DESIGN DOCUMENT

CPE 333 Software Engineering

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1. Introduction

1.1 Purpose of the design document.

This software design document provides a description of the architectural and system design of Horo application in detail. The document's primary propose is to define technical vision of how business requirements will be constructed. Moreover he document facilitates communication and understanding of the system by providing several views of the system design.

According to a quarter of Thai people are believe in fate and fortune. This application will serve comfort to users. Nowadays mobile phone is almost a 33 part of human body so we convert fortune telling in many methods into users hand in one application. Users will save the fortune teller cost. They don't have to go to see fortune teller anymore. HOROP serve 5 main foretell methods to serve user needs.

1.2 Document Conventions.

Term	Definition
HOROP	Our application name.
Exorcise	A rite to eliminate or suppress a malign influence or negative feeling.
Foretell	To describe future before it happens.
Fortune Card	A card that can describe the future and user's fate.
Fate	A power that some people believe causes and controls all events.

1.3 Project Background and Scope.

The purpose of this project is about creating the application about horo application, which can predict the destiny of user. There would be consisted of many features that fortune teller should have, e.g. the fortune cards, the information of each zodiac-year and stars, and it might have the verse of the Day from holy bible to soothe people's mind from the bad situation. We don’t create something that related to death because we're not the god.

Application which include 5 foretell methods. Our application are suitable for android and OS.

1. Users have to insert birth date and connect to Facebook first before enter the application.

5 foretell methods are included.

1) Fortune card: This function will let the user pick the card randomly. Then all of the cards will fortune the user fate for any reason that user pick each card. (Select one up to two cards)

2) God quotes: A quote from the god delivery directly into users hands every single day. Which contain a warning message, fortune teller, encouraging quotes all from the god.

3) Zodiac: Fortuning user’s fate by their zodiac in each month.

4) Birthday horoscope: This detailed astrological analysis of user day of birth can reinforceuser personality, true love, destiny, suitable jobs.

5) Exorcise: Suggest the best solution for user to exorcise their fate. This function also include the location that user can exorcise there by connecting to google map.

2) Users can share their fate and foretell result on Facebook.

3) Our application will have a monthly update. Every foretell will be refresh and have a new result.

1.4 Document Overview

For this document, Software design document we have separate into 3 part. First part of this document design provide information of information of internal and temporary data structure. Database description of database attributes. Second part is architectural design. This part provides information on each module in Holo application the last part is about process manual specification

Introduction

-Purpose of the Design Document describe about the architectural and the system design.

-Document Conventions tell the meaning all of the abbreviation that use in our application.

-Project background and scope of the project describe about what our software can do.

Data/Class Design

-To describe all of data structures including internal, global, and temporary data structures.

- Internal software data structure describe about the data that store in our application.

-Database Description database that use in this application we use SQLserver v2014.

Architecture Design

Architectural Design (Level1) UML Architectural Context Diagram showing that how module in application working with each other. Process Manual Specifications Project Plan and Monitoring Method - how that how we plan for doing this project's schedule and what we have updating and done.

Employee work/Task assignment process - showing a feature for collecting data in project.

Final project cost method with example -so we can estimate the cost of projects by direct and indirect cost.

2. Data / Class Design

A description of all data structures including internal, global, and temporary data structures.

2.1 Internal software data structure

When the add or update button is pressed from the registration, or other information that have to be kept in database, the information in those text fields is directly sent to the database for add or update.
For accessing or viewing, data is fetched directly from the SQL server 2014 database to the java database object is displayed directly on the screen.

When SQL returns the results of the query sent to it by Java, the results of the query will be passed back to Java using the built in data structures.

2.2 Global data structure

We are not using any global data structures at this time.

2.3 Temporary data structure

We're not using any temporary data structure. As data is being stored in SQL server 2014 all the intermediate data it being stored by the DBMS

2.4 Database description

A database will be used to store all of the information (User Facebooks account, User’s information, Zodiac’s information, God quote and place for exorcising) used to create the reports needed. The database is made up of four tables. User Info, zodiac, god Quote and exorcising. The relationships for these tables are shown below. God Quote and exorcising have no relationships to the other two tables.

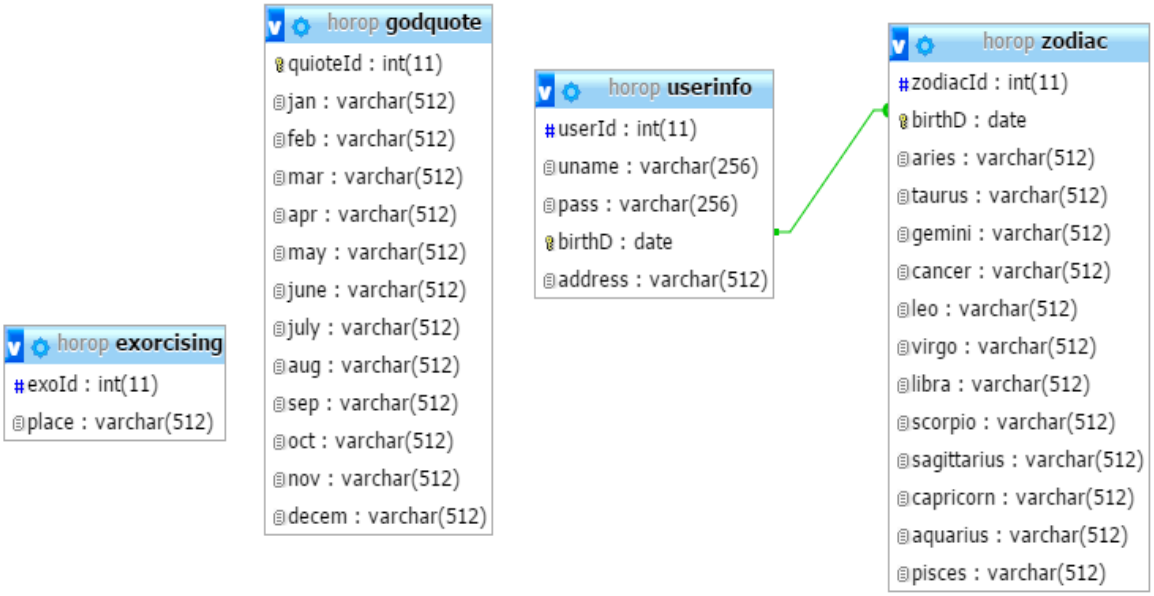


Table Name: exorcising

Attributes: exoId, place

Description: This table keeps the address of the place for exorcing.

Table Name: god quote

Attributes: godquoteId,jan,feb,mar,apr,may,june,july,aug,sep,oct,nov,decem

Description: This table stores the information of the verse of god in each day from bible.

Table Name: user info

Attributes: user ID, uname, pass, birthD, address

Description: This table keeps the information of user.

Table Name: zodiac

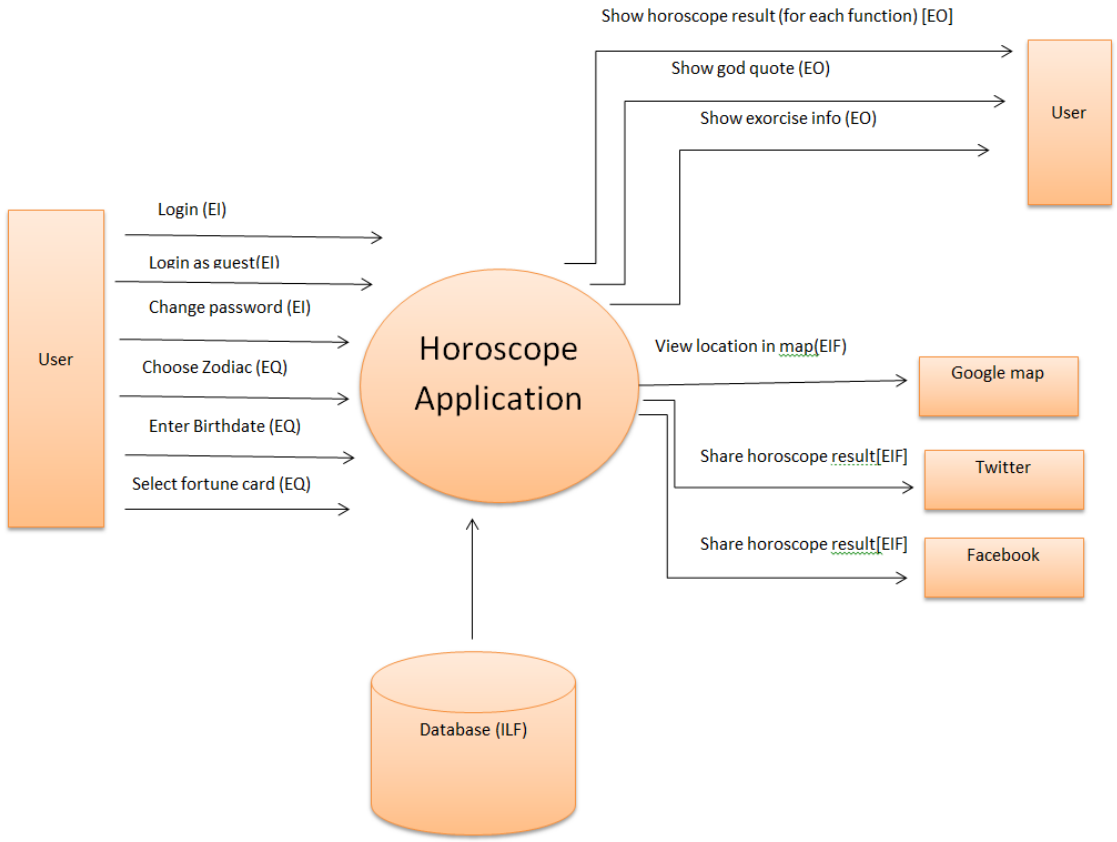
Attributes: zodiacId,birthD,aries,taurus, gemini, cancer, leo, virgo, libra, scopio, Sagittarius, Capricorn, Aquarius, Pisces.

Description: This table keeps the foretelling prediction of each zodiac.

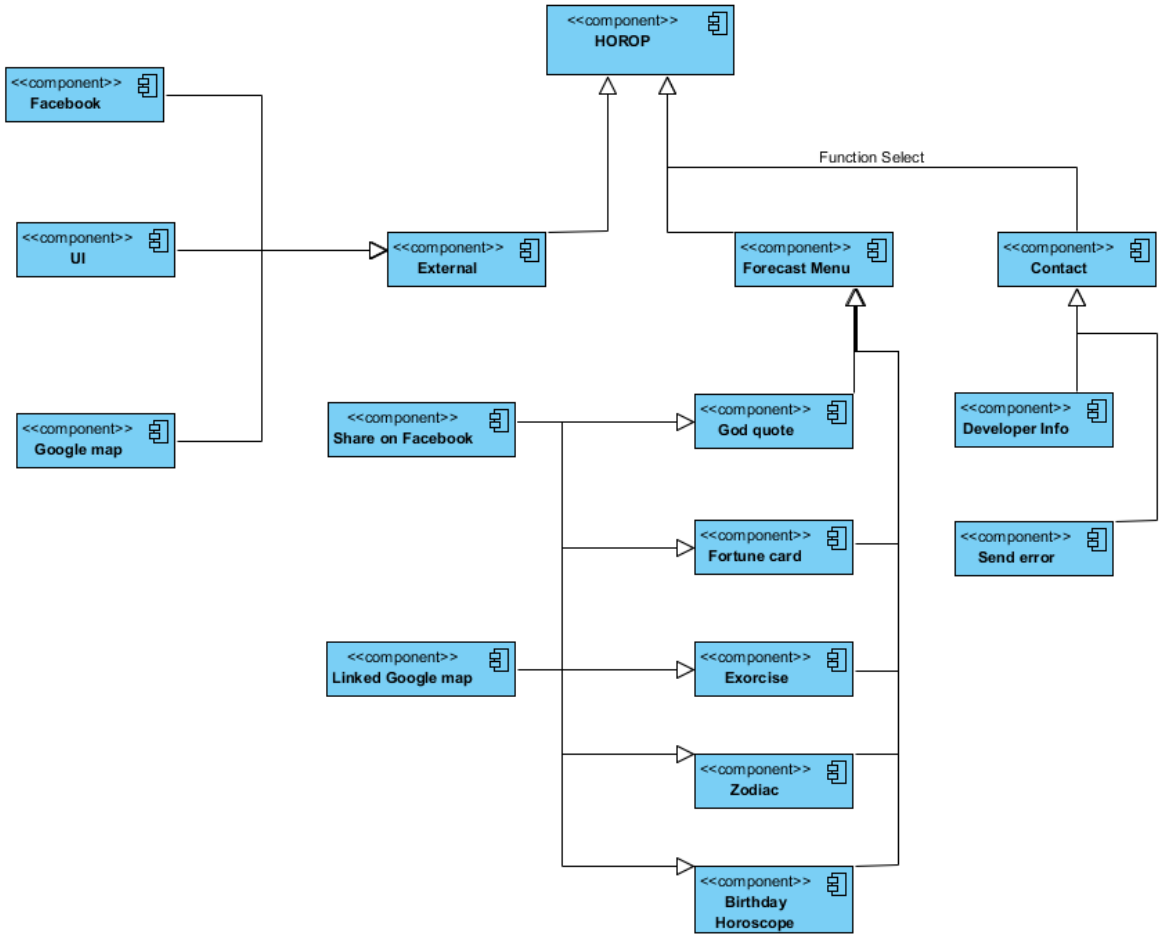
3. Architural Design

3.1 Architectural Design (Level1)

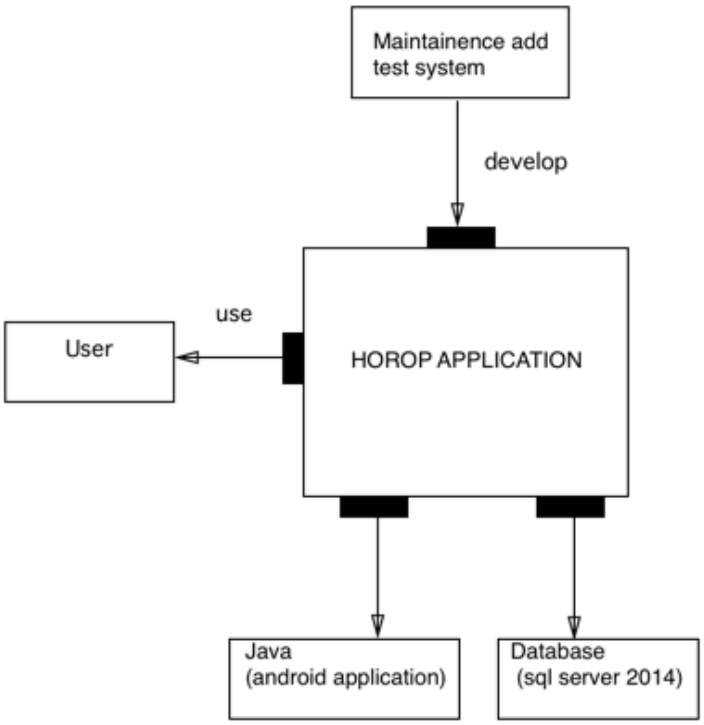
A.UML Architectural Context Diagram



B.UML Component Diagram



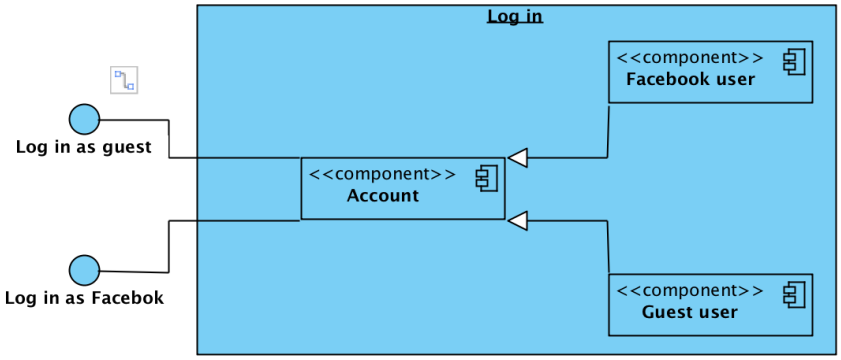
UML Architectural Context Design



3.2 System Architectural Design (2Level)

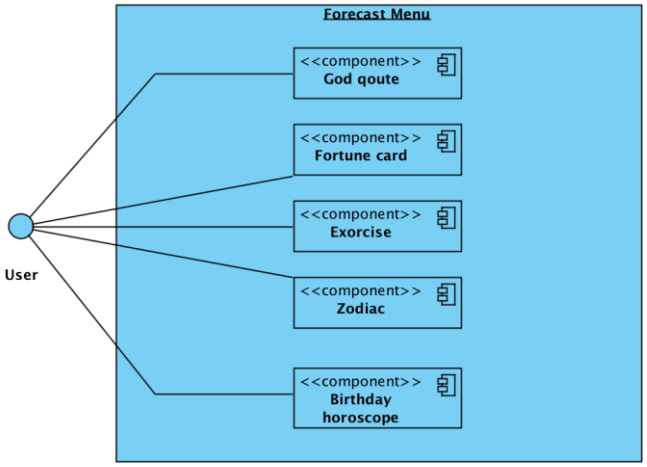
Log in

- Log in as guset for the user that does not want to sign in with facebook account or not have facebook account.
- Log in as Facebook for user that have facebook account or want to share their result to social network.



