the above problems, drinking habits and lack of knowledge are the main problems and will definitely affect health.

Therefore, this app has functions as following:

- Show the caffeine content in each menu.
- Choose coffee sizes.
- Increase the number of drinks to collect data in the daily graph, weekly graph and monthly graph.

Up Coffee

Up Coffee Application is an additional app that helps track life and Recommend Healthy lifestyle. When starting to use this app, User have to put personal information into what gender, height, weight and think about how is caffeine sensitive to them?

When drink coffee or caffeinated drinks such as tea or coke during the day, user opened this application to record our drinking by choosing the type of drink that has a variety in the application to be as close as we drink the most such as Cappuccino or Espresso, how many sockets are inserted. After using for a while, this application will collect our coffee drink statistics to suggest a better life. Therefore, from the above application, the function can be added in this application as following:

- Display data graph form bar chart format.
- Display caffeine levels that should not be over and proper caffeine.
- Specify the calculation of daily coffee drinking clearly.

Brown Coffee Application

Brown Mobile Application is an application linked to Brown Card that you will get much more benefits from it such as Checking your current balance and point, checking your transaction, Promotion notification, Brown drink menu, Store location map, QR game, Photo sharing to your Facebook and so on. By the way, in this app, there are many functions that are interesting, but there are functions that can be customized with this project is can share pictures or calculated data to Facebook or your email and another social .From the above application, the function can be added in this application as following:

- Can link the application information via email or phone number.
- Can log in using a password and user name.
- Can receive notifications via email or phone number wherever you enter or save information.

Caffeine Tracker – Caffeine Calculator

According to this Caffeine Tracker**,** this application is a caffeine consumption tracker, calculates the amount of caffeine for every drink consumed in one day. So that consumer coffee consumption and caffeine levels in the body decreased. In this application, there are interesting functions and information which is quite comprehensive about the types of caffeinated beverages. We have taken information from this application that is related to drinks to add to the project and takes some buttons that should be in our project, such as the main page of our project, the main page or menu page and buttons that should be available in the application, etc. (Caffeine Tracker,2018)

2.3 DEFINITION

Application

Application or mobile application is a shorter form of application program, it is a program designed to perform specific functions directly for users. Applications can be in themselves or in a group of programs called “set of operations programs that run user applications". Examples of applications include word processors, database programs, Web browsers, development tools, drawing, paint, image editing programs, and communication programs. The formal request and method of communication with other programs used by application programs is called application program interface (API). (Margaret Rouse, 2018)

Calculate Program

From the article of caffeine informer (2018), explained that the amount of caffeine in each person should be different. There are limits depending on many factors. For example: Age of the user, the health of the drinker and the exception of consumer with heart disease etc. Which the application will determine the type and status of the users to easily set the data to be displayed after the user has calculated. Therefore, developer will take the amount of coffee and the cup size or packaging size of each shop as a database and the results will be displayed depends on the coffee shop selection, the type of drink and the size of the beverage of consumer.

2.3 TOOL USED

Android

The software was first announced at Google I/O in May 2013, and the first stable build was released in December 2014. Android Studio is available for Mac, Windows, and Linux desktop platforms. It replaced Eclipse Android Development Tools (ADT) as the primary IDE for Android application development. Android Studio and the Software Development Kit can be downloaded directly from Google.

Android Studio is the official integrated development environment (IDE) for Android application development. It is based on the IntelliJ IDEA, a Java integrated development environment for software, and incorporates its code editing and developer tools.

Android Studio uses an Instant Push feature to push code and resource changes to a running application. A code editor assists the developer with writing code and offering code completion, refraction, and analysis. Applications built in Android Studio are then compiled into the APK format for submission to the Google Play Store. To support the development of applications within the Android operating system, Android Studio uses a build system Gradle-based, emulator, code templates, and Github integration. Every Android Studio project has one or more modules complete with source code and resource files. These modules include Android app modules, library modules and Google App Engine modules. (Rouse, 2018)

PhpMyAdmin

phpMyAdmin is a free software tool written in PHP, written from PHP and also free program because it is an open source group program, it is used to manage and control MySQL via the web browser (GUI). phpMyAdmin will work to control and manage the MySQL database. The ability of phpMyAdmin has create and delete database,create and manage table such as add record, delete record, edit record or delete table,add or edit fields in the table,text files and CSV file extensions can be stored as data in the table and can use SQL statements as well.

Mocking Bot

Mocking Bot is an online platform and application that enables users to build interactive mobile app wireframes and prototypes. It enables users to build these prototypes in a couple of minutes. Users can select color themes, screen gestures and transitions, test application on the device, and more. With Mocking Bot Viewer, you can preview and share all your Mocking Bot prototypes no matter where you are. It is easy to describe what your project will go.

CHAPTER III

METHODOLOGY

3.1 INTRODUCTION

The objective of this chapter, developers are focusing on the process of project development, which uses concept of production process. The software development life cycle or (SDLC) is a framework defining tasks performed at each step in the software development process. SDLC is a structure followed by a development team within the software organization. It consists of a detailed plan describing how to develop, maintain and replace specific software.

The software development life cycle consists of five phases as show in the figure 3.1 below:

- Planning
- Analysis
- Design
- Implementation
- Maintenance

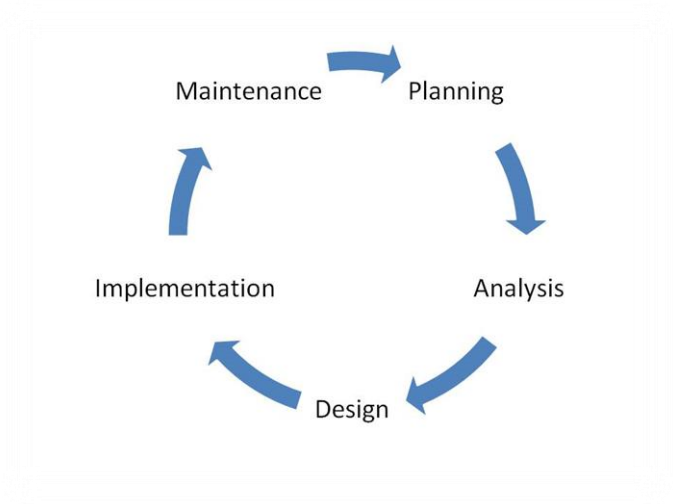

Figure3.1: The SDLC Model

Source: http://www.ilifegeeks.com/5-critical-phases-software-development-life-cycle/ Retrieve on 1 September 2019

SDLC or The software development life cycle is a framework defining tasks performed at each step in the software development process. SDLC is a structure followed by a development team within the software organization. It consists of a detailed plan describing how to develop, maintain and replace specific software. The life cycle defines a methodology for improving the quality of software and the overall development process. According to V. Therese Clara (2013) said that, the systems development life cycle (SDLC) is a conceptual model used in project management that describes the stages involved in an information system development project, from an initial feasibility study through maintenance of the completed application.

3.2 PLANNING

The first phase for doing the project is planning, planning make the developers arrange and manage the work to make the project going easily, smoothly and efficiently to success. As following the step of planning:

Identify the problem

The first step in planning is finding the topic of project.

- Define project objective.
- Determine project scope.
- Find problem statement.
- List software and hardware requirement.
- Study the research results about the amount of caffeine in each menu of the beverage for calculate in the application.
- Find information of each drink via internet that experimental data from Thai and foreign doctors.
- Go to the area to inquire information of specific menu that costumer order in the café.
- Summarize drinks information of each category.

Study and find the information

After taken the idea of the project, the second step is finding and collecting all of information to develop Awaken me caffeine application as following:

• Create the questions to access the consumer problem and requirement to develop this application by online questionnaire. So, the results obtained from the questionnaire are consumers are not realize of caffeine , consumers are curious about caffeine content which available in each beverage type, and consumers still lacking knowledge about caffeine dangers as well.

• Search the article and information that relate to the topic.

• Study the tools to develop application.

• Practice the software to use to design and code.

Identify Equipment and Technique (Hardware and Software) for using to do the project

For software requirement, developer has chosen Android Studio. This software is used mainly to build the whole system. **Android Studio** is a software program for designing web pages, essentially for mobile developer editor.

For the database of this project, developer has created database in **PhpMyadmin**, all information will keep in this software, whether drinks information or user information so on.

3.3 ANALYSIS

Analysis is the second step of SDLC that collects relevant data, data requirements, calculates beverages to perform in an application.

Requirement gathering

In this step, the developers collected the requirements by using Google Form for creating online questionnaire. Which will consist of all consumers who used this application? It was collect by 100 consumers from online questionnaire, when did consumers start drinking? When did consumers start drinking? People who want to know and really like to drinks with several questions; gender, consumer status , age , consumer exception, information about caffeine, information about bad result of caffeine ,the reasons of consumers to choose caffeine, behavior of consumers and also side effect that has been faced with consumers. In which the results obtained from the questionnaire are 40% found that consumers who have experienced problems after consuming caffeine,60% consumers are not aware of caffeine intake, 60% still lack knowledge about the harmful effects of caffeine, 50% who know information about type of caffeinated beverage and also 50% who don’t know information about type of caffeinated beverage. The result from online questionnaire 100 people fill out the information ,most people like to drink coffee from antique cafes because it's easy to find the cafes and cheaper and tasty. The menu that most people like to order is iced cocoa, iced green tea and lemon tea etc.In addition, 60% of some consumers do not know that caffeine is harmful to the body if drinking more than prescribed.