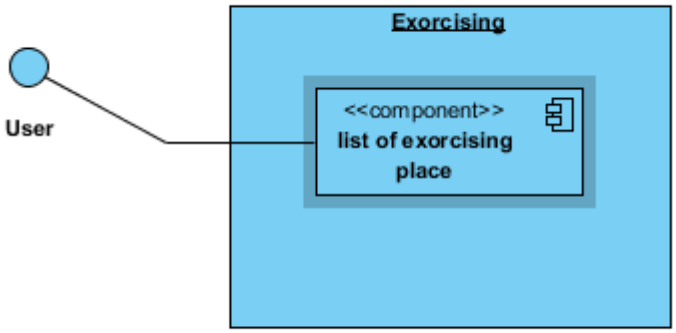
Forecast menu

- God quote is to deliver a good qote to the user by directly. Which contain a waring message, fortune teller, encouraging quotes all from the god.
- Fortune card let the user pick the card randomly. Then all of the cards will fortune the user fate for any reason that user pick each card.
- Exorcise this function will suggest location to the user for exorcise their fate by using google map.
- Zodiac Fortuning user's fate by their zodiac in each month.
- Birthday horoscope This detailed astrological analysis of user day of birth can reinforce user personality, true love, destiny, suitable jobs.



Location

- This feature user can see the location that near least user for exorcise thier fate



Process Manual Specification

1. Project Plan and Monitoring Method

2. Employee Work / Task Assignment Process

Work Phase	Programmer Days	Project manager Days
Software Development	94	0
Software requirement analysis and design	0	5
Project management	0	5
Integration testing	0	3
Manual	4	1
Training	1	1
Software delivery	4	1
Maintenance	10	0
Total day	113	16
Cost baht/day	4200	6000
Total cost/type	395000	73205
Total price		468205

3. Final Project Cost Method with Example

Total Cost Estimation Table

Description	Cost
4 programmers	95000/month
1 project manager	25000/month
water utility	320/month
electric utility	1358/month
internet	790/month
Building rent	17000/month
Analyser	10000/month
Housekeeper	9000/month
total cost	158,468/month

Maintenance Estimation Cost

Month 1	2 day/month
Month 2-12	9 day/month
Total Day:	11

5 User interface design

A description of the user interface design of the software is presented.

5.1 Description of the user interface

The user interface (UI) is web-based and provides a visual front-end to our client

- Main Menu Page

The main menu page allows a user to navigate to check your destiny, zodiac information, verse of god, fortune card (tarot card) and place for exorcising.

- Today Destiny Page

The Today Destiny page contains fields for the user to check user destiny with information to search for specific prediction. It also contains a navigation menu on the side that will allow the user to quickly move to other pages.

- Zodiac information Page

The Zodiac information page has the information of each zodiac.

- God quote Page

The God quote contains information of verse of god to motivate client in each day to deal with your life. The god's quote can sooth people when they get hurt in the life or depress from something. It's the worth in mind. This page also contains an image of place that it's relax when stare at It., navigation bars to move into other pages by touching it.

- Tarot card Page

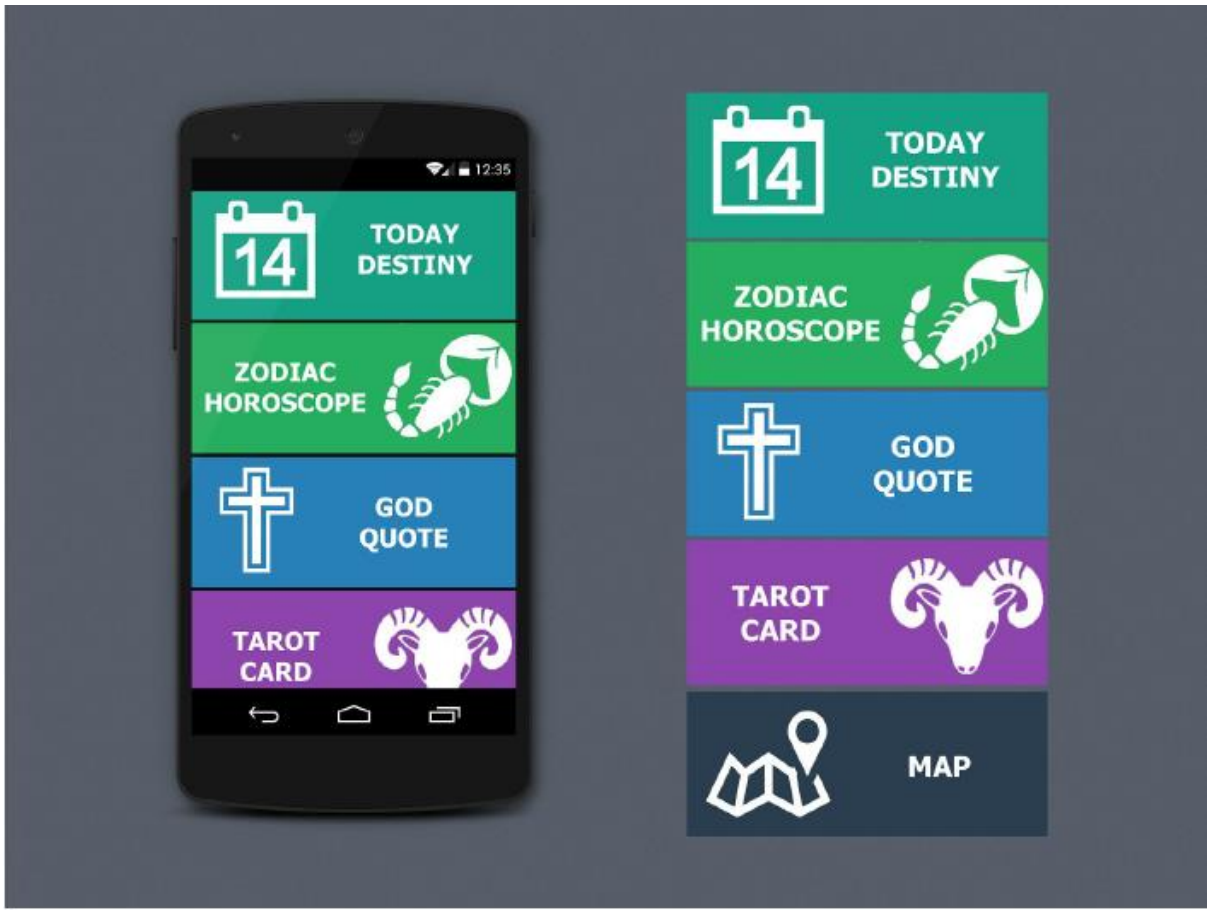
The Tarot card page will be a game to select cards to predict your destiny. This activity doesn't force client to do, it depends on each individual belief. From this page you can also move to other pages by navigation.

- Plan for exorcise Page

The Plan for exorcise page will have the places to exorcise as lists by using google map involved. This would help clients to figure out nearby places to increase their luck (personal belief) faster.

5.1.1 Screen Images

Shown here are the interface screens of the Horop application.



Main menu

5.1.2 Objects and Actions

The main object on all of the pages is the navigation menu that will allow the user to get to the main menu, the client search and select the menu. Depending on what page you are on there may be more options in the navigation menu. There is also a game in fortune card page that allow user to pick one or two card and foretell your future, displaying the results on a screen. For the exorcising page, this page

also has a search bar to find the place to exorcise through google map. Other pages are just the information of zodiac, and the foretell of user's birthdate.

5.1.3 Interface design rules

The only standards that we are currently following are to conform to the general color scheme of cool color. On the main menu page, we use the card component, idea from google, which is a quickly scan able list and an appropriate way to represent the separated content. We've to create an application for user not developer, following the golden rules. The golden rules are formulated as follows.

1) Strive for consistency.

Consistent sequences of actions should be required in similar situations; identical terminology should be used in prompts, menus, and help screens; and consistent commands should be employed throughout.

2) Enable frequent users to use shortcuts.

As the frequency of use increases, so do the user's desires to reduce the number of interactions and to increase the pace of interaction. Abbreviations function keys, hidden commands, and macro facilities are very helpful to an expert user.

3) Offer informative feedback.

For every operator action, there should be some system feedback. For frequent and minor actions, the response can be modest, while for infrequent and major actions, the response should be more substantial.

4) Design dialog to yield closure.

Sequences of actions should be organized into groups with a beginning, middle, and end. The informative feedback at the completion of a group of actions gives the operators the satisfaction of accomplishment, a sense of relief, the signal to drop contingency plans and options from their minds, and an indication that the way is clear to prepare for the next group of actions.

5) Offer simple error handling.

As much as possible, design the system so the user cannot make a serious error. If an error is made, the system should be able to detect the error and offer simple, comprehensible mechanisms for handling the error.

6) Permit easy reversal of actions.

This feature relieves anxiety, since the user knows that errors can be undone; it thus encourages exploration of unfamiliar options. The units of reversibility may be a single action, a data entry, or a complete group of actions.

7) Support internal locus of control.

Experienced operators strongly desire the sense that they are in charge of the system and that the system responds to their actions. Design the system to make users the initiators of actions rather than the responders.

8) Reduce short-term memory load.

The limitation of human information processing in short-term memory requires that displays be kept simple, multiple page displays be consolidated, window-motion frequency be reduced, and sufficient training time be allotted for codes, mnemonics, and sequences of actions.

5.2 COMPONENTS AND DEVELOPMENT TOOLS USED.

1. Photoshop
2. Mockup
3. Sketch
4. Illustrator

5.3 SCREEN IMAGES AND DESCRIPTION.

We are going to be developing this website with ASP.net and using SQL to query the database.

6. OTHER INTERFACES DESIGN

- User Interface

○ the user interface for the Horop will be a simple application to use. A prototype has been created that represents the final interface for the system in terms

Of look and feel. The user interface will be limited to the types of controls that can be generated using Java. The user interface code will be generated by

Individual developers, as well as by the Android Studio.

○ there will be five “separate” user interfaces. One will be the fortune card to predict user destiny. The second user interface will be a separated prediction

Of each user zodiac. The third one will be the verse of god to motivate user when he/she has a poor day or fail from something. The fourth thing will be the birthday prophecy and the last point will be the place for exocising bad luck. These organizations will be depended on various belief of user.

- Hardware Interface

The Hardware Interfaces of the system are handled by any smart device that has either Android or IOS operating system.

- Software Interfaces

Operating System

- This application is being designed to run on Android and IOS

Webserver

- This software will store information in database using SQL server 2014 Enterprise. These information are listed below
  - User Facebook account
  - User's information
  - Zodiac's information
  - God quote

Page Layout Tool

- Our team has decided to use Adobe Photoshop CS6 to decorate our interface, page and the entire layout because this program provides the many tools for arranging our concept of Horop application

- Communication Interfaces

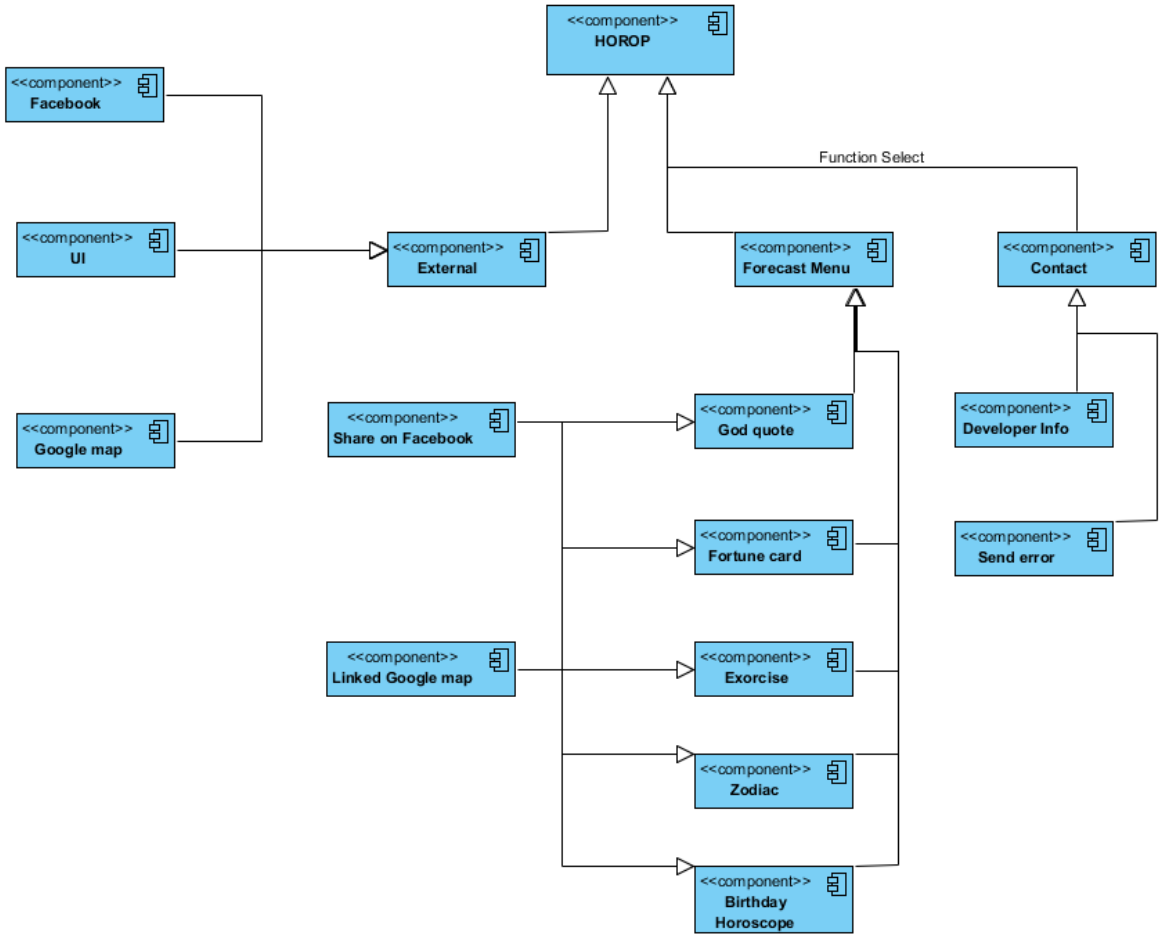
Web Interface

- This application will be accessed the internet when user does login using Facebook and another case is finding place for exorcising via

Google map

Update Request Facebook

- Horop will be able to ask user to share the result after playing in each feature on Facebook



4. Component-Level Design.

4.1. USER COMPONENT

We divide user component to one big component then we divide into 2 subcomponents

1) User authentication from Facebook Horop will receive user profile from Facebook through their login stored in to database as temp. (Name, current location, Birthdate)

2) Guest authentication if user log in with guest this component will take a part for create a simple user profile by let they insert their birthdate.

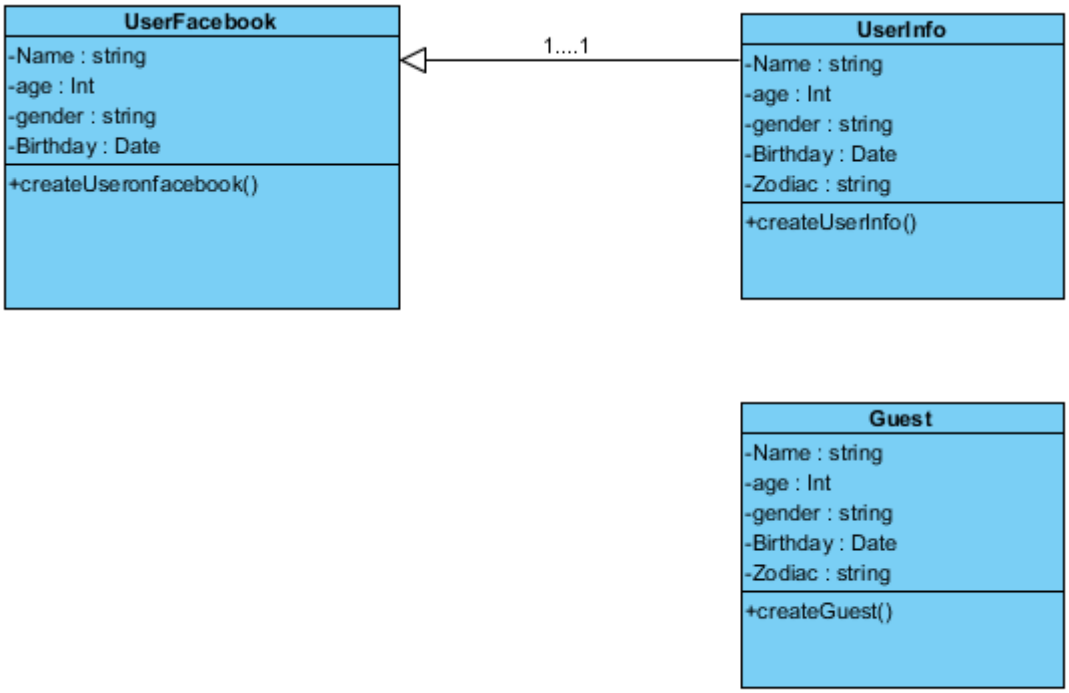
4.1.1. PROCESSING NARRATIVE (PSPEC) FOR COMPONENT

When we receive user profile from their Facebook account. Then the object that support this data will be created. In this object will contain user first name, last name, birthdate and zodiac. This information will be encrypted. This object will be called every time that program request.

4.1.2. PROCESSING DETAIL OF USER COMPONENT

The mainly use of user component is for storage and retrieval. To save set data into the database and retrieve from the database, manipulate data to communicate in server.

1). Design Class hierarchy for component 1



2) Restrictions/limitations for user component

The component can only be called when the program is request a data for horoscope function or the other class required for the function.

3) Performance issues for user component

Connection will be called when the program sync information from Facebook. It may cause a delay.

4). Design constraints for component 1

The information that sync from Facebook can't be modified.

5) Processing detail for each operation of component 1

5.1) Processing narrative (PSPEC) for each operation

User Facebook Class

- createUseronFacebook(): FacebookUser
  CreateUseronFacebook () function will collect all user information from user profile on Facebook then store in package and prepare for sync.

User Info Class

- createUserInfo(Name: string, age: Int, gender: string, birthday: string) : UserInfo
  Sync user profile from Facebook and store it as user info (user information) for support horop function that request.

Guest Class

- createGuest() : Guest
  Let user enter their information to support the Horop function that request and store it as Guest package for use only one time

5.2) Algorithmic model (e.g., PDL) for each operation

UserFacebook Class

- Create connection to Facebook. Then collecting all user profile store as useronFacebook (createUseronFacebook function)

UserInfo Class

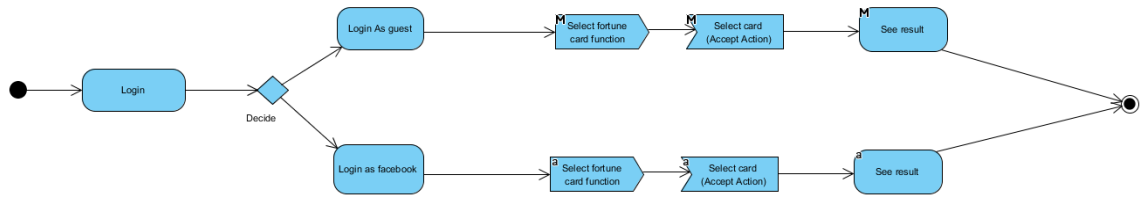
- Sync user profile from Facebook. Then store in database as UserInfo(createUserInfo() function)

Guest Class

- Let user input their information. Then store as guest for one time use.(createGuest() function)

4.2. Fortune card component

4.2.1 PROCESSING NARRATIVE (PSPEC) FOR FORTUNE CARD COMPONENT

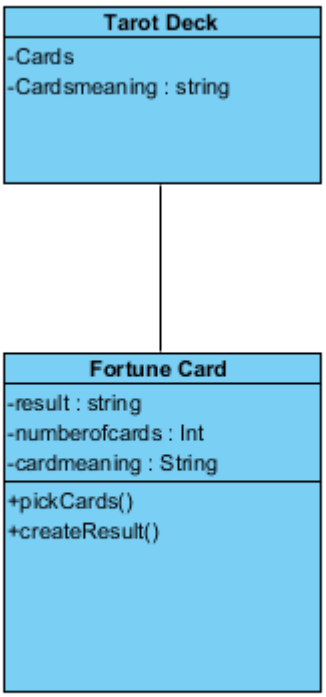


The fortune card component contain the fortune card and tarot deck class. The tarot deck contains the data of card and functions, which are unique to the card. The responsibilities of this component is to declare variables of basic data of the fortune cards and implementing functions which set data retrieve from the database.

4.2.2. PROCESSING DETAIL OF FORTUNE CARD COMPONENT

The mainly use of fortune card component is to retrieve data from the database (meaning of each card). The meaning will relate to a card that user selected, users may select in pairs so the meaning of a cards will be mix and generate a new meaning.

1). Design Class hierarchy for fortune card component.



2) Restrictions/limitations for fortune card component

The component can only be called when user use the fortune card function and select the card. User can't add a new card or data into database.

3) Performance issues for fortune card component

The component information will stored in the database. The performance will occur when user select one or a pair of cards

4). Design constraints for fortune card component

The card must be originally and not edited.

5) Processing detail for each operation of fortune card component

5.1) Processing narrative (PSPEC) for each operation

Tarot Deck Class

- N/A

Fortune Card Class

- pick Cards(Cards: string): Pickcard

  User select between on to two cards to fortune user fate

5.2) Algorithmic model (e.g., PDL) for each operation

Tarot Deck Class

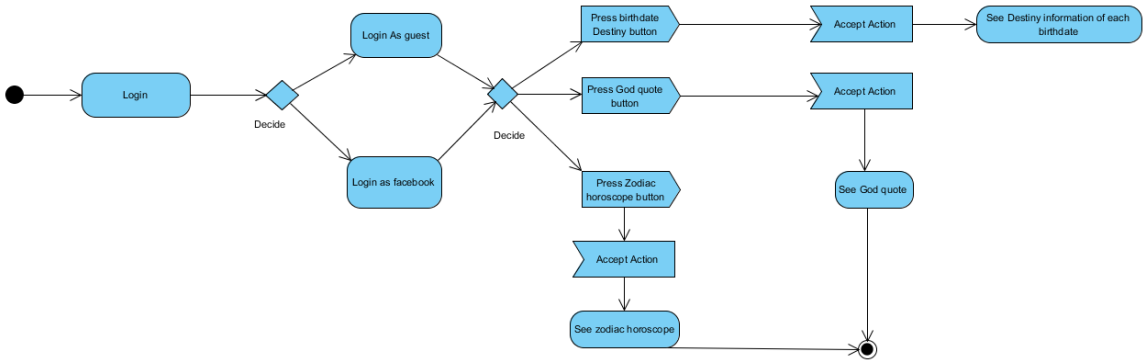
- Contain meaning of each card

Fortune Card Class

- pickCards() will let user select between one to two cards.
- createResult() will fortune fate from card meaning to calculation and generate results.

4.3. Description component 3 (Daily fortune component)

4.3.1 PROCESSING NARRATIVE (PSPEC) FOR COMPONENT 3



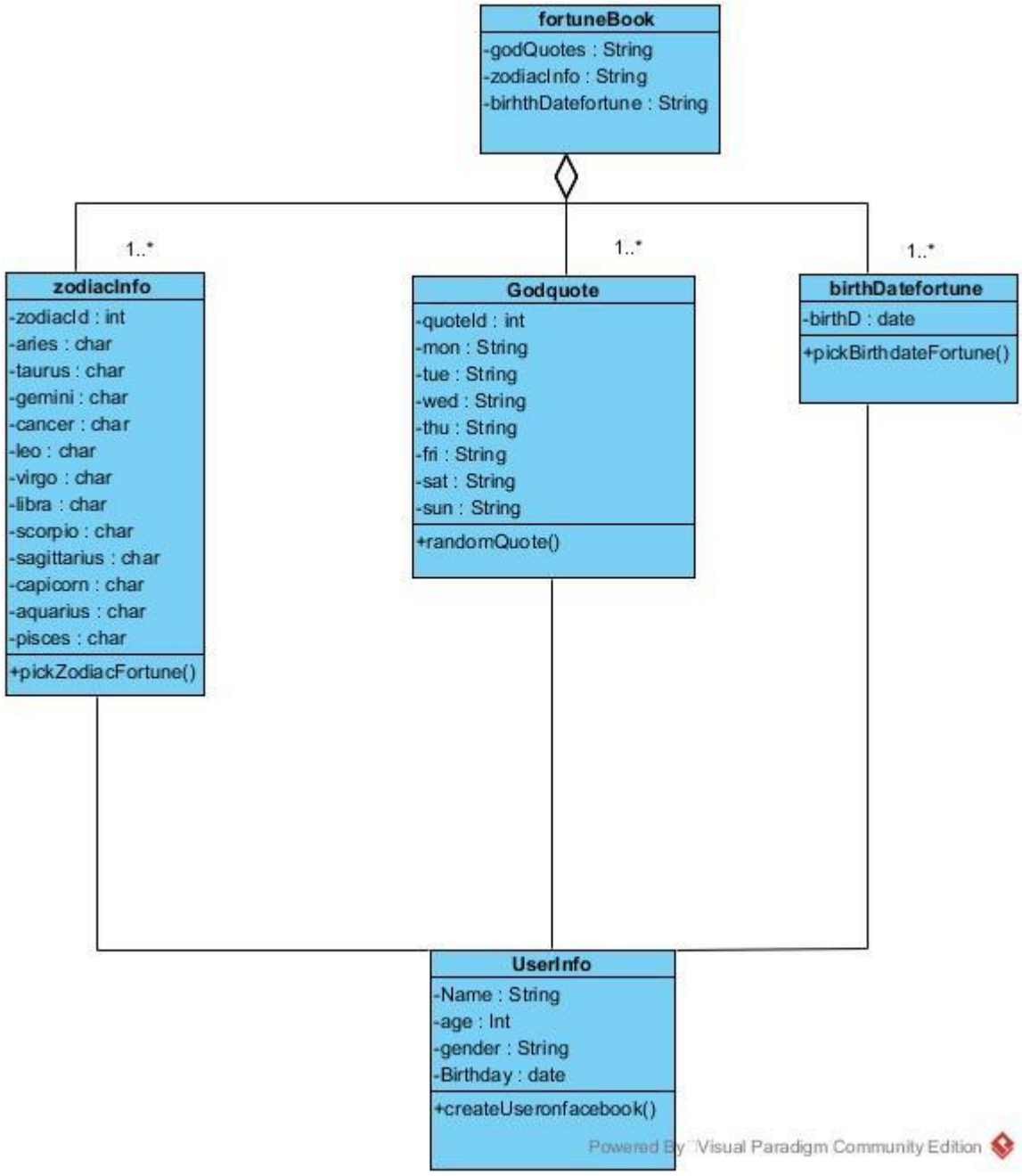
This component gathers the quotes of god, destiny of each person's birthdate and zodiac horoscope information. Sometimes, you might think that your life is over or you might be depressed from something that break you down. God quote can help you to persuade your aim by letting you know the truth of thing and preparing the way to overcome the badness in your mind. For birthdate destiny information, users may know their destiny by putting birthdate. These information are

the individual belief. Moreover, Horop application provide zodiac information, which explain each characteristic and destiny of zodiac in that time.

4.3.2. PROCESSING DETAIL OF COMPONENT 3

The mainly use of Daily fortune component is to retrieve birthdate of each user to be fortune, user's zodiac to let application tell their destiny, and God's quote are involved to be a part of it.

1). Design Class hierarchy for god quote component.



2) Restrictions/limitations for component 3

User are not allowed to see other days' quote, for example, if today is Monday, user would see only one verse that shows on Monday, but other days wouldn't be seen.

3) Performance issues for component 3

n/a

4). Design constraints for component 3

See 4.3.2.2

5) Processing detail for each operation of component 3

5.1) Processing narrative (PSPEC) for each operation

God quote class

- randomQuote(): verse

-This operation is public and no input parameter. The process is random the quote from fortuneBook, which includes god's quote, to show on screen in each day as a string return.

zodiacInfo class

- pickZodiacInfo(int numZodiac): zodiacInfo

-This operation is public and one parameter, which these numbers are 1 through 12. The return is string type show on screen.

birthDatefotune class

- pickBirthDateInfo(Date bidrthD): birthdateInfo

-This operation is public and there is birthdate input. The return is string type to show each information of each person's birthdate.

5.2) Algorithmic model (e.g., PDL) for each operation

Godquote class

- For randomQuote operation, this state begins when the date is changed, and then god's quote would be randomized to pick one verse show on screen.

zodiacInfo class

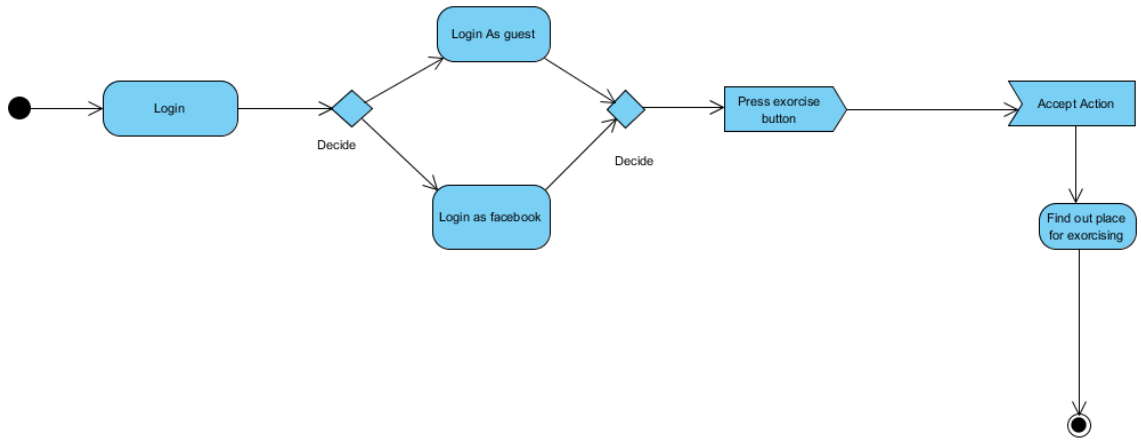
- For pickZodiacInfo operation, users click their wanted zodiac and the detail of each would be shown.

birthDatefotune class

- For pickBirthDateInfo operation, this state allows user to fill their birthdate and the detail of each birthdate would be displayed.

4.4. Description component 4 (Exorcise component)

4.4.1 PROCESSING NARRATIVE (PSPEC) FOR COMPONENT 4

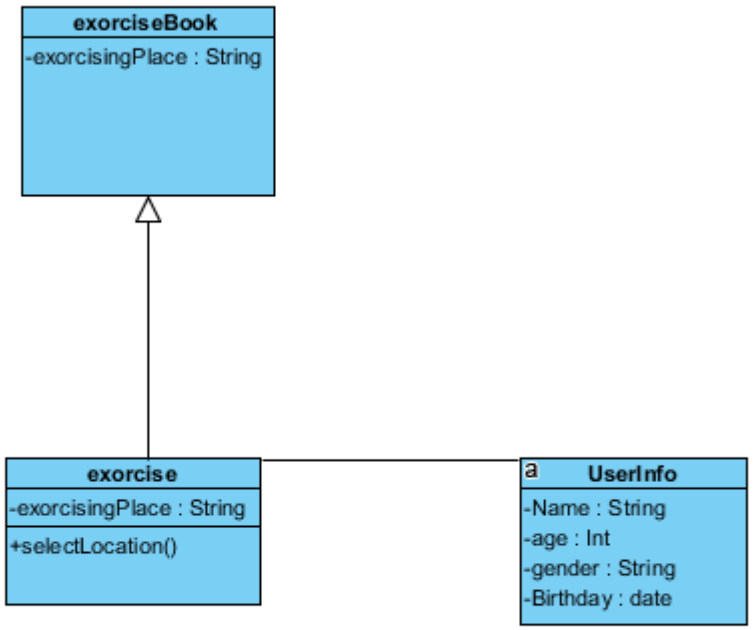


The exorcising component contains the place to exorcise for each user to figure out a nearby location or a proper exorcising location. Perhaps, people want something as the spiritual anchor because they meet the bad situation in their bad day and think they can't find the light. Exorcing is another alternative to revise their mind being better. Horop application are emphasized on this situation.

4.4.2. PROCESSING DETAIL OF COMPONENT 4

The mainly use of exorcising component is to retrieve a place from user and find out a nearby location of user.

1). Design Class hierarchy for component 4.



2) Restrictions/limitations for component 4

Users aren't allowed to fill their wanted exorcising place because the application provides.

3) Performance issues for component 4

Connection will be called when the program sync information from Google Map. It may cause a delay.

4). Design constraints for component 4

There must have internet connection during using Horop application.

5) Processing detail for each operation of component 4

5.1) Processing narrative (PSPEC) for each operation

Exorcise class

- selectLocation(String place): exorcisingPlace

-This operation is public and one parameter, which recieves input from user's selection. The return is string type show on screen.