In this step, the developer tried to analyzed and designed the project after accepted the responses from the consumers, these will be benefit and easy for developer understanding the user or consumer requirements

System architecture overview

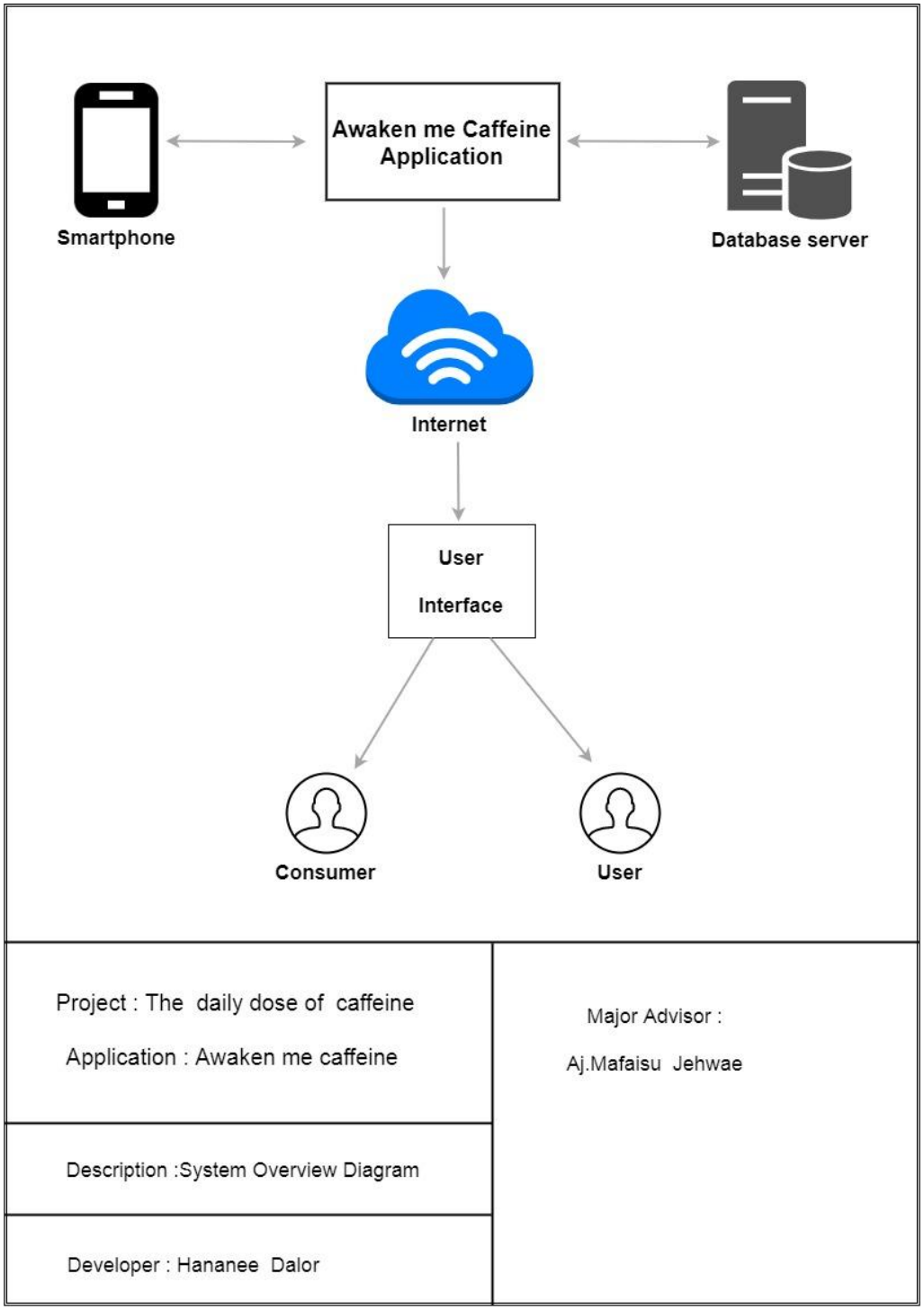

Figure 3.2: System architecture overview

System structure cart

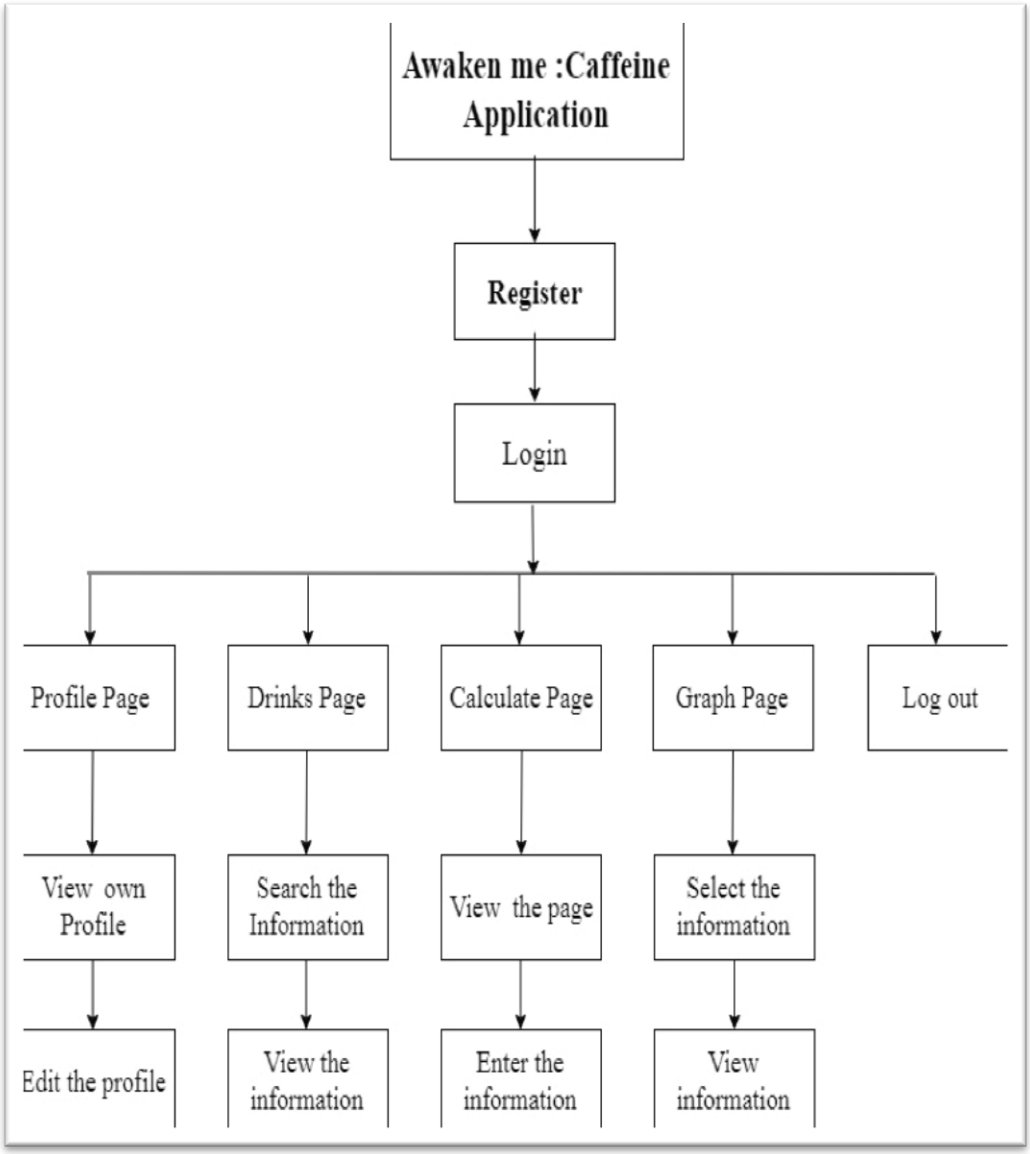

Figure 3.3: Project Structure Chart

The specific requirement is creating the purpose and identifies the function of the application. After making interviewing with the Coffee shop owner and also Coffee maker or Barista of each cafe and making online questionnaire by using Google Form, developers make a summarization to these processing by giving attention to the application the requirement to identify the function of the application. Then, developer make the list requirements to produce process modeling and data modeling by using Unified Modeling Language (UML) and web draw online.

Process Analysis follows as:

- List of Requirements.

- Use case diagram.

- Use case specification

- Sequences diagram

List of Requirements.

M – Mandatory: Requirements cannot be sacrificed.

D – Desirable: Requirements are importance but could be sacrificed if necessary to meet schedule or budget.

O – Optional: Requirements would be nice to have, but are readily sacrificed.