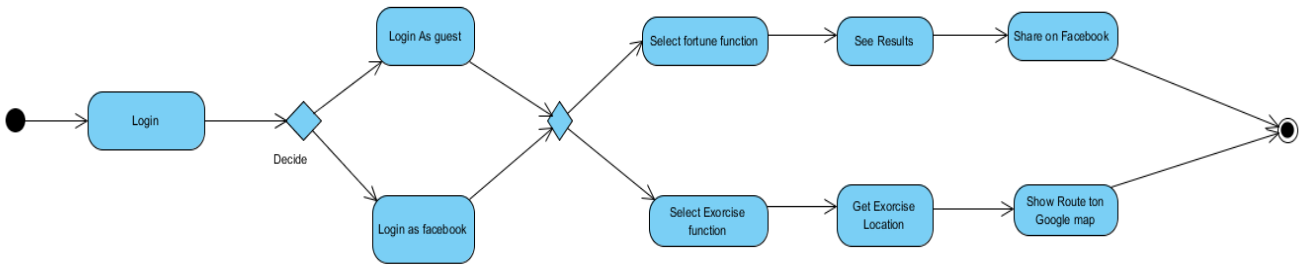
5.2) Algorithmic model (e.g., PDL) for each operation

exorcise class

- For selectLocation operation, the exorcising places are provided as dropdown list to let users select their location. Then, the string of location would be sent to google map to figure out a nearby place or a proper exorcising location of user location.

4.5. External component

4.5.1 PROCESSING NARRATIVE (PSPEC) FOR EXTERNAL COMPONENT

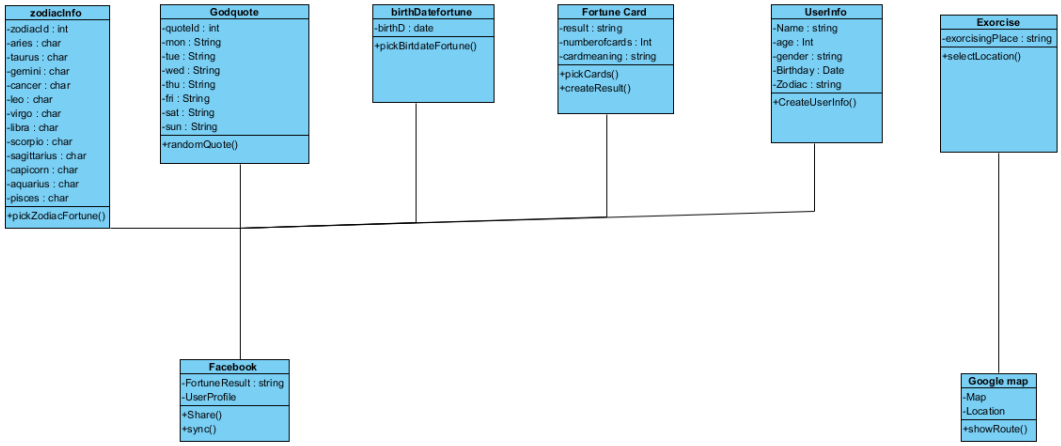


The external component contain userinfo and every fortune function class. The responsibility of this class is to establish a connection to external part. To retrieve result from database and share on Facebook also include the google map to show the route to exorcise location

4.5.2. PROCESSING DETAIL OF EXTERNAL COMPONENT

The mainly use of external component is to establish a connection to internet. This component need an internet connection to share fortune result on Facebook and show the path to exorcise location on exorcise function.

1). Design Class hierarchy for External component.



2) Restrictions/limitations for External component

User can only share on Facebook with the account that they have login. This component will be deactivate if there were no internet connection.

3) Performance issues for External component

If the internet connection was not stable it may cause a delay or crash.

4). Design constraints for External component

There must have an internet connection all the time. Horop application can connect only to Facebook and Google map.

5) Processing detail for each operation of External component

5.1) Processing narrative (PSPEC) for each operation

Facebook class

- Share(String package): packageOut

  -This operation is public and has one parameter as a package. The return is formed as a package either to encapsulate chunk of data, sending out to post on Facebook.

- Sync(): message

  -This operation is public and no parameter. The process is to sync information of user by login in. The return is a string message.

Google map class

- ShowRoute(String exorcisngPlace): message

  -This operation is public and has one parameter. The return is used Google map API to find out a place in the form of location. The return is a string message.

5.2) Algorithmic model (e.g., PDL) for each operation

Facebook class

- For Share operation, this state begins by clicking a share button to post on Facebook. After this button is clicked, the chunk of data of thing that user wants to share would be combined as a package and send to Facebook using its API. Then, Facebook server receives this package posted on Facebook on social media.

- For Sync operation, this method synchronizes user's Facebook information to use in Horop application.

  Google map class
- For ShowRoute operation, Determining exorcising places that user wants to go by a drop-down list. Google map API would point out that place and show other nearby location for user.

5. User interface Design

5.1. USER INTERFACE DESIGN RULES.

The user interface design rule is based on Golden Rules. The golden rules are divided into three groups 1.Place Users in Control 2. Reduce Users' Memory Load 3.Make the Interface Consistent Each three group contain the specific rules.

Place Users in Control

1. Use modes judiciously (modeless)
2. Allow users to use either the keyboard or mouse (flexible)
3. Allow users to change focus (interruptible)
4. Display descriptive messages and text(Helpful)
5. Provide immediate and reversible actions, and feedback (forgiving)
6. Provide meaningful paths and exits (navigable)
7. Accommodate users with different skill levels (accessible)
8. Make the user interface transparent (facilitative)
9. Allow users to customize the interface (preferences)
10. Allow users to directly manipulate interface objects (interactive)

Reduce Users' Memory Load

1. Relieve short-term memory (remember)
2. Rely on recognition, not recall (recognition)
3. Provide visual cues (inform)
4. Provide defaults, undo, and redo (forgiving)
5. Provide interface shortcuts (frequency)
6. Promote an object-action syntax (intuitive)
7. Use real-world metaphors (transfer)
8. User progressive disclosure (context)
9. Promote visual clarity (organize)

Make the Interface Consistent

1. Sustain the context of users' tasks (continuity)
2. Maintain consistency within and across products (experience)
3. Keep interaction results the same (expectations)
4. Provide aesthetic appeal and integrity (attitude)
5. Encourage exploration (predictable)

5.2. Components and Development Tools

A Sketch 3 application is an application that excusive on Mac OS X platform that using for creating user interface layout of a horoscope application. Sketch 3 was design for modern graphic designer to create design and has a powerful performance. Sketch 3 gives you the power, flexibility and speed you always wanted in a lightweight and easy-to-use package. The outcome of Sketch 3 application is can be image file on png format. This outcome is fit for all mobile device.

Photoshop cs6 and Illustrator cs6 is a program of adobe. That using for creating icon in a horoscope application. There are a lot of feature that help to create an image file.

Photoshop cs 6:

- Customizable toolbar and workspaces
- Modern user experience on desktop and touch devices
- Edit once, update everywhere with Linked Assets
- Find the perfect image or graphic, fast

Ai:

- Work more visually with Smart Guides
- Illustrator Draw for Android
- Integration with the Illustrator family of mobile apps
- Capture inspiration anywhere

We can create any design that we want by using these program the outcome of both programs can be png file.

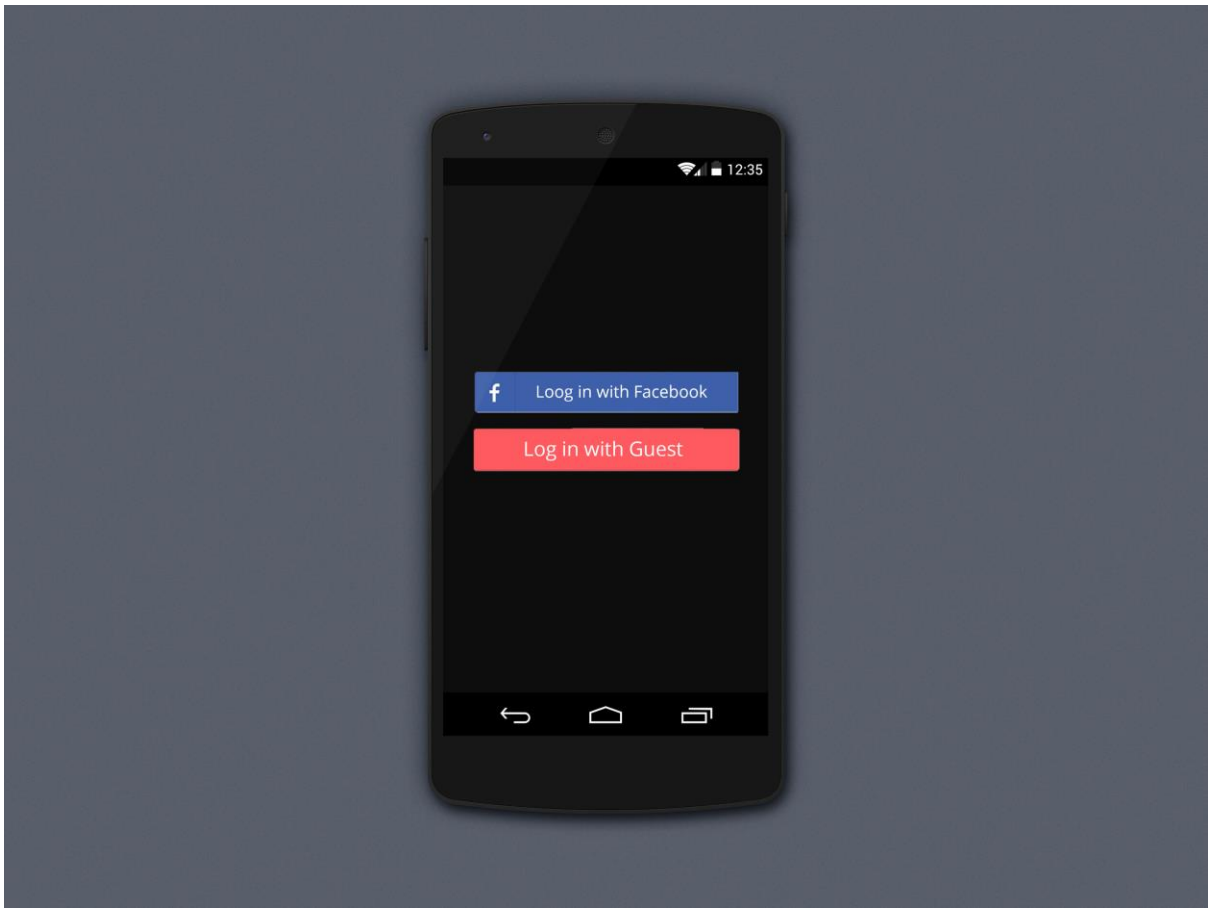
Android Studio is the official IDE for Android app development, based on IntelliJ IDEA. On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps

Important feature:

- A flexible Gradle-based build system
- Build variants and multiple APK file generation

- Code templates to help you build common app features
- A rich layout editor with support for drag and drop theme editing
- Lint tools to catch performance, usability, version compatibility, and other problems
- Code shrinking with ProGuard and resource shrinking with Gradle
- Built-in support for Google Cloud Platform, making it easy to integrate Google Cloud Messaging and App Engine.

5.3. SCREEN IMAGES AND DESCRIPTION.



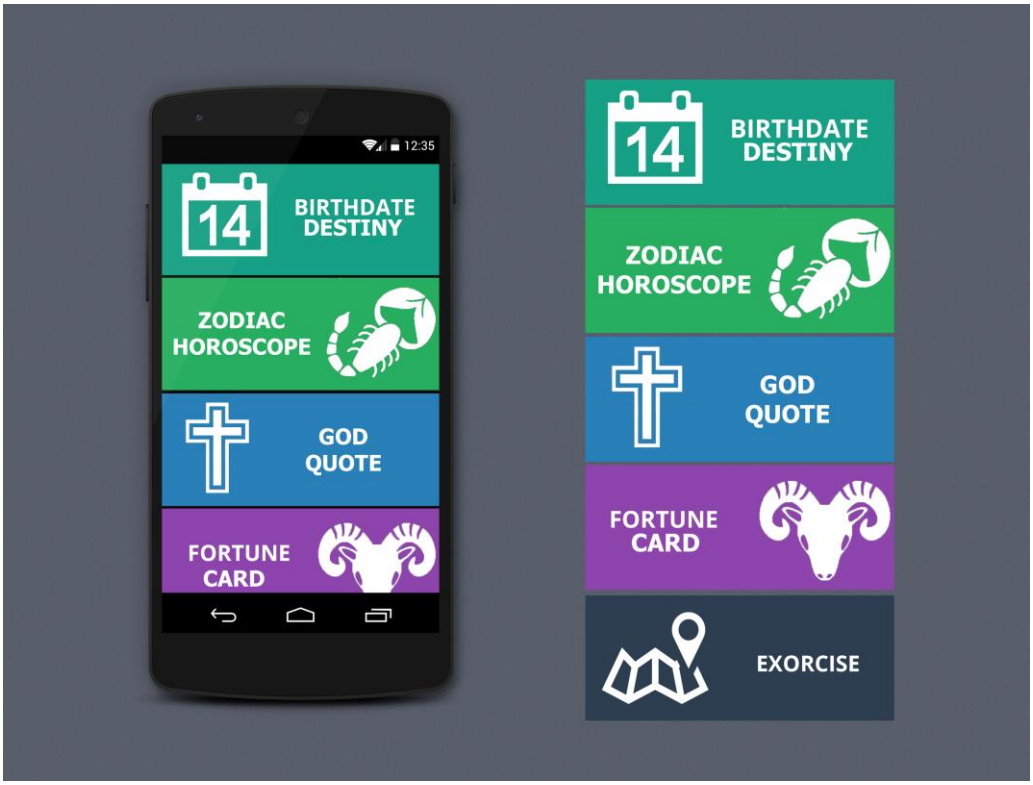
The login page of this application, show the option login with Facebook or login with guest

- Login with Facebook

  User can share the content in an application

- Login with Guest

  User can't share the content of an application



The main menu of this application, show all of the feature user can select which one that they want to do.

Menu list:

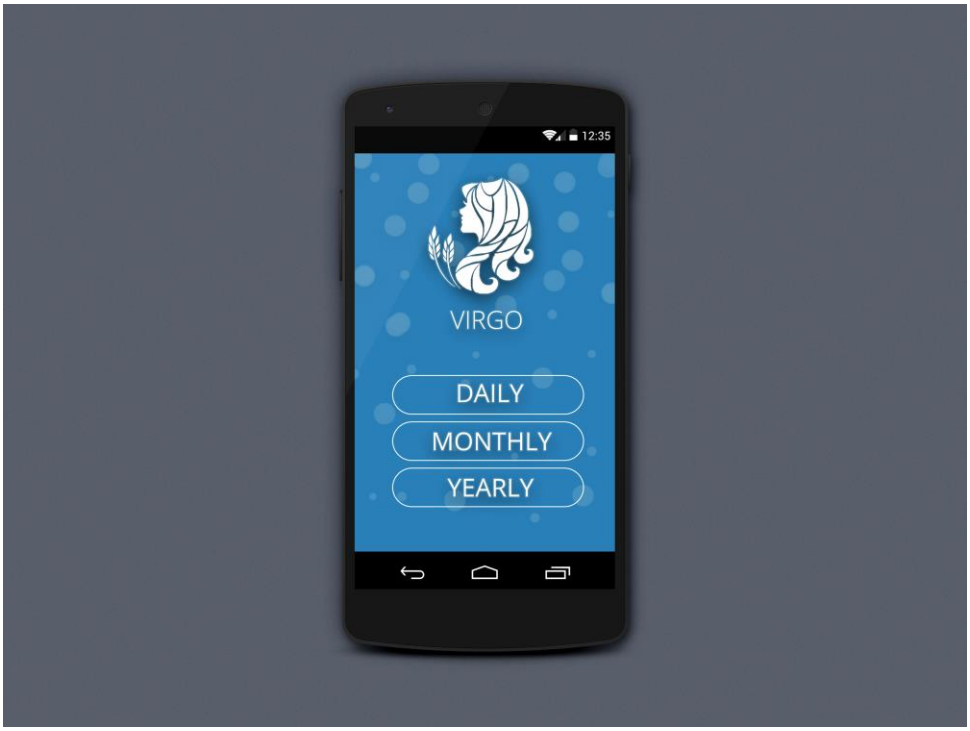
- Today destiny: Go to see today destiny. Users can go to this menu every day for checking daily-horoscope. The result will change every day.
- Zodiac horoscope: Go to see horoscope monthly. Program will random horoscope base on month. The result will depend on month the user selected
- God quote: Go to see god quote. Program will random god quote to user every time that user go ot this menu the god quote will change.
- Tarot card: Go to play tarot card. User have to choose a cart. The tarot application will give user a description of a card and also fortune quote.
- Map: Go to navigate to the nearest prophet.