No	Requirement ID	Requirement Description	Priority
	Req_01	Manage Registration	
1	Req_01.1	User register to be member	M
	Req_02	Manage Login	
2	Req_02.1	User login	M
No	**Requirement ID**	**Requirement Description**	**Priority**
	Req_03	Manage user profile	
3	Req_03.1	User can view own profile	M
	Req_04	Manage coffee menu	
4	Req_04.1	User can view menu of coffee	M
5	Req_04.2	User can select menu of each coffee	M

	Req_05	Manage Calculate caffeine	
6	Req_05.1	User can select the café	M
7	Req_05.2	User can select the menu	M
8	Req_05.3	User can select glass size	M
9	Req_05.4	User can select a drink type	M
10	Req_05.5	User can enter amount of drinking	M
11	Req_05.6	User can view results of calculations.	M
	Req_06	Manage Graph	
12	Req_06.1	User can view daily graph	M
13	Req_06.2	User can view weekly graph	M
14	Req_06.3	User can view monthly graph	M

Use Case Diagram

Use case diagrams are usually referred to as behavior diagrams used to describe a set of actions (use cases) that some system or systems (subject) should or can perform in collaboration with one or more external users of the system (actors)

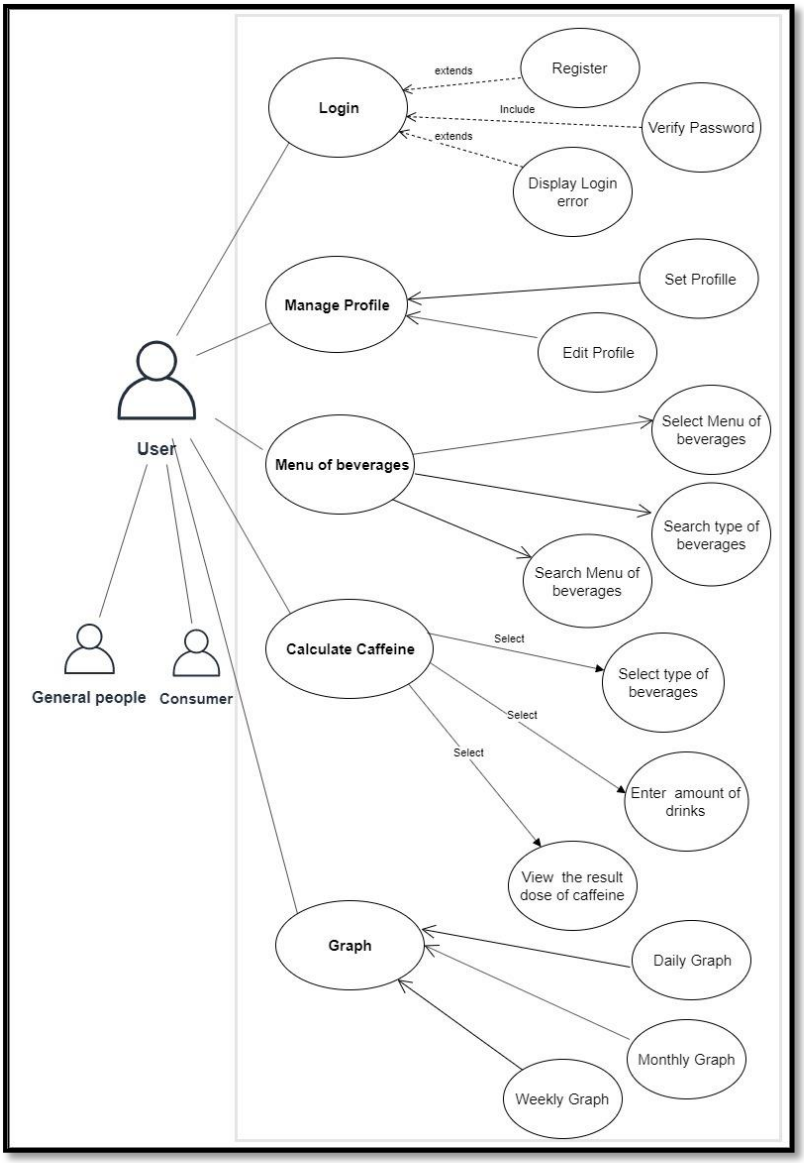

Figure 3.3 Use Case Diagrams

Use Case Specification

Login

Use case name: Login
Actor(s): User
Brief description: This use case will be used to allow the users (Consumer) to login the system.
Trigger: The user wants to enter the system **Type:** External
Relationship: Association: User Include: None Extend: None Generalization: None
Flow of events: 1. The user key-in e-mail and password on login page. 2. The user press Login Button. 3. The system will validate e-mail and password [E-1: Invalid username and password]. 4. The system will allow user enter to the system.
Sub Flows: None
Alternative/Exception Flows: E-1: Invalid e-mail / Telephone number and password. - The system will display acknowledge message to reenter e-mail and password.

Manage profile

Use case name: Manage profile
Actor(s): User
Brief description: This use case will be used to allow the users (Consumer) to manage own profile.
Trigger: The user wants to manage own profile **Type:** External
Relationship: Association: User Include: None Extend: None Generalization: None
Flow of events: 1. The system will allow user to view own profile. 2. The system will allow user to edit own profile. 3. The user press SAVE Button.
Sub Flows: None
Alternative/Exception Flows: A-1: Cancel for managing profile - The system will allow user to CANCEL for managing own profile

Calculate caffeine

Use case name: Calculate caffeine
Actor(s): User(Consumer)
Brief description: This use case will be used to allow the users (Consumer) to enter and select coffee information of each café.
Trigger: The user wants to enter the system **Type:** External
Relationship: Association: User Include: None Extend: None Generalization: None
Flow of events: 1. The system will allow user to select coffee menu and café . 2. The user press SAVE Button. 3. The user can view result calculation
Sub Flows: None
Alternative/Exception Flows: -

View Graph

Use case name: View Graph
Actor(s): User(Consumer)
Stakeholder and Interest: None
Brief description: This use case will be used to allow the users (Teacher and Student) to select the chapter.
Trigger: The user wants to select the chapter **Type:** External
Relationship: Association: User Include: None Extend: None Generalization: None
Flow of events: 1. The system will display the result daily graph 2. The system will display the result weekly graph 3. The system will display the result monthly graph
Sub Flows: None
Alternative/Exception Flows: -

Sequence Diagram

According to Tegarden (2019) has state that “Sequence diagram illustrate the objects that participate in a use case and the message that pass between them over time for one use case”

By the way, Sequence diagrams describe interactions among classes in terms of an exchange of messages over time. There are also called event diagrams. A sequence diagram is a good way to visualize and validate various runtime scenarios. These can help to predict how a system will behave and may need to have in the process of modeling a new system (Donald, 2004).

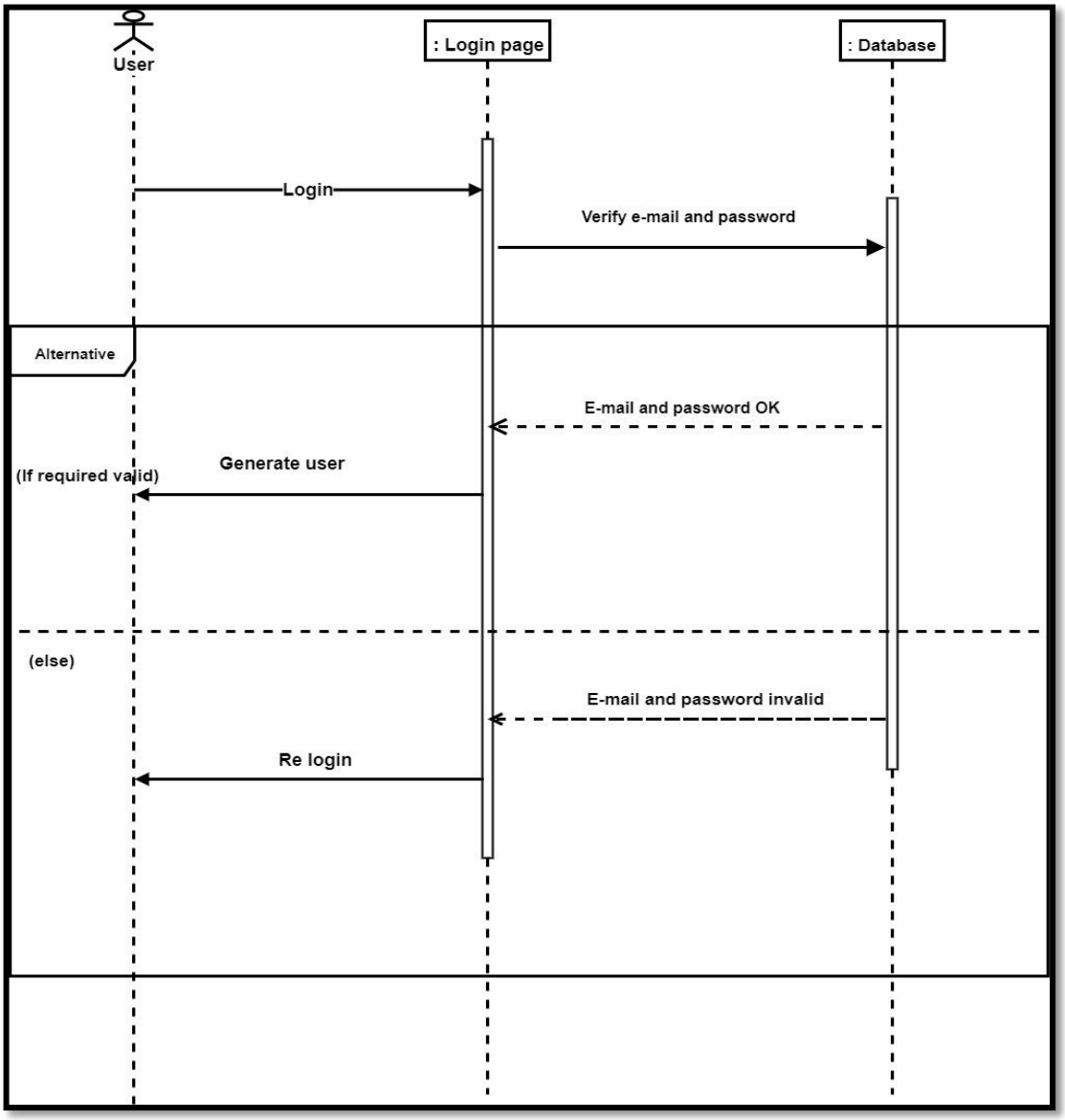

Figure 3.4: Sequence diagram of login page

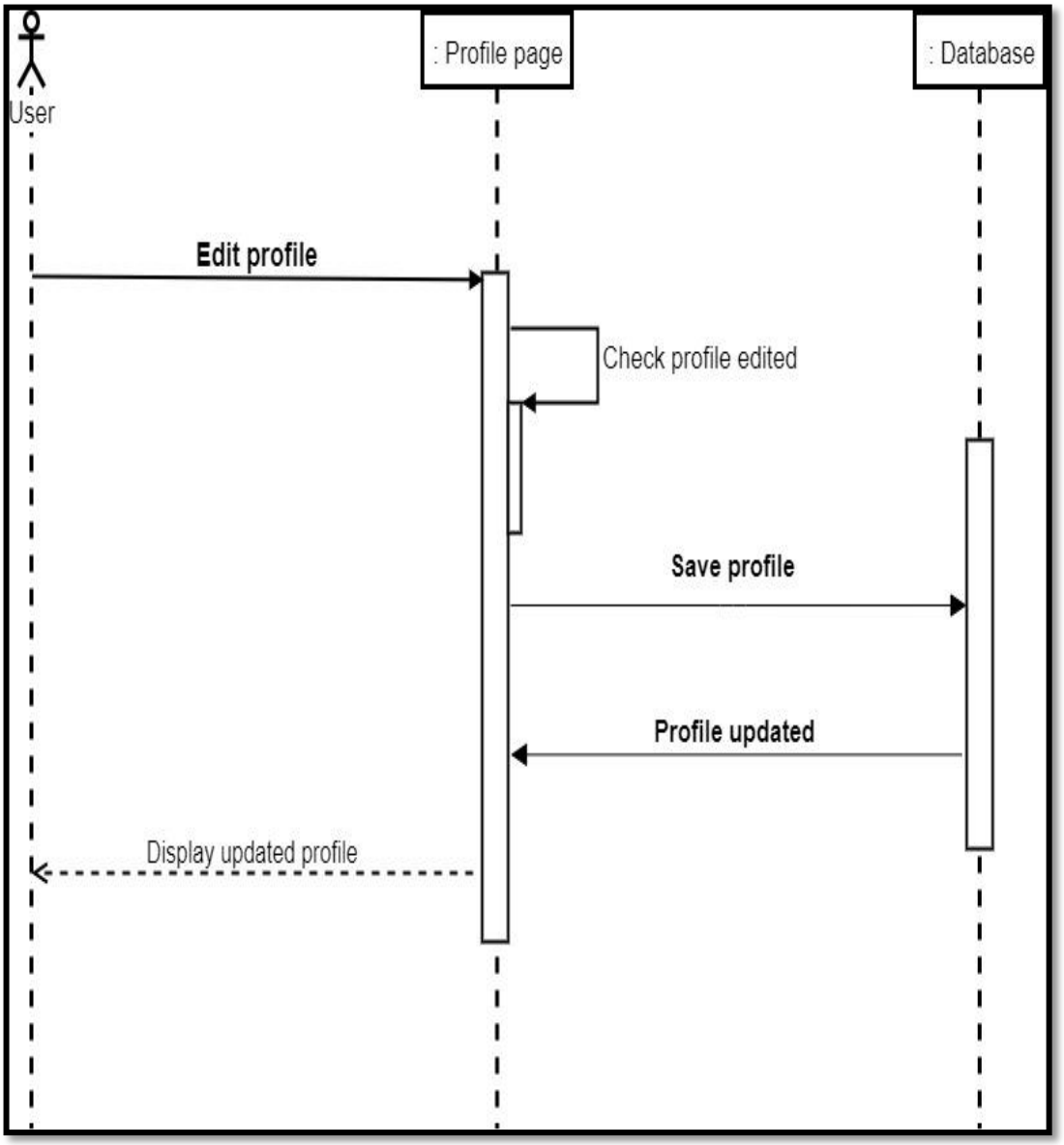

Figure 3.5: Sequence diagram of profile page

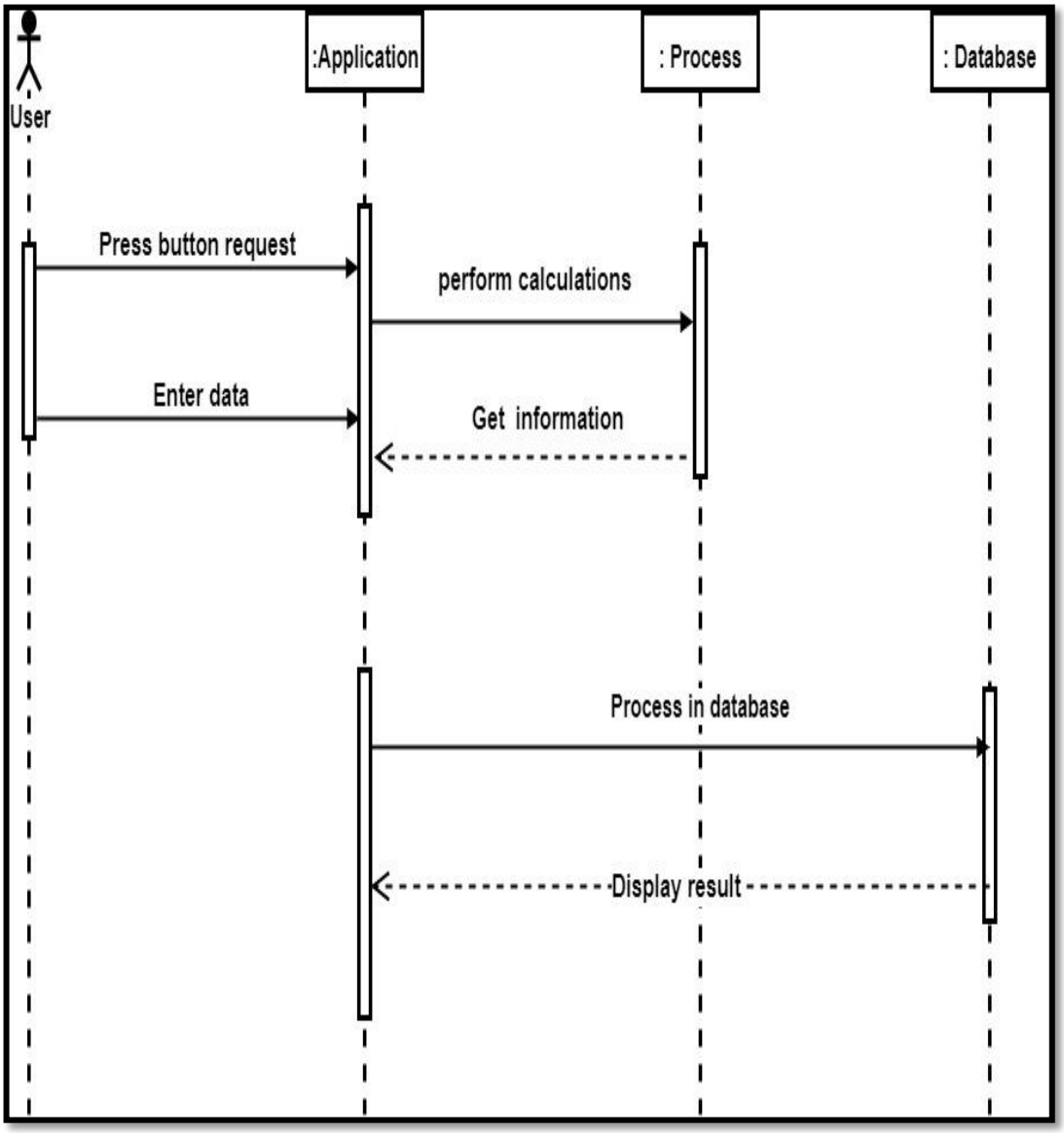

Figure 3.6: Sequence diagram of calculation page

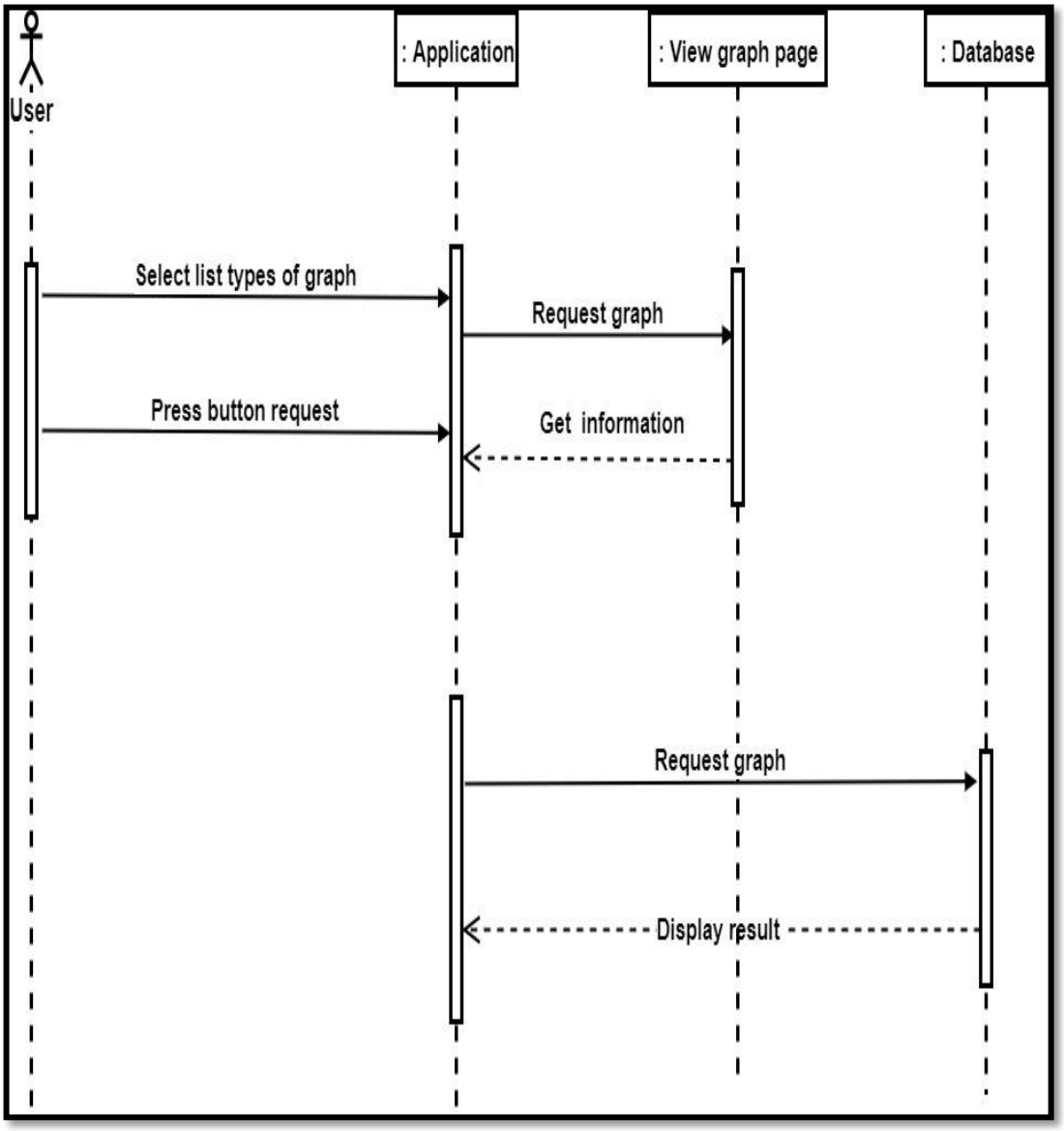

Figure 3.7: Sequence diagram of graph page

3.4 DESIGN

To develop Awake me caffeine application, the developers also need the questionnaire to understand what the happens that consumer face in the area and what their need, so this step, the developers have designed it by having by creating the questions that can be the great resources to support the project and can be achieved the project goal as much as possible. Next, the database is designed as manual to see if any data is important to be put in each table. Last, figure out project's key features or user interface as layout for future nice displays screen and unique.