The zodiac horoscope menu

User have to choose zodiac that they interested. Application will give user a horoscope depend of user choice. The list of zodiac is relate to real zodiac that consist of

- ARIES : MARCH 21 - APRIL 19
- TAURUS : APRIL 20 - MAY 20
- GRMINI : MAY 21 - JUNE 20
- CANCER : JUNE 21 - JULY 22
- LEO : JULY 23 - AUGUST 22
- VIRGO : AUGUST 23 - SEPTEMBER 22
- LIERA : SEPTEMBER 23 - OCTOBER 22
- SCOPION : OCTOBER 23 - NOVEMBER 21
- SAGITTARIUS : NOVEMBER 22 - DECEMBER 21
- CAPRICON : DECEMBER 22 - JANUARY 19
- AQUARIUS : JANUARY 20 - FEBRUARY 18
- PISCES : FEBRUARY 19 - MARCH 20

Then system will ask user to choose period that user want to see a destiny quote.

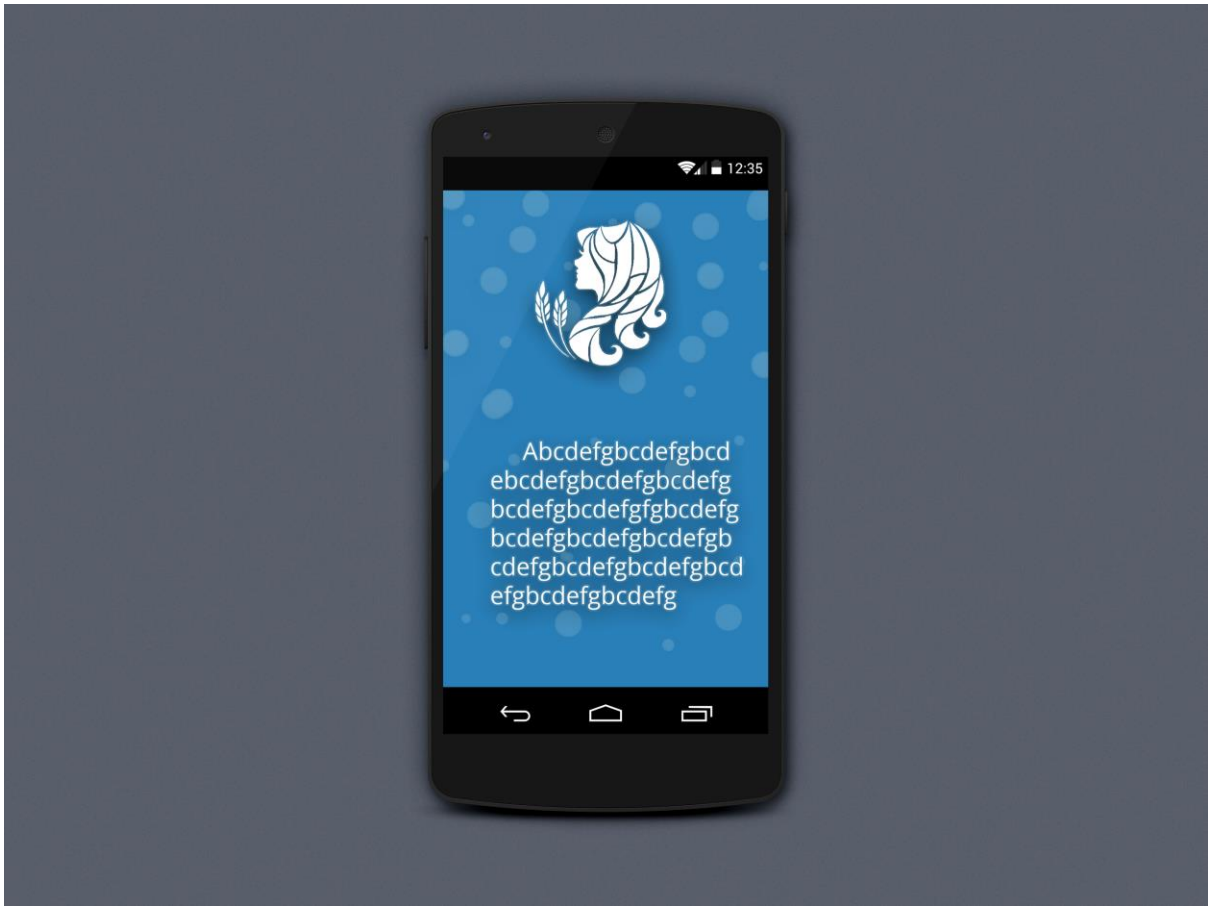


Zodiac period selection menu

System will ask user a period that user interested. There are 3 choices that user can choose.

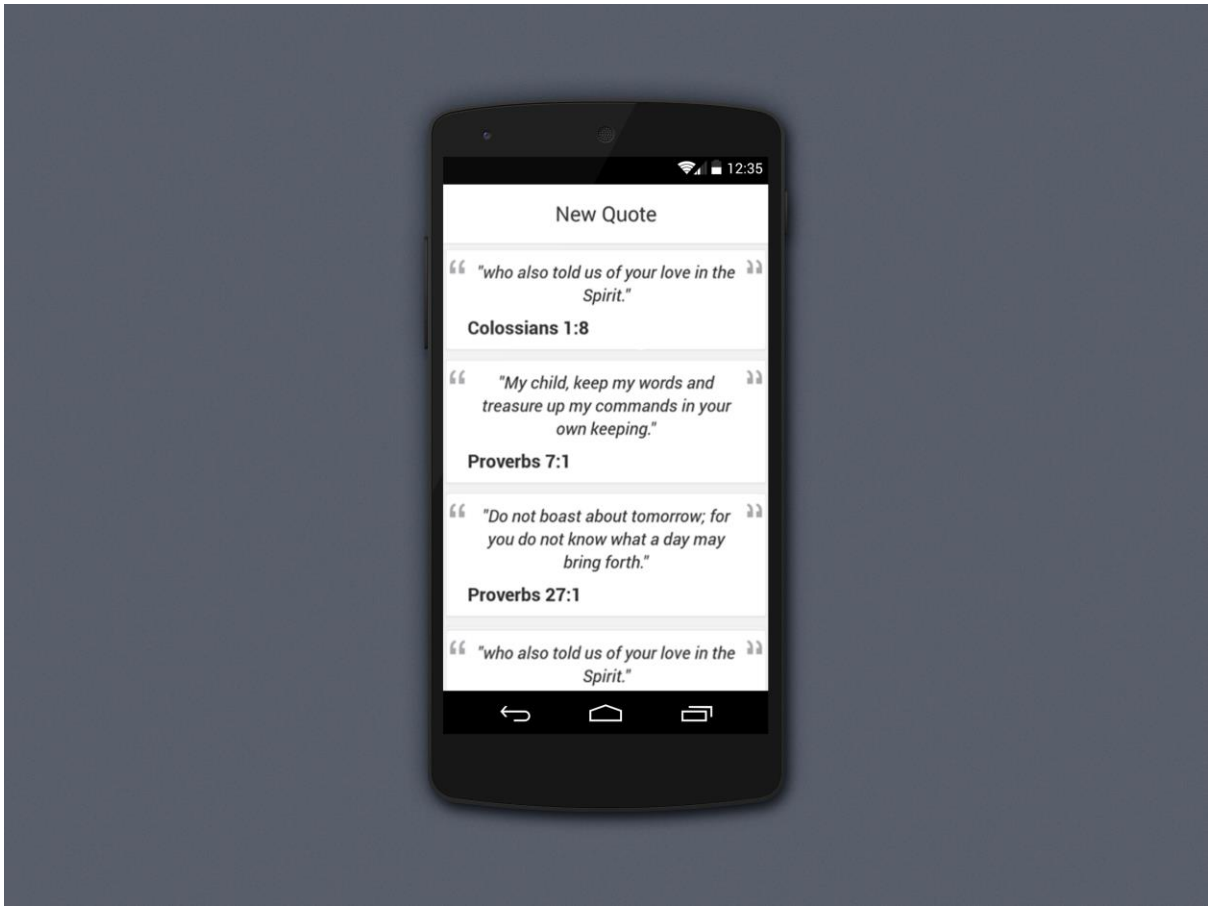
- Weekly
- Monthly
- Yearly

Then application will go to zodiac destiny quote page.



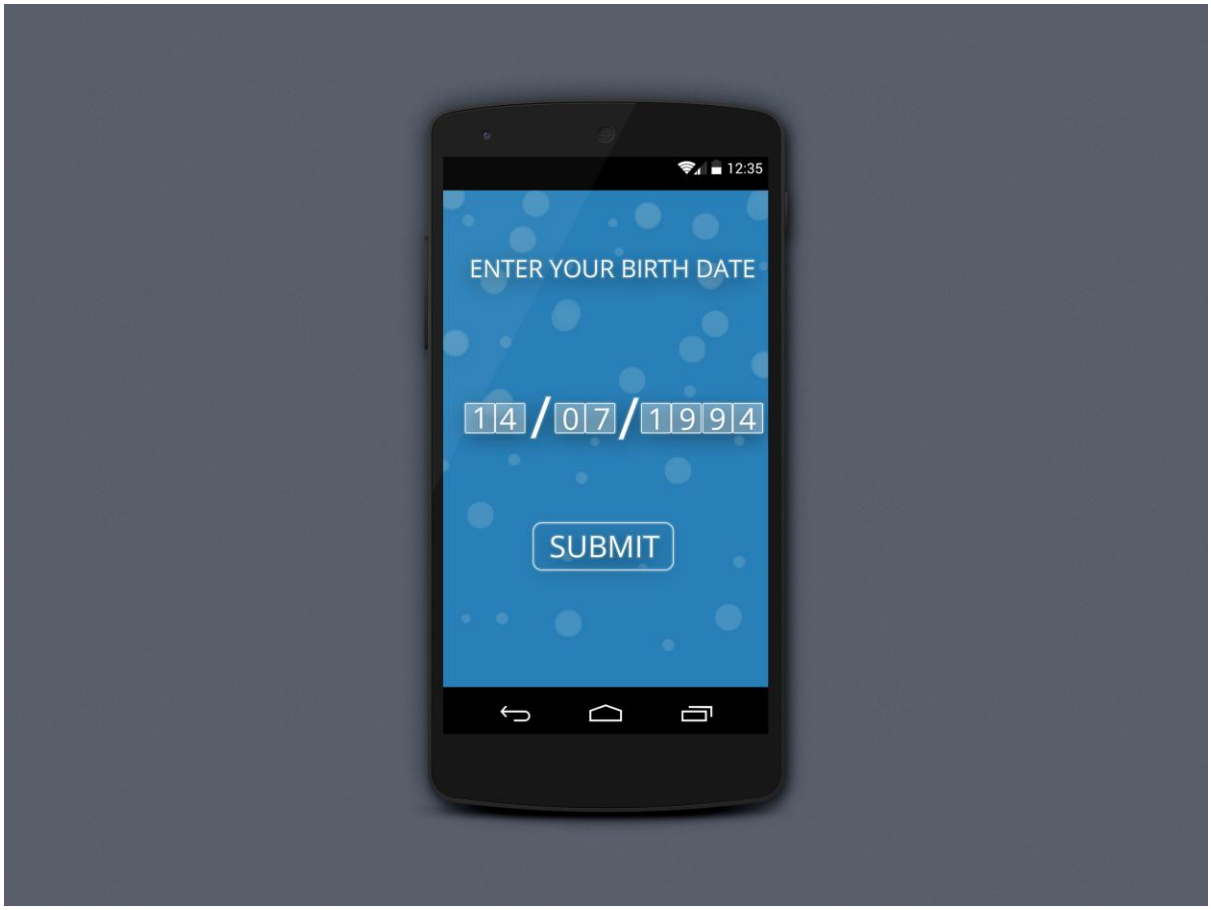
Zodiac detail page.

This page will show zodiac destiny quote that depend on zodiac and period that user choose and user can share the content if they login with face book



God quote page

This page will show the quote of god. The quote will disappear every day. User can see more detail by tap on it and user can share the content of god quote if they login with Facebook

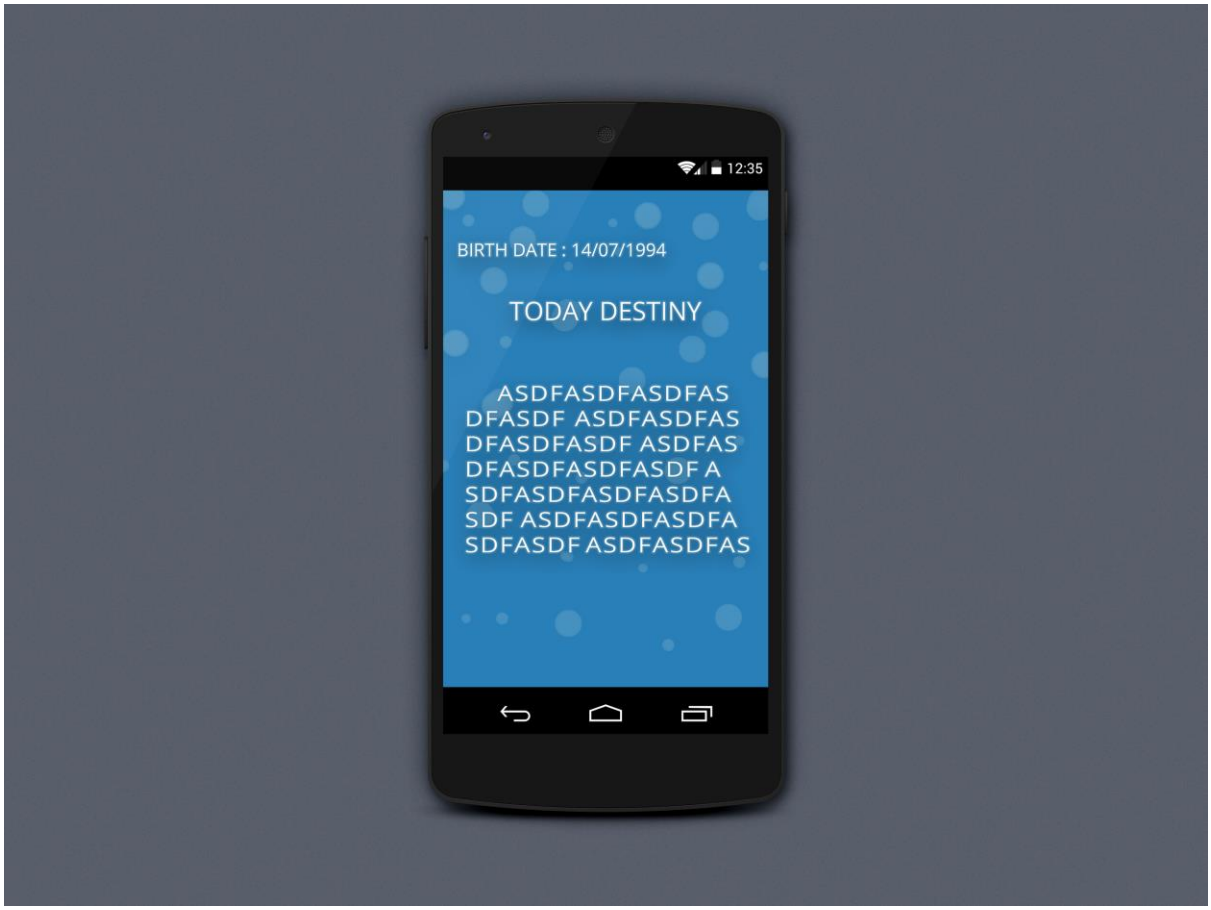


Birthdate destiny page

This page will ask the birthdate from user if user login with Facebook this page will don’t show and go through to Destiny detail page