USER INTERFACE DESIGN

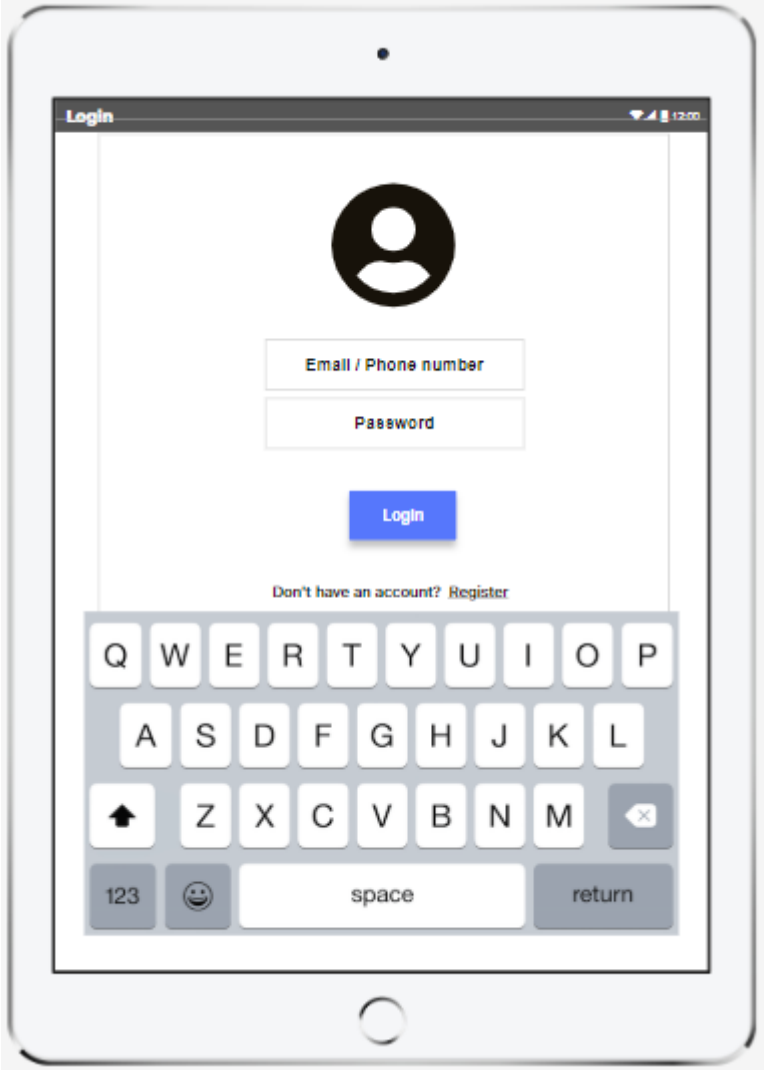

Figure .3.8: User login

As the figure shown, the login page that requested for user e-mail and user password for login the application. Users have to click on login button to verification user then enter to the application.

Figure 3.9: Profile page

As the figure shown, the profile page that included the information of User; Image, Name, E-mail, Phone, and select type or status of consumer. User able to change any information then click on save button to save the information or click on cancel button if do not edit the information.

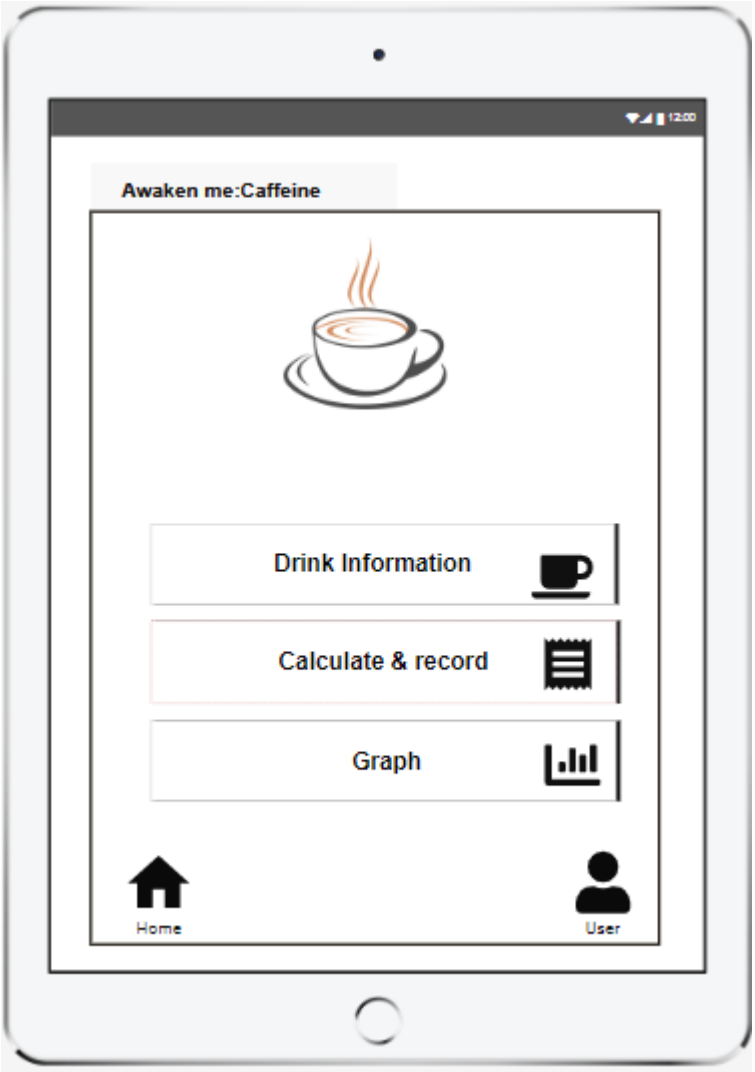

Figure 3.10: Home page

As the figure shown, the home page that included many buttons for functions working. User able to select any functions then click the link to go to another page.

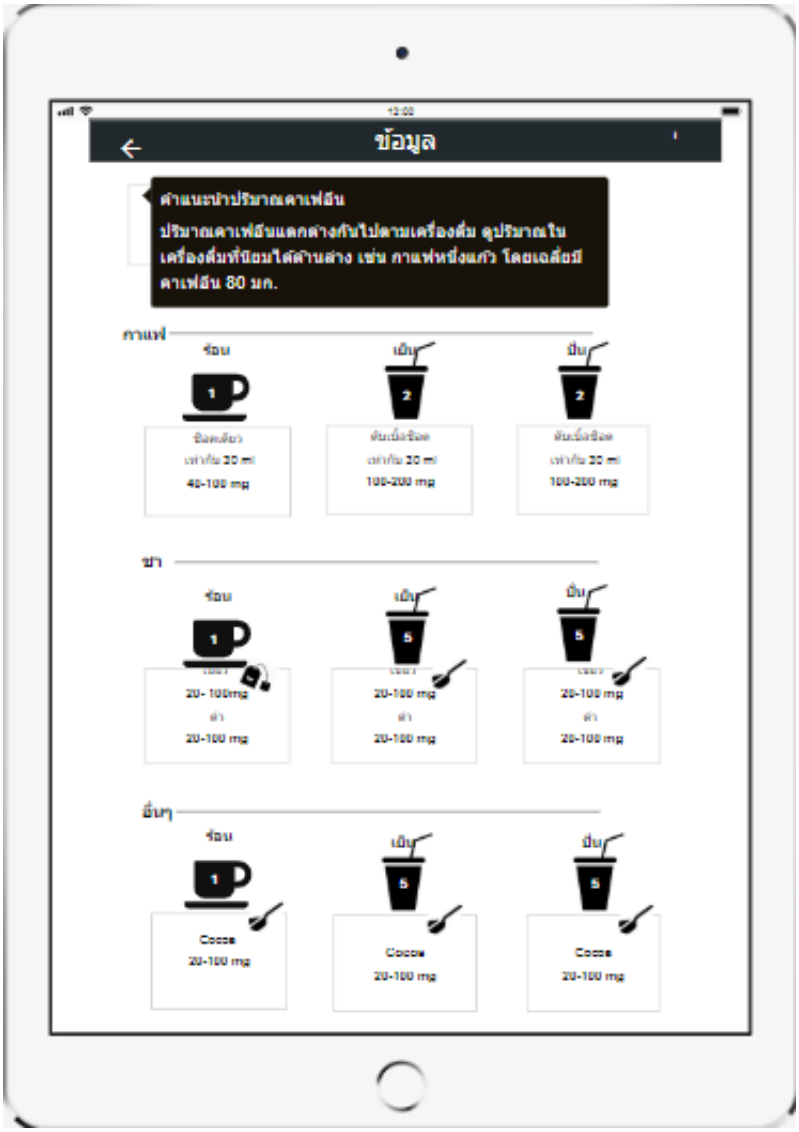

Figure 3.11: Calculate principles page

As the figure shown, this page included information on the calculation of caffeine in beverages for functions working and information of cups. User able to read principles of calculation any drink menu then clicks the link to go to another page.

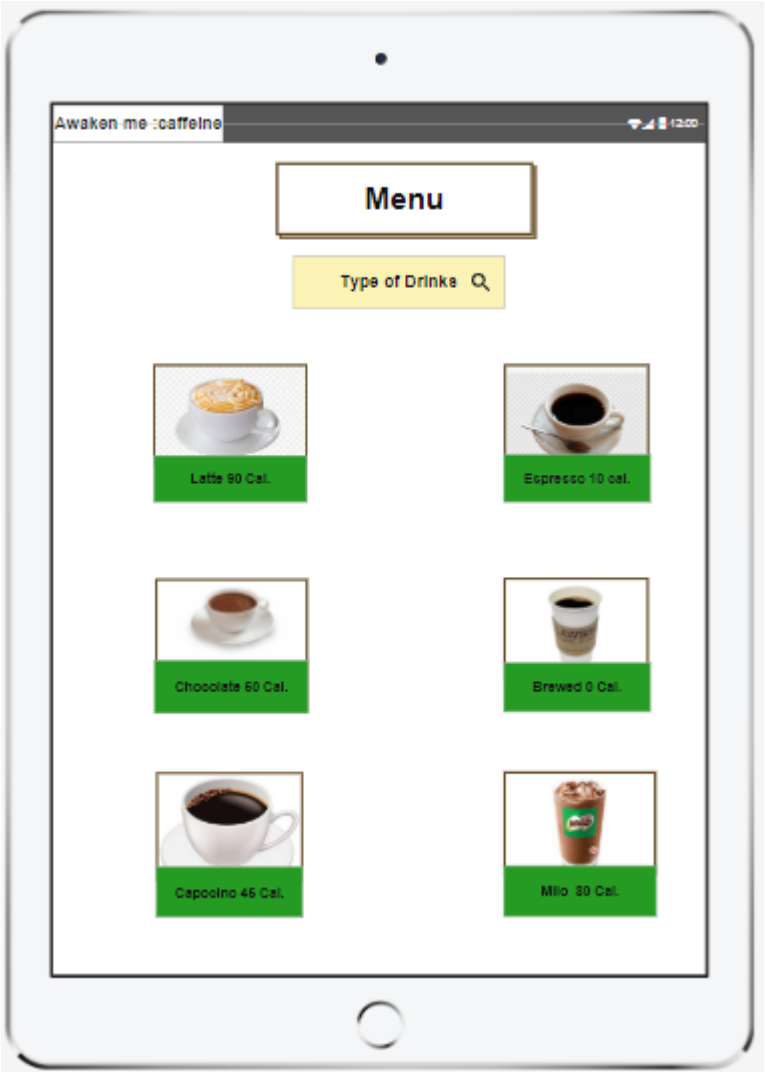

Figure 3.12: Drinks page

As the figure shown, the drinks page that included many to buttons for functions working. User able to select and searching by typing any drink menu then clicks the link to go to another page.

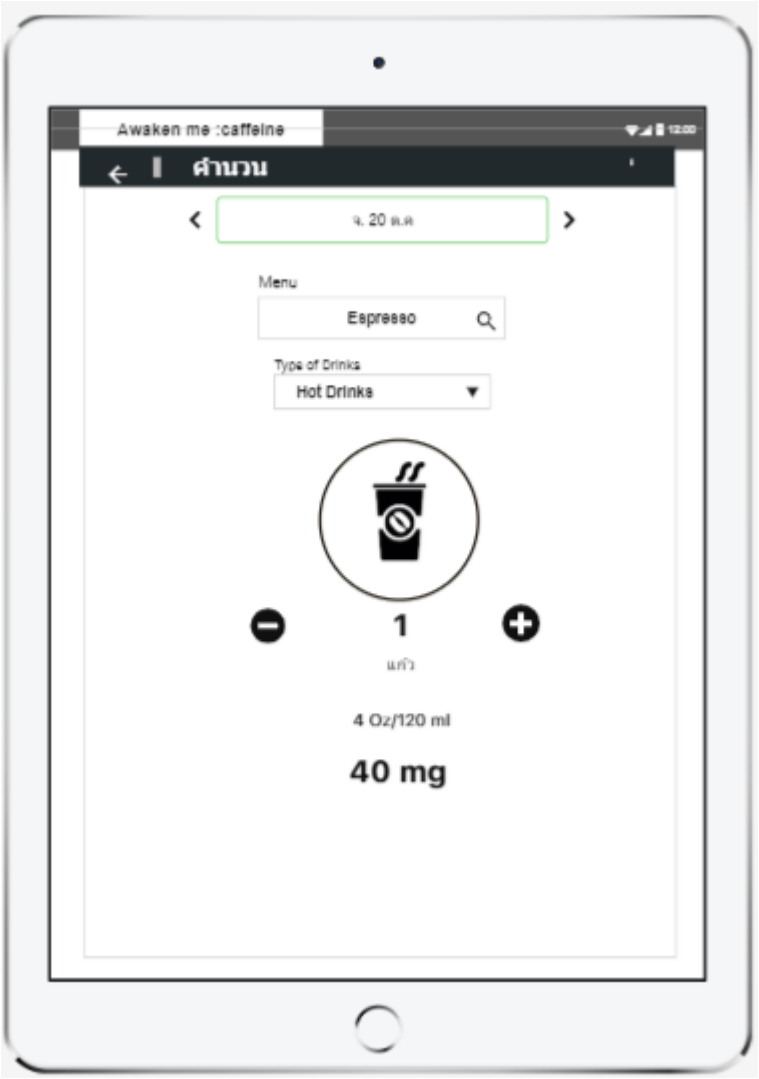

Figure 3.13: Calculate page

As the figure shown, the calculate page of hot drink of 4 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