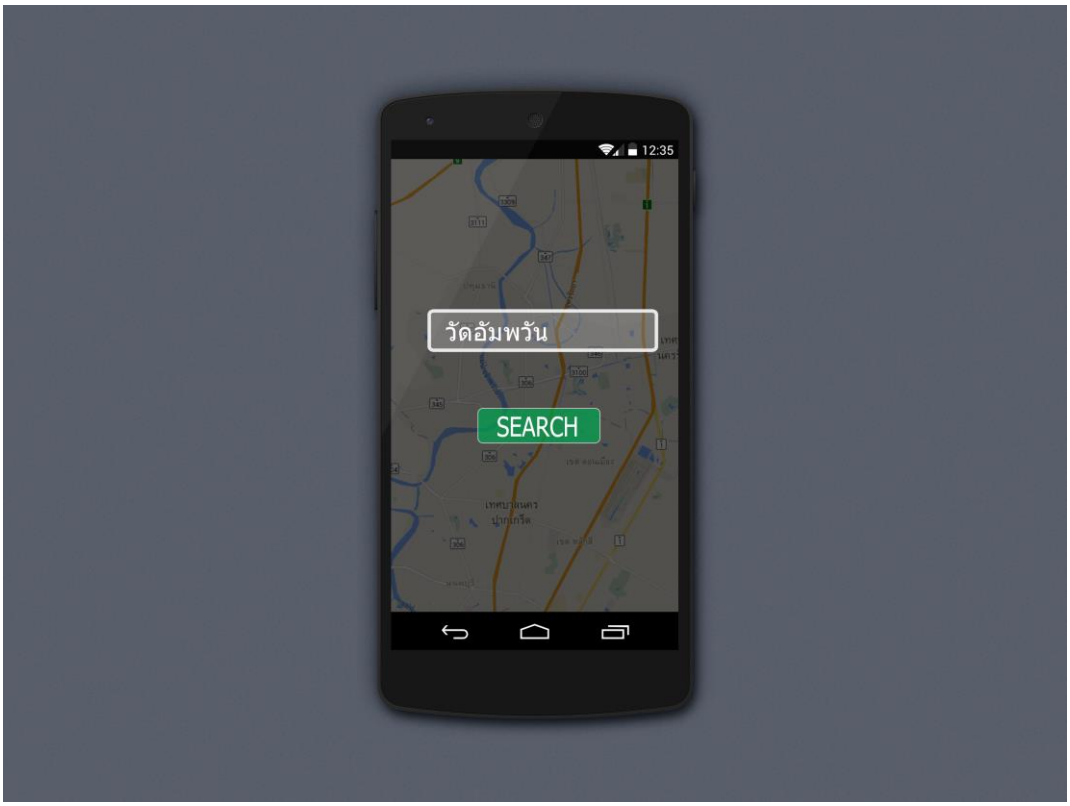
Tis page User that login with guest will submit Birthdate to go to Destiny detail page

For user that login with Facebook application will get birthdate from Facebook



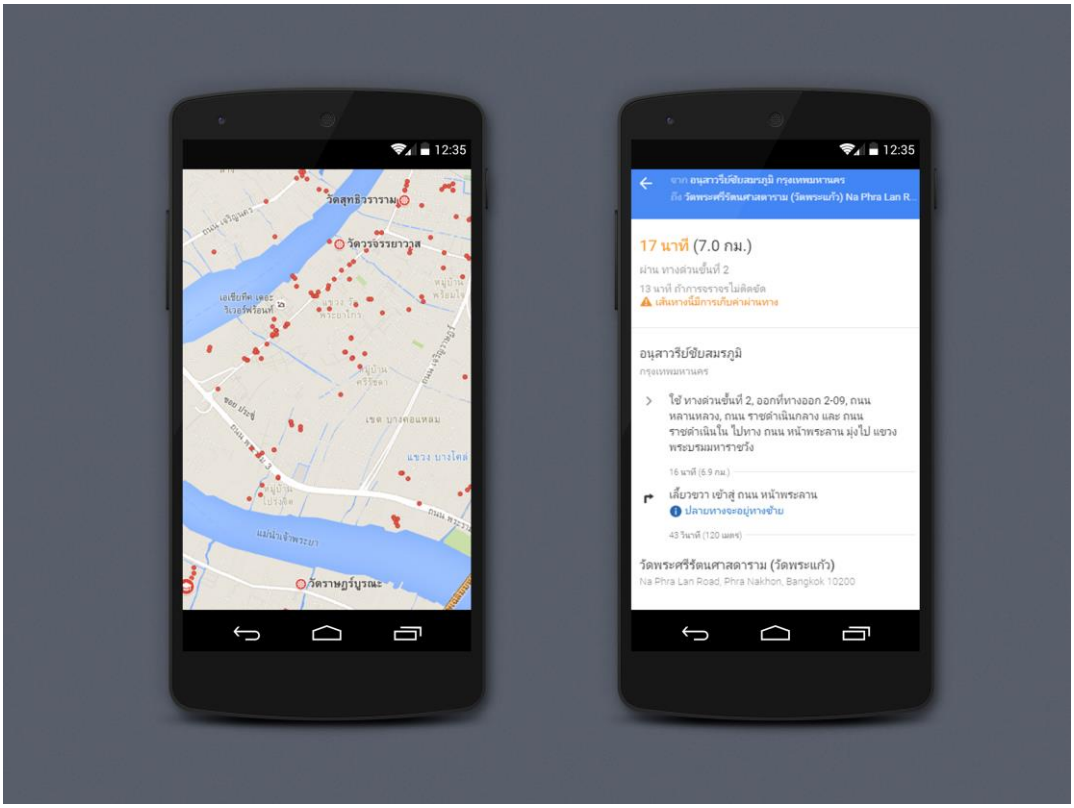
Destiny Detail page

This page will show the detail of destiny that depend on birthdate that user submit



Exorcise searching menu

This page allow user to search place or name of exorcise that user want to go. Then system will navigate user to that place.



Exorcising menu

This page will link to google map application. System will show list of nearby prophet and also the distance from user. User can do choose option

- Navigate: navigate to the rarest prophet. User also can choose transportation method
    - car
    - walk
    - public transport

- Review : User can read a review of each prophet
- Search : User can search specific prophets that didn’t show in the maps application

6. Other interface Design

6.1. HARDWARE INTERFACES DESIGN.

The Hardware Interfaces of the system are handled by any smart device or mobile phone that has either Android or IOS operating system.

6.2. SOFTWARE INTERFACES DESIGN.

Operating System

○ This application is designed for running on Android and IOS operating system.

Webserver

○ This software will keep information in database using SQL server 2014 Enterprise. These information are listed below

○ User Facebook account

○ User's information

○ Zodiac's information

○ God quote

Page Layout Tool

○ Our team has decided to use Adobe Photoshop CS6

To decorate our interface, page and the entire layout

Because this program provides the many tools for

Arranging our concept of Horop application

6.3. COMMUNICATION INTERFACES DESIGN.

Web Interface

■ This application will be accessed the internet when user does login using Facebook and another case is finding place for exorcising via

Google map

Update Request Facebook

■ Horop will be able to ask user to share the result

After playing in each feature on Facebook

7. How to use for Each Scenario

Use case 1: Login page with Facebook

Primary actor: User

Goal: To make user can share their result to social network.

Condition: Internet requirement to logging in and user are not logging in to Facebook.

Main flow of event

1. System show button play as Facebook account and play as guest.
2. User must choose play as Facebook account.
3. User need to type user name and password of their Facebook account.
4. User can choose to remember the user name and password by tick on tick box
5. Click login button to login to Facebook account.
6. System will show message that login successful.

Alternative flow

3. a. User enter invalid email address

3. A.1 Show message “invalid email or password”.

3. A.2 User need to type email address again.

3. b. User enter invalid password

3. B.1 Show message “invalid email or password”.

3. B.2 User need to type email address again.

4. a. User choose remember username and pass word

4. A.1 System will show symbol yes or no.

4. A.2 User must tick yes.

4. b User do not choose remember username and pass word

4. B.1 System will show symbol yes or no.

4. B.2 User must tick no.

Use case 2: User login with guest.

Primary actor: User
Goal: User cannot share any content
Condition: Internet requirement to logging in and user are not logging in to Facebook.
Main flow of event

1. System show button play as Facebook account and play as guest.
2. User choose on play as guest.
3. System will show message login successful

Alternative flow

None

Use case 3: Today destiny Facebook user

Primary actor: User
Goal: User can see their destiny and can share result to Facebook.
Condition: Internet requirement and Facebook logging in.
Main flow of event

1. System will show loading screen for loading data.
2. System show destiny of user by date of birth.
3. System show symbol to tick share to Facebook or not share.

Alternative flow

3. A User share result to Facebook.
    3. A.1 System show symbol to tick yes or no to share result.
    3. A.2 User tick yes to share result.
3. B User not share result to Facebook
    3. B.1 System show symbol to tick yes or no to share result.
    3. B.2 User tick no to not share result.

Use case 4: Today Destiny Guest user

Primary actor: User
Goal: User cannot share any content and must enter birth date.
Condition: Login with guest.
Main flow of event

1. User enter birth date.
2. User enter submit
3. System show destiny content

Alternative flow

None

Use case 5: Zodiac horoscope Facebook User.

Primary actor: User
Goal: User can see their destiny by their zodiac and can share content.
Condition: Internet requirement and user must login to Facebook.
Main flow of event

1. System will show all 12 zodiac.
2. User choose their own zodiac
3. System show button weekly, monthly and yearly of destiny of the zodiac.
4. System show result to user.
5. System show symbol to tick share to Facebook or not share.

Alternative flow

1. A User pick their own zodiac

3. A System show button weekly, monthly and yearly after user choose zodiac.

3. A.1 User choose weekly.
3. A.2 User choose monthly.
3. A.3 User choose yearly.

4. A User share result to Facebook

4. A.1 System show symbol to tick yes or no to share result.

4. A.2 User tick yes to share result.

4. B User not share result to Facebook

4. B.1 System show symbol to tick yes or no to share result.

4. B.2 User tick no to not share result.

Use case 6: Zodiac horoscope Guest user.

Primary actor: User

Goal: User can see their destiny by their zodiac.

Condition: Login with guest.

Main flow of event

1. System show all 12 zodiac
2. User choose their own zodiac
3. System show button weekly, monthly and yearly of destiny of the zodiac.
4. System show result.

Alternative flow

1.a. User pick their own zodiac.

3.a System show button weekly, monthly and yearly after user choose zodiac.

3.a.1 User choose weekly.

3.a.2 User choose monthly.

3.a.3 User choose yearly.

Use case 7: God quote Facebook User.

Primary actor: User

Goal: System will tell god quote to user.

Condition: Internet requirement and user must login to Facebook.

Main flow of event

1. System display content to the user.
2. System show symbol to tick share to Facebook or not share.

Alternative flow

2.a User share result to Facebook

2.a.1 System show symbol to tick yes or no to share result.

2.a.2 User tick yes to share result.

2.b User not share result to Facebook

2.b.1 System show symbol to tick yes or no to share result.

2.b.2 User tick no to not share result.

Use case 8: God quote Guest User.

Primary actor: User

Goal: System will tell god quote to user.

Condition: Login with guest.

Main flow of event

1. System display result to the user.

Alternative flow

None

Use case 9: Tarot card Facebook User.

Primary actor: User

Goal: User can see their own destiny by choose card and can share the result to Facebook.

Condition: Internet requirement and user must login to Facebook.

Main flow of event

1. System show 14 card.
2. User pick 1 out of 14 card.
3. System show definition of that card
4. System show symbol to tick share to Facebook or not share.

Alternative flow

1.a Show all card

1.a.1 System display 14 card.

2.a User pick 1 card

3.a System show definition of that card.

4.a User share result to Facebook

2.a.1 System show symbol to tick yes or no to share result.

2.a.2 User tick yes to share result.

4.b User not share result to Facebook

2.a.1 System show symbol to tick yes or no to share result.

2.a.2 User tick no to not share result.

Use case 10: Tarot card Guest User.

Primary actor: User

Goal: User can see their own destiny by choose card.

Condition: Login with guest.

Main flow of event

1. System show 14 card.
2. User pick 1 out of 14 card.
3. System show definition of that card

Alternative flow

1.a Show all card

1.a.1 System display 14 card.

2.a User pick 1 card

3.a System show definition of that card.

Use case 11: Map Facebook and guest User.

Primary actor: User

Goal: User can see the nearest place for exorcise.

Condition: Internet requirement for using current location.

Main flow of event

1. System display loading screen.
2. System will ask for using current location (yes/no).
3. System list all of the place that nearby user.
4. User select place.

5. System show detail of that location and rout button to show the rout from user location to selected location. User can choose travel by walk, car or bus.

Alternative flow

2.a User accept to use current location.

2.a.1 User tick yes.

2.b User deny to use current location.

2.b.1 User tick no.

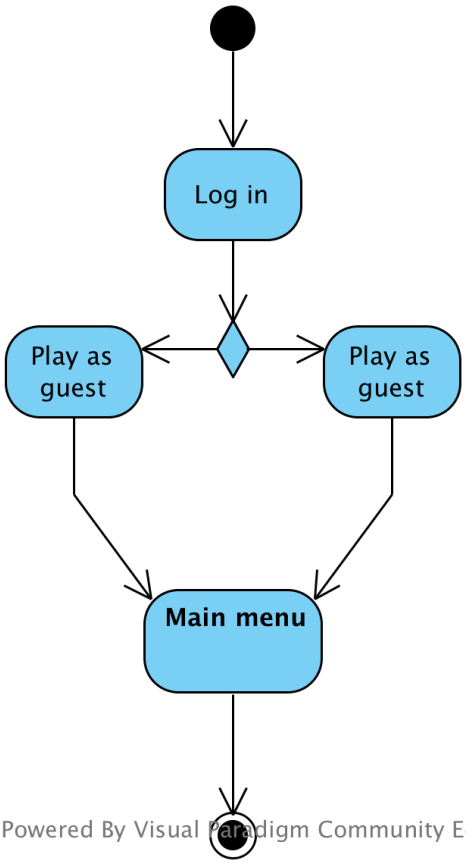
5.a. User select the location.

5.a.1 User use rout guid and choose walk, car or bus.

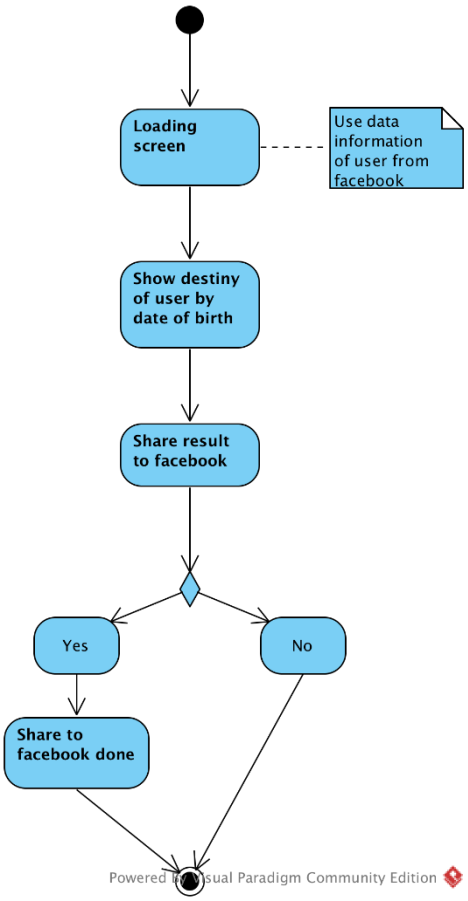
5.a.1.1 System warn user must accept to use current location

Activity diagram of each case

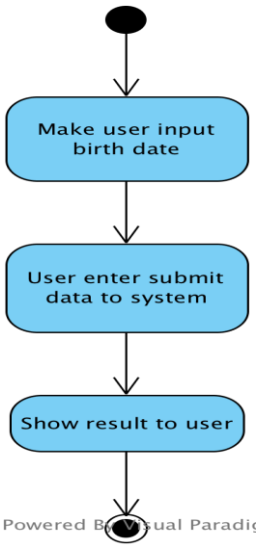
1. Login case



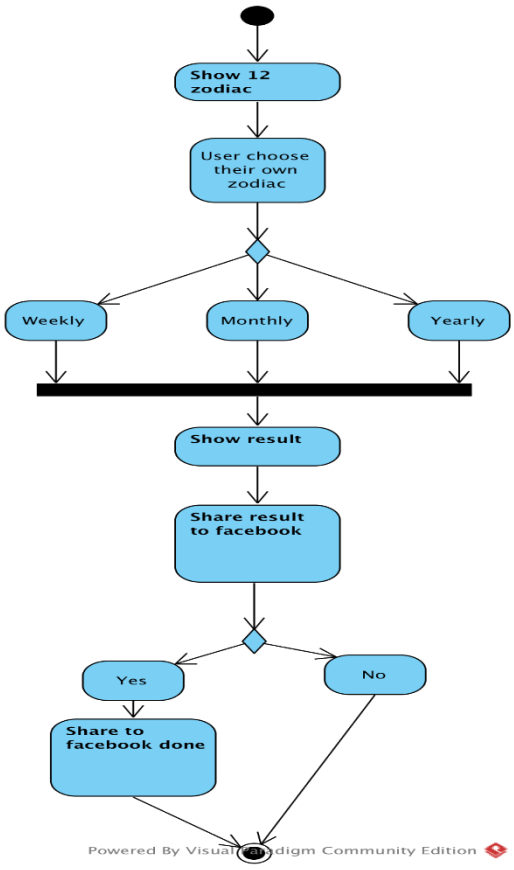
2. Today destiny Facebook user



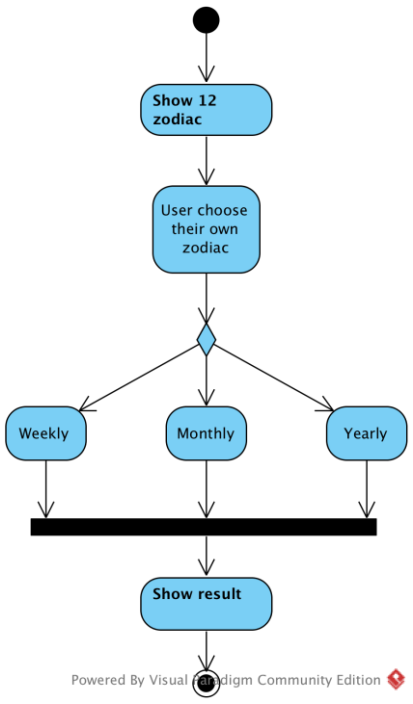
3. Today destiny guest user



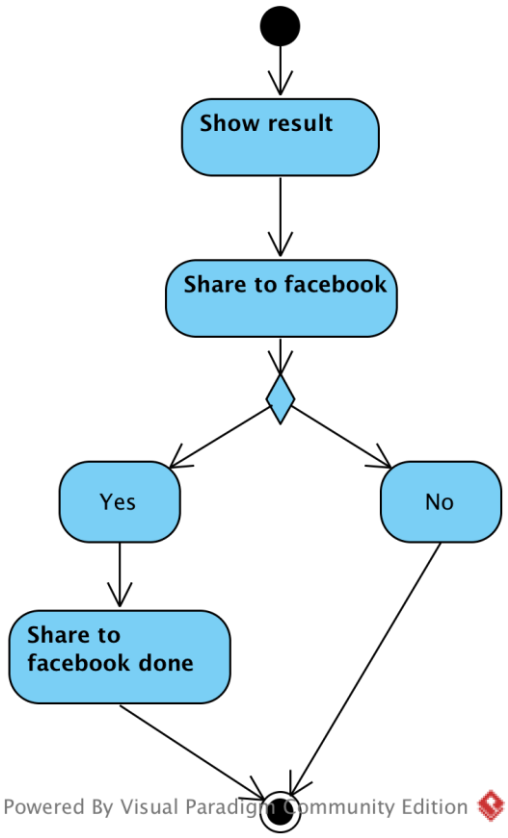
4. Zodiac horoscope Facebook user



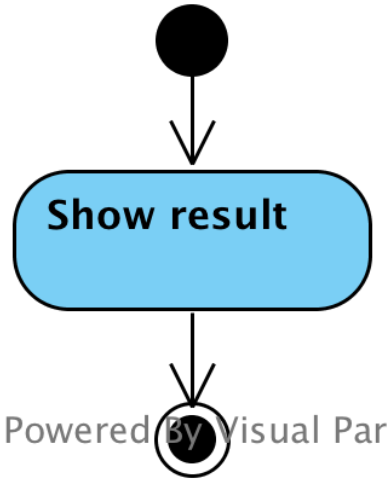
5. Zodiac horoscope guest user



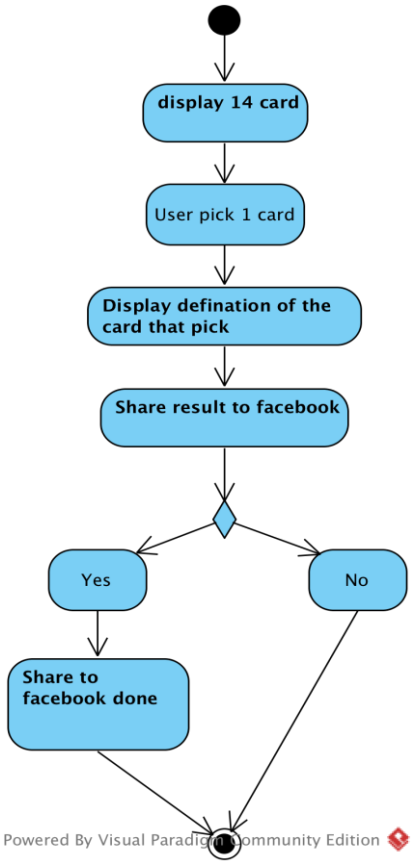
6. God quote Facebook user



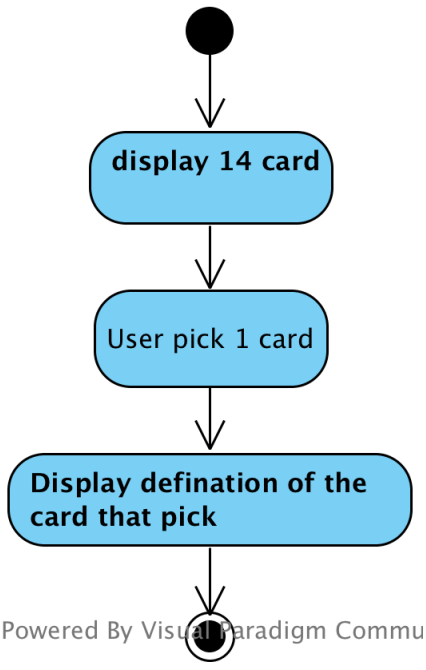
7. God quote guest user



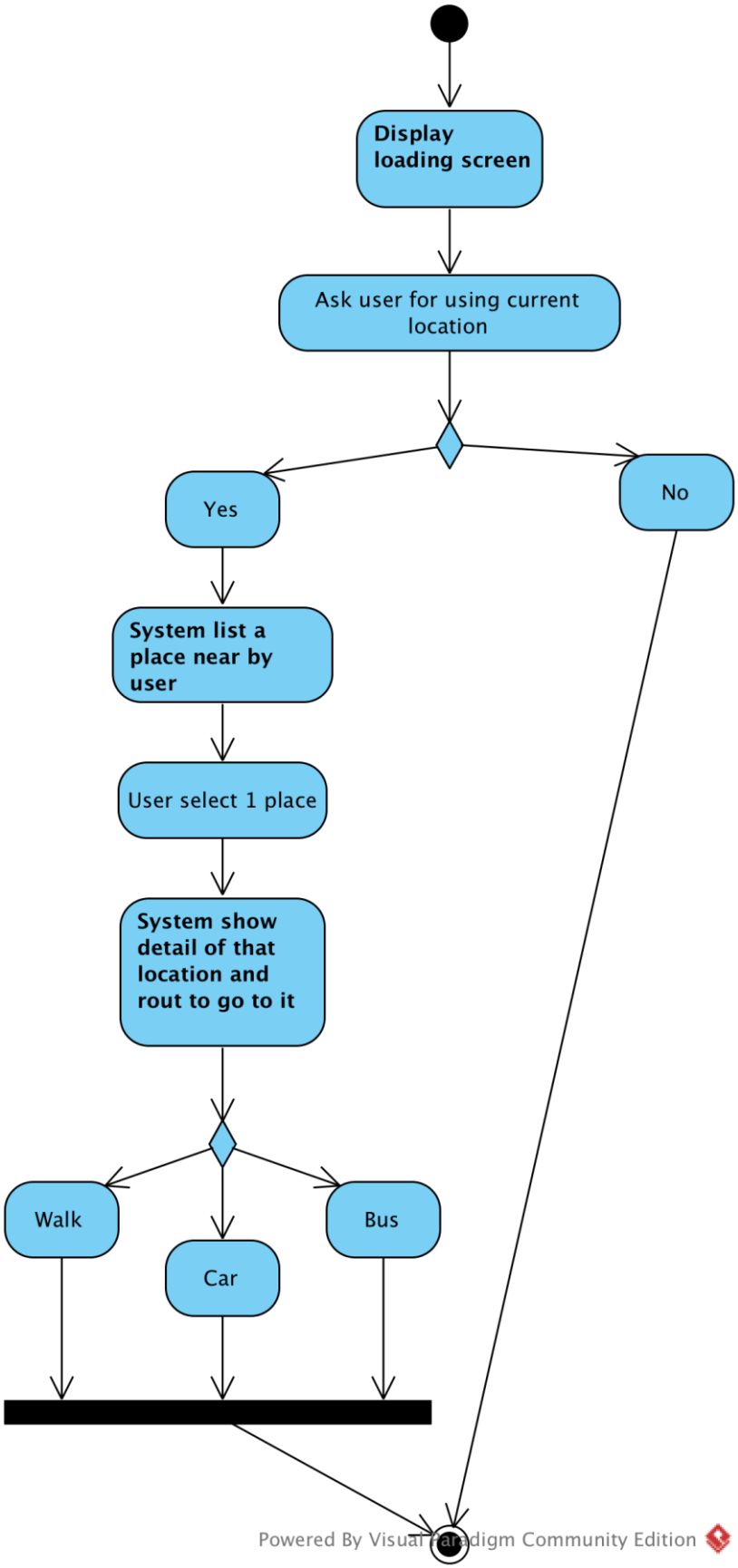
8. Tarot card facebook user



9. Tarot card guest user



10. Map for Facebook and guest user.



8. Requirements Validation Matrix

8.1 Functional requirement checklist

Component List

- User component (U)
- Daily fortune component (D)
- Fortune card component (F)
- Exorcise component (EC)
- External component (ET)

Requirement Code	Component List				
	U	D	F	EC	ET
HOP 0.0.1	X				
HOP 0.0.1.1	X	X			
HOP 0.0.1.2	X		X		
HOP 0.0.2	X	X	X		
HOP 0.0.3	X	X	X		
HOP 0.0.4			X	X	
HOP 0.0.4.1			X	X	
HOP 0.0.5	X		X	X	
HOP 0.0.5.1	X	X	X		

HOP 0.0.6			X	X	X
HOP 0.0.7	X	X		X	
HOP 0.0.7.1	X	X		X	
HOP 0.0.8	X			X	X
HOP 0.0.9	X	X	X	X	X

8.2 Non-Functional requirement checklist

Requirement list	Description
Performance & Quality	• System must has fast computation • Less lag or any bugs. • Support any android devices • Support Thai and English language • Handle 100 or more transaction per day • Flexibility interface
Security	• Backup user's information every hour • Have administrator to keep user information secret

Maintenance	• Collect feedback form user and maintain • Debugging software must finish within 2 days
System Management	• Collection of requirements pertaining to live system management and the corresponding services. • Requirement on the infrastructure and/or application to raise alerts to response the error or exception conditions.

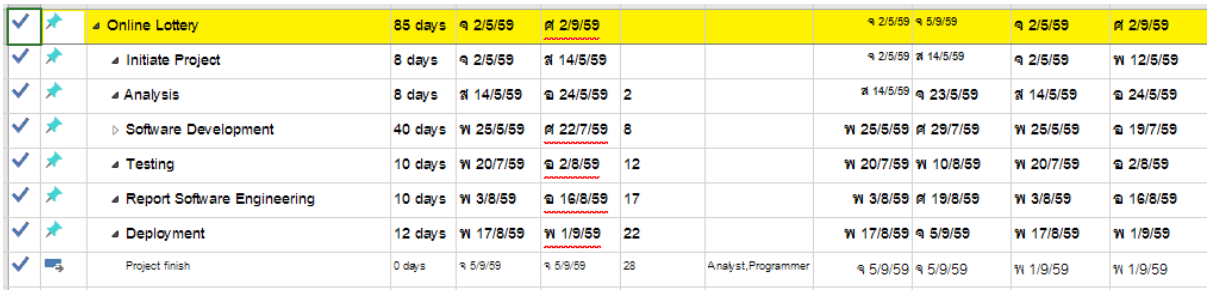
Process Manual Specifications

1. PROJECT PLAN AND MONITORING METHOD

We decide to use MS Project to keep the track of our project because there are a lot of functions to look at the process of our project and its delay. The figure below shows the table of both actual and baseline dates that can tell the delay of each task.

Actual Start	Actual Finish	Baseline Start	Baseline Finish
จ 2/5/59	จ 5/9/59	จ 2/5/59	ศ 2/9/59
จ 2/5/59	ส 14/5/59	จ 2/5/59	พ 12/5/59
ส 14/5/59	จ 23/5/59	ส 14/5/59	อ 24/5/59
พ 25/5/59	ศ 29/7/59	พ 25/5/59	อ 19/7/59
พ 20/7/59	พ 10/8/59	พ 20/7/59	อ 2/8/59
พ 3/8/59	ศ 19/8/59	พ 3/8/59	อ 16/8/59
พ 17/8/59	จ 5/9/59	พ 17/8/59	พ 1/9/59
จ 5/9/59	จ 5/9/59	พ 1/9/59	พ 1/9/59

Behold, the duration of actual work could finish earlier or further than the baseline days that we thought it before.



	Online Lottery	85 days	จ 2/5/59	ศ 2/9/59			จ 2/5/59	จ 5/9/59	จ 2/5/59	ศ 2/9/59
	Initiate Project	8 days	จ 2/5/59	ส 14/5/59			จ 2/5/59	ส 14/5/59	จ 2/5/59	พ 12/5/59
	Analysis	8 days	ส 14/5/59	อ 24/5/59	2		ส 14/5/59	จ 23/5/59	ส 14/5/59	อ 24/5/59
	Software Development	40 days	พ 25/5/59	ศ 22/7/59	8		พ 25/5/59	ศ 29/7/59	พ 25/5/59	อ 19/7/59
	Testing	10 days	พ 20/7/59	อ 2/8/59	12		พ 20/7/59	พ 10/8/59	พ 20/7/59	อ 2/8/59
	Report Software Engineering	10 days	พ 3/8/59	อ 16/8/59	17		พ 3/8/59	ศ 19/8/59	พ 3/8/59	อ 16/8/59
	Deployment	12 days	พ 17/8/59	พ 1/9/59	22		พ 17/8/59	จ 5/9/59	พ 17/8/59	พ 1/9/59
	Project finish	0 days	จ 5/9/59	จ 5/9/59	28	Analyst,Programmer	จ 5/9/59	จ 5/9/59	พ 1/9/59	พ 1/9/59

The above figure is the example of MS project.

2. Role and responsibility

Members	Email	Role	Responsibility
Naiprakarn Nakornkhet (Mix)	zarn_kira@hotmail.com	Project manager	Identity management
Saurawit Sanguanphokai (Art)	srw-art.t@hotmail.com	Web development	Coding
Kant Sunthad (Karn)	karn.sunthad@gmail.com	Web development	Coding
Chayuth Laoviwat (Bright)	bright_chayuth@hotmail.com	UI designer	Design UI
Sarun Keikajee (Run)	sarun.omanol@hotmail.com	UI designer	Design UI

2.1. Task process

The level of priority
5 - Most Significant
4 - Significant
3 - Normal
2 - Unnecessary
1 - Most unnecessary

Task/person day	Duration	Start	Significant	Resources Name
Horop Application	55 Days	20/1/2016	5	All
Initiate Project	9 Days	20/1/2016		
Kickoff Meeting	1 Day	20/1/2016	1	All
Planning	2 Days	21/1/2016	2	All
Requirement Observation	2 Days	23/1/2016	3	Mix
Requirement Gathering	1 Day	25/1/2016	3	Art
Design Layout	3 Days	26/1/2016	4	Run

Analysis	15 Days	29/1/2016		
Fortune Documentation	3 Days	29/1/2016	5	Karn
Zodiac Documentation	3 Days	30/1/2016	4	Run
Verse of God Documentation	3 Days	31/1/2016	2	Art
Place for luck Documentation	2 Days	5/02/2016	3	Bright
Requirement Document Review/Approval	3 Days	7/02/2016	5	Mix
Design Prototype and approval	3 Days	10/02/2016	4	Bright & Mix
Implementation	17 Days	13/02/2016		
Front-end coding	17 Days	13/02/2016	5	Bright & Run
Back-end coding	15 Days	15/02/2016	5	Art & Karn
Finish coding	0 Day	1/03/2016	5	All
Testing	4 Days	1/03/2016		
Application testing	4 Days	1/03/2016	4	Mix

Report Software Engineering	10 Days	5/03/2016		
Manual Instruction	10 Days	5/03/2016	4	Art & Mix
Deployment	0 Day	15/03/2016		
Launch Application	0 Day	15/03/2016	2	All

3. Final Project Cost

3.1. Salary

Members	hours/day	Role	Cost/month
Naiprakarn Nakornkhet (Mix)	8	Project manager	15000
Saurawit Sanguanphokai (Art)	8	Web development	14000
Kant Sunthad (Karn)	8	Web development	14000
Chayuth Laoviwat (Bright)	8	UI designer	13000
Sarun Keikajee (Run)	8	UI designer	13000