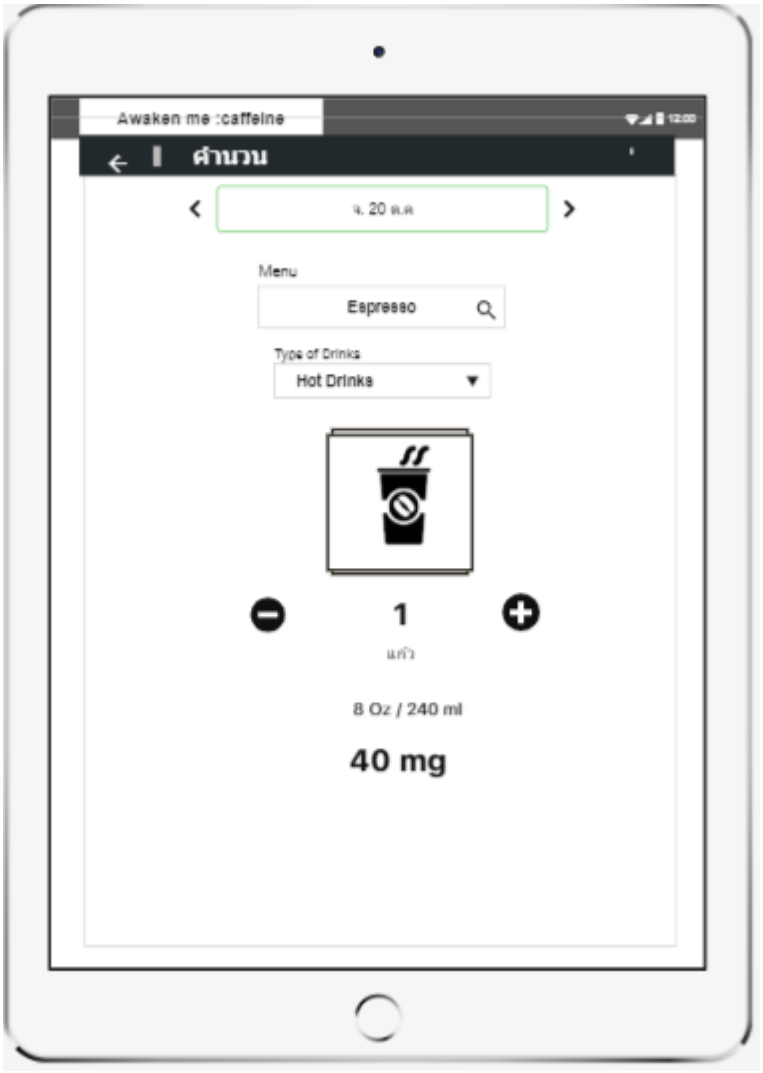

Figure 3.14: Calculate page

As the figure shown, the calculate page of hot drink of 8 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

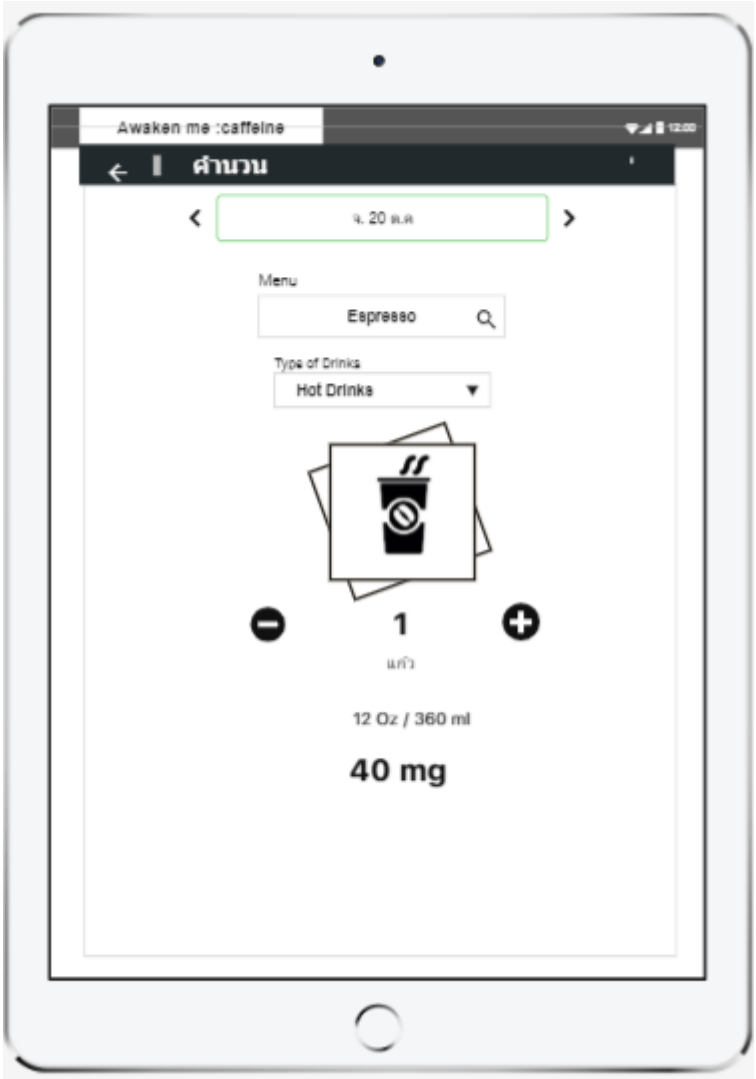

Figure 3.15: Calculate page

As the figure shown, the calculate page of hot drink of 12 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

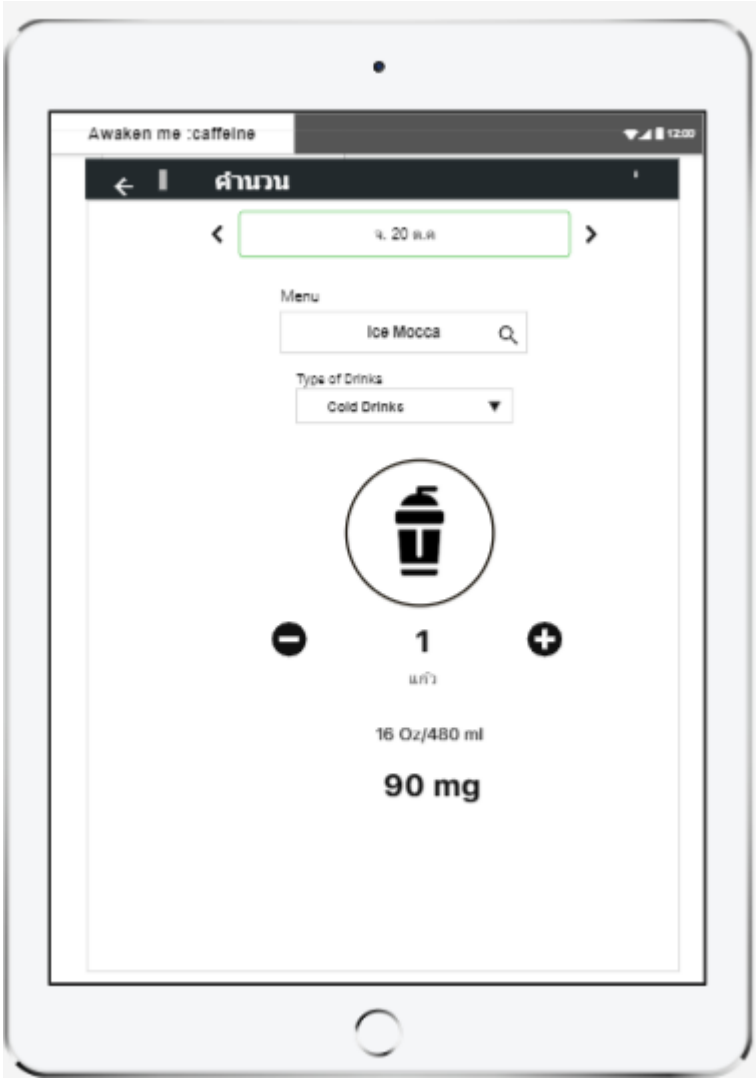

Figure 3.16: Calculate page

As the figure shown, the calculate page of cold drink of 16 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

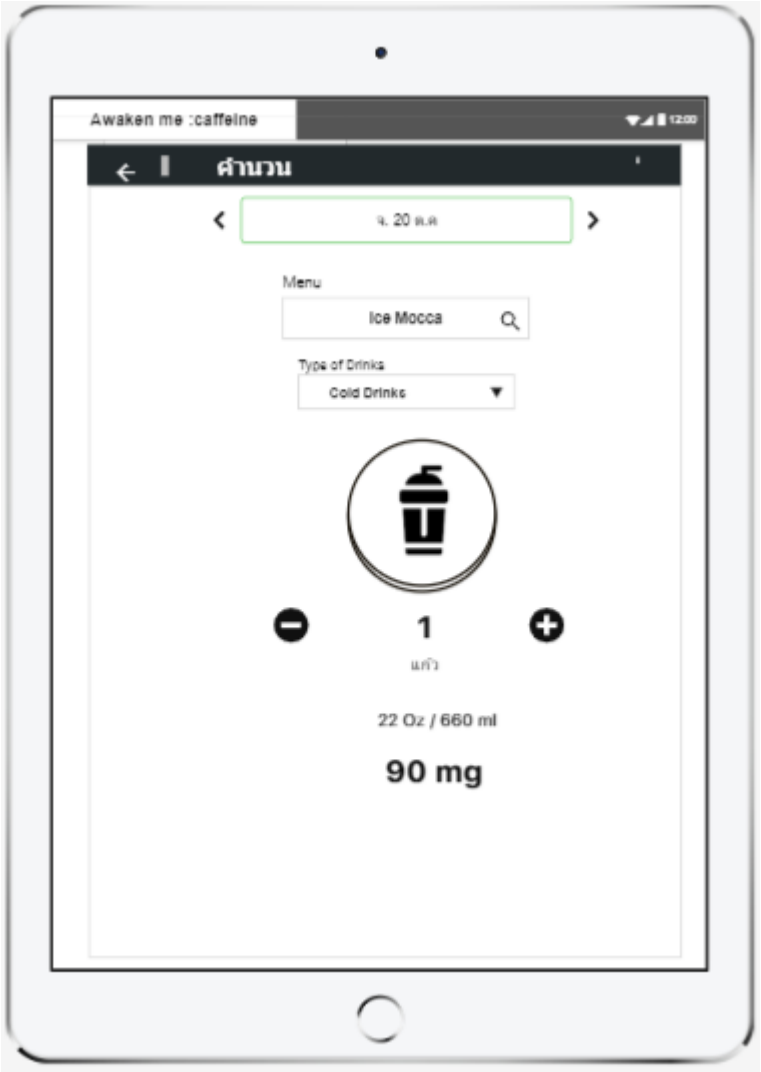

Figure 3.17: Calculate page

As the figure shown, the calculate page of cold drink of 22 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

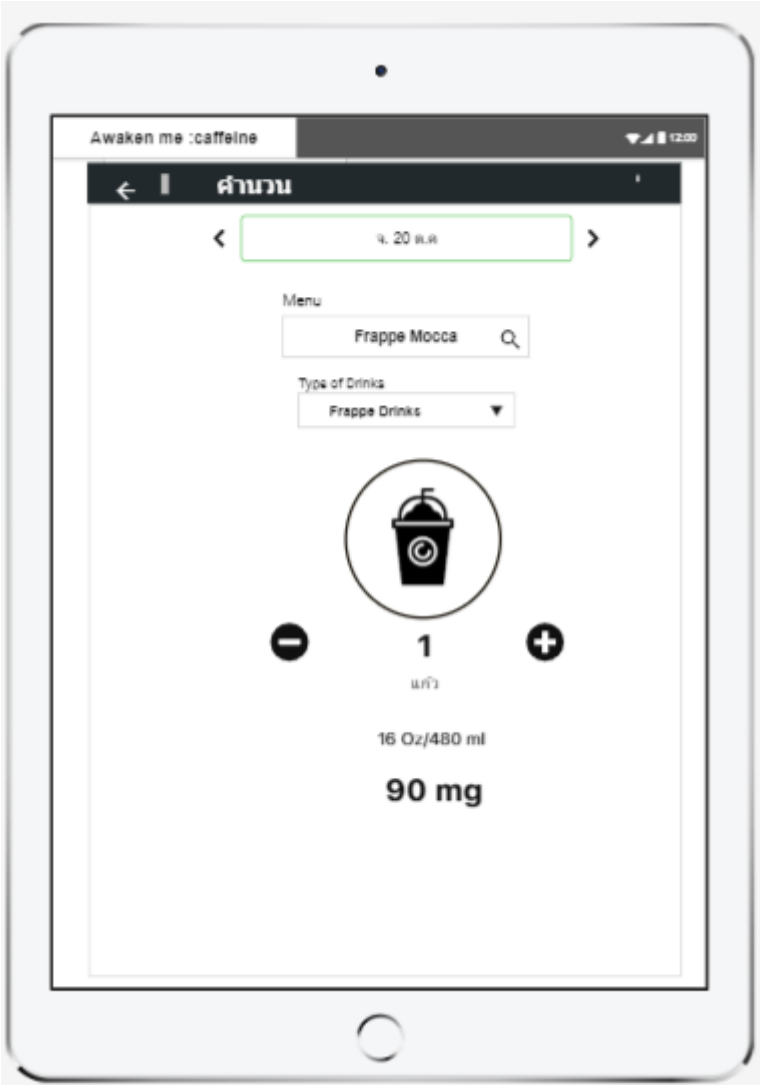

Figure 3.18: Calculate page

As the figure shown, the calculate page of frappe drink of 16 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

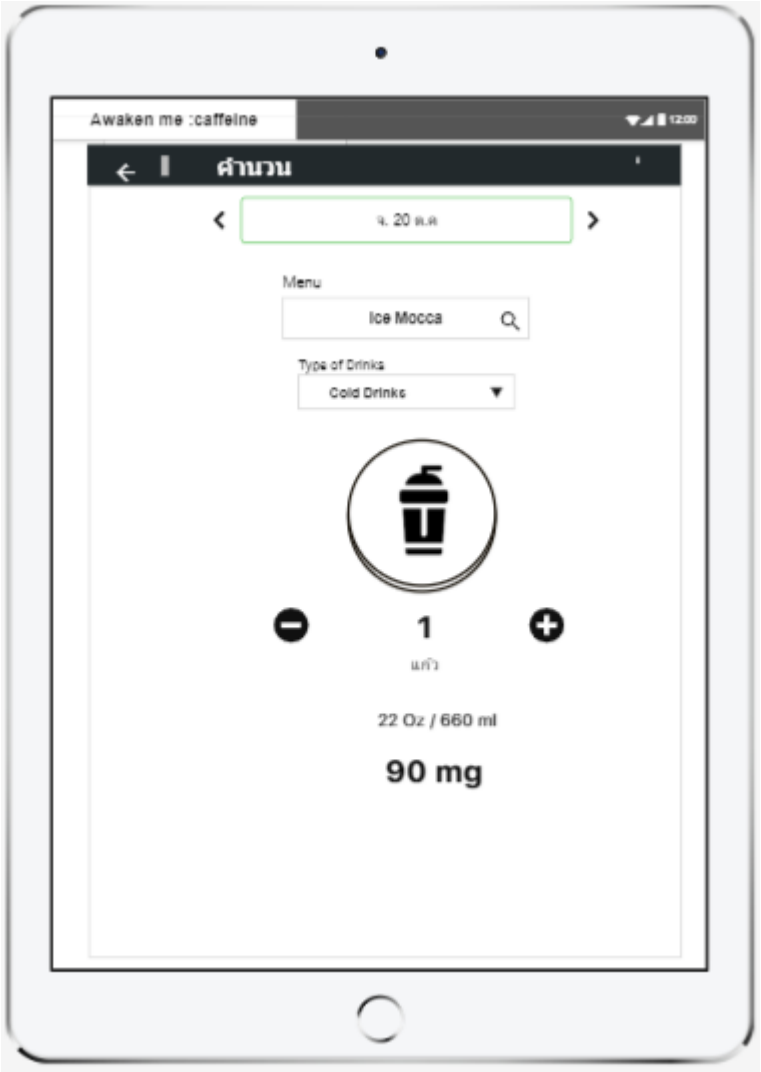

Figure 3.19: Calculate page

As the figure shown, the calculate page of frappe drink of 22 oz. that included button for press the number. User can view the result of caffeine then click the link to go to another page.

Figure 3.20: Graph daily page

As the figure shown, the daily page that included information such as graph, number of glasses. User can view the result of caffeine then click the link to go to another page.

Figure 3.21: Graph weekly page

As the figure shown, the weekly page that included information such as graph, number of glasses. User can view the result of caffeine then click the link to go to another page.

Figure 3.22: Graph monthly page

As the figure shown, the monthly page that included information such as graph, number of glasses. User can view the result of caffeine then click the link to go to another page.