3.2. Total cost

Direct cost

Salary = 15000 + 14000 + 14000 + 13000 + 13000 = 69000 baht

Software = 3000 x 2 months = 6000 baht

Total direct cost = 69000 + 6000 = 75000 baht

Indirect cost

Utility = 4500 x 2 months = 9000 baht

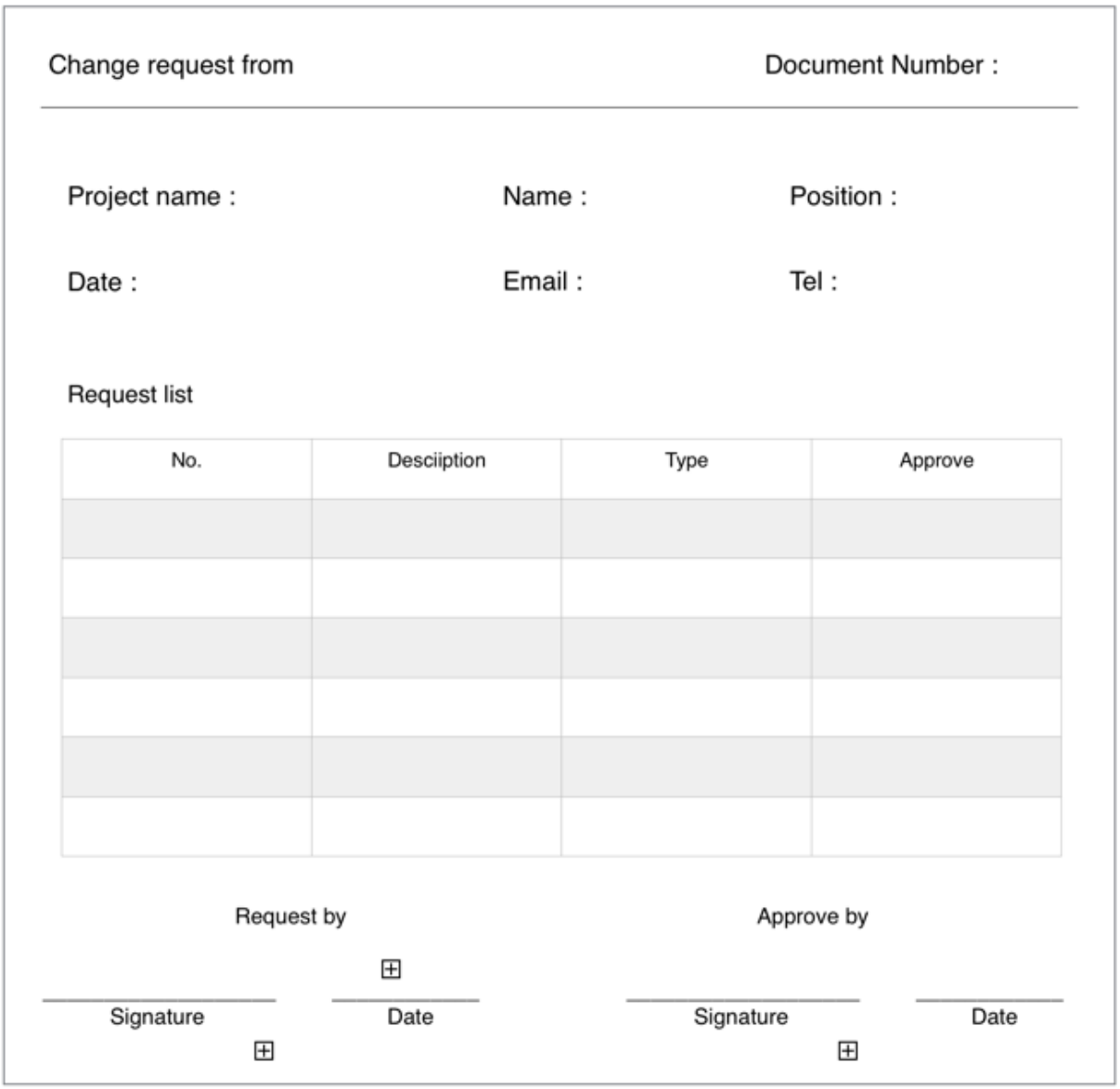
Appetizer = 1000 baht

Total indirect cost = 10000 baht

Total cost = 85000 baht

4. Requirements and Change Management Process

- Request from



Change request from Document Number :

Project name : Name : Position :

Date : Email : Tel :

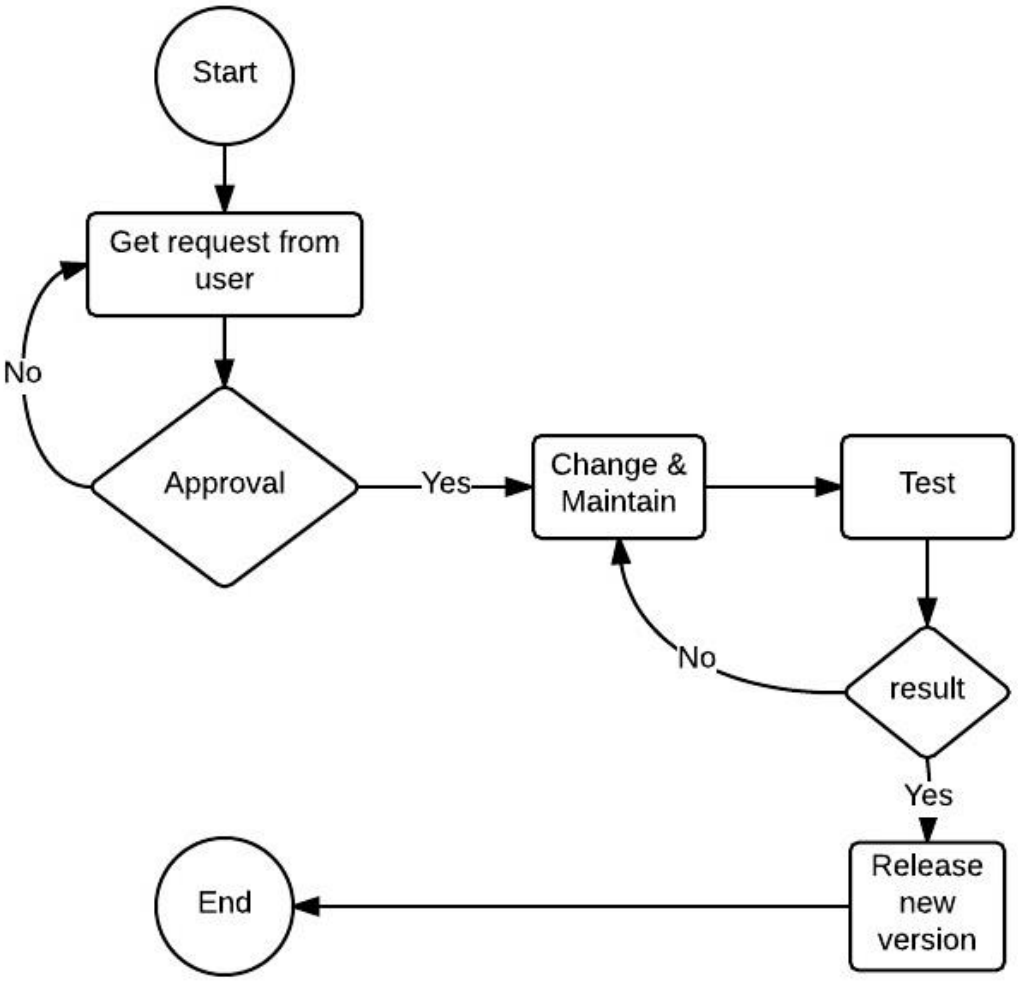
Request list

No.	Desciiption	Type	Approve

Request by Approve by

Signature Date Signature Date

- Change and maintenance process



5. Configuration Management Process

Process Starts With

- Communication between developer and customer
- Initial Time, Resources and Planning
- Initial capture of existing infrastructure
- Request for Change (Add, Modify, Remove a Configuration Item)
- Requests for configuration information

Ends With

- Audit of configuration database against the installed infrastructure
- Test Physical Configuration Identification

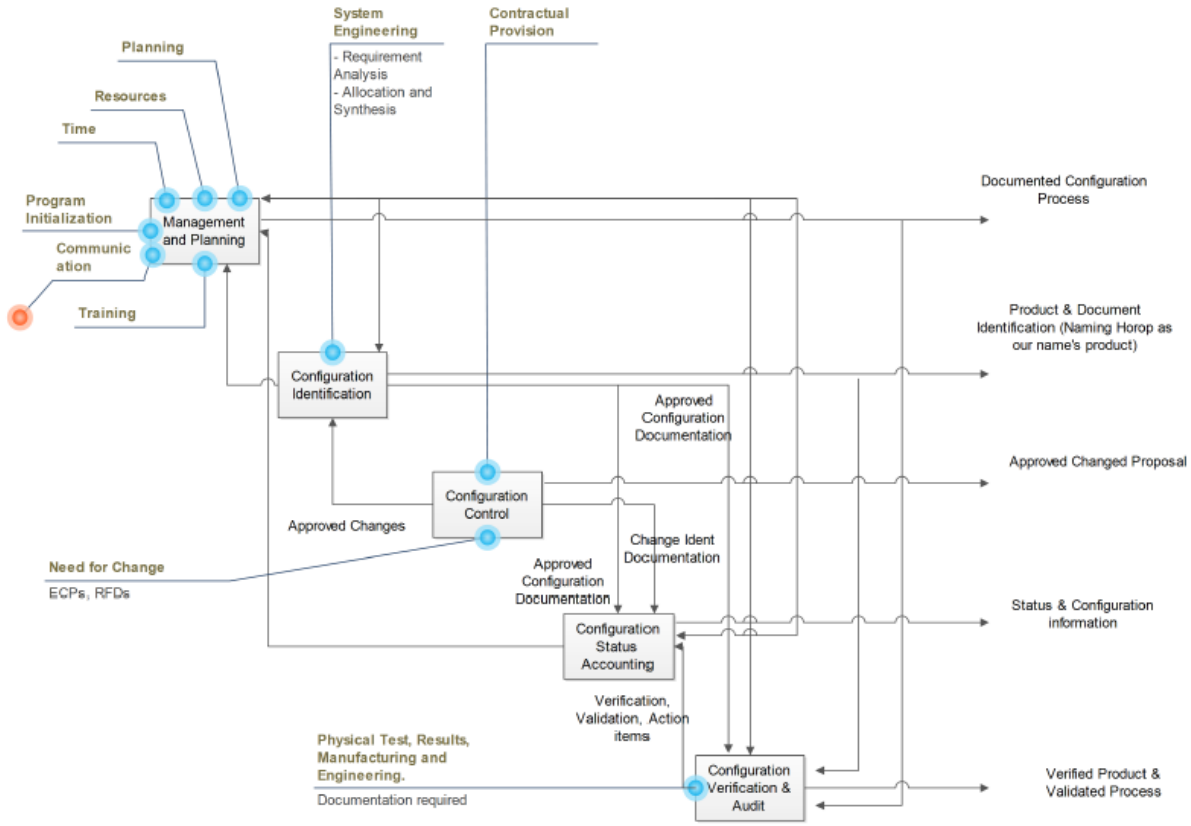
Process Design Includes

- The complete lifecycle of a Configuration Identification from planning through to retirement
- Flow of Data between the subs processes of the Configuration Management Process
- Flow of Data between the Configuration and other ESM Processes
- Activities per Sub process
- Roles per Activity

Process Design Excludes

- Design activities for infrastructure components
- Authorization’s Responsibility Changes
- Planning how and in what way configuration details should be represented

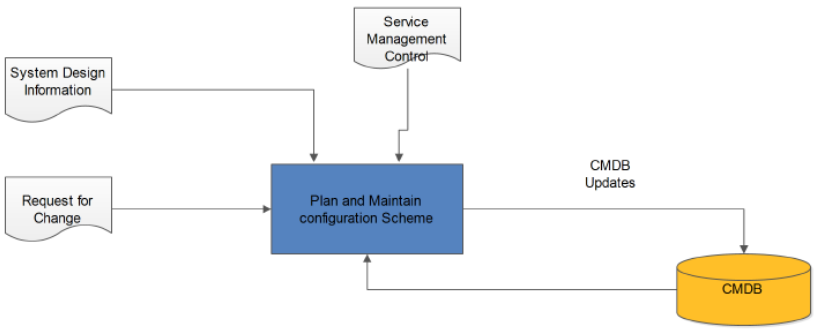
Configuration Management Process Flow



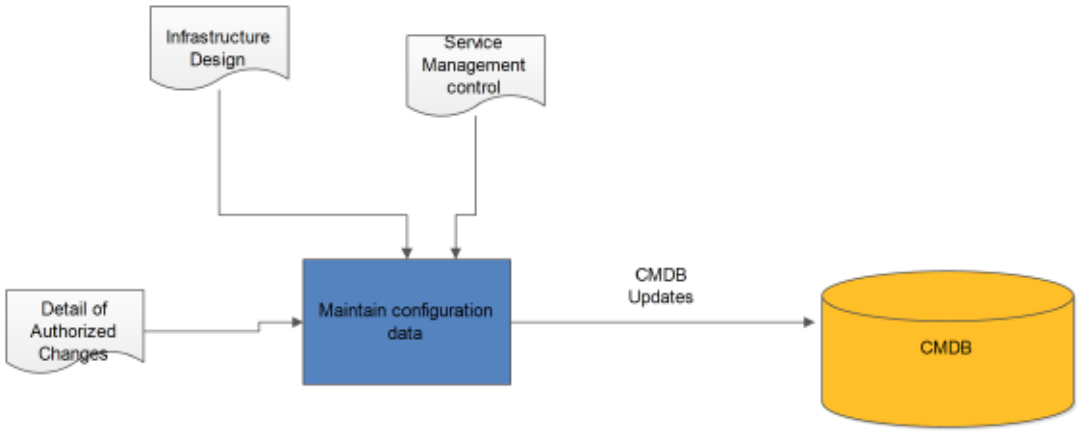
Configuration Management Sub processes

The configuration management process can break down into various sub-processes:

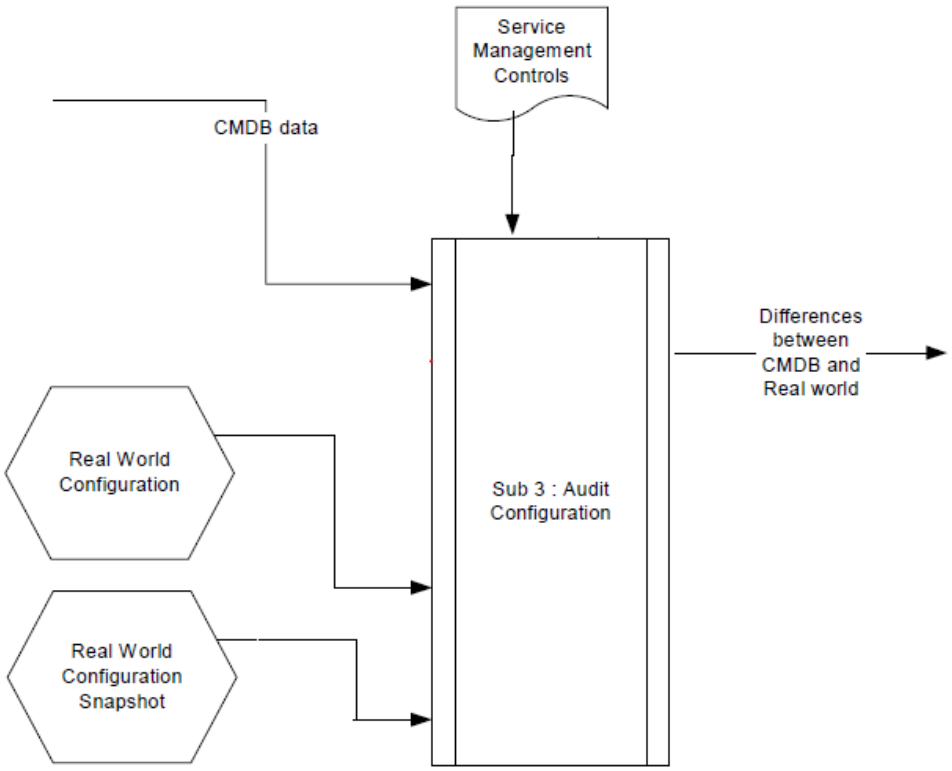
• Sub 1: Plan and Maintain Configuration Scheme



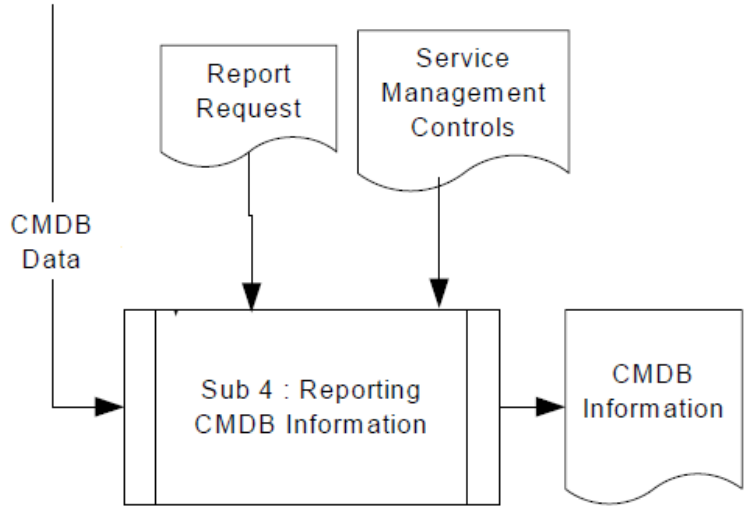
• Sub 2: Maintain Configuration Data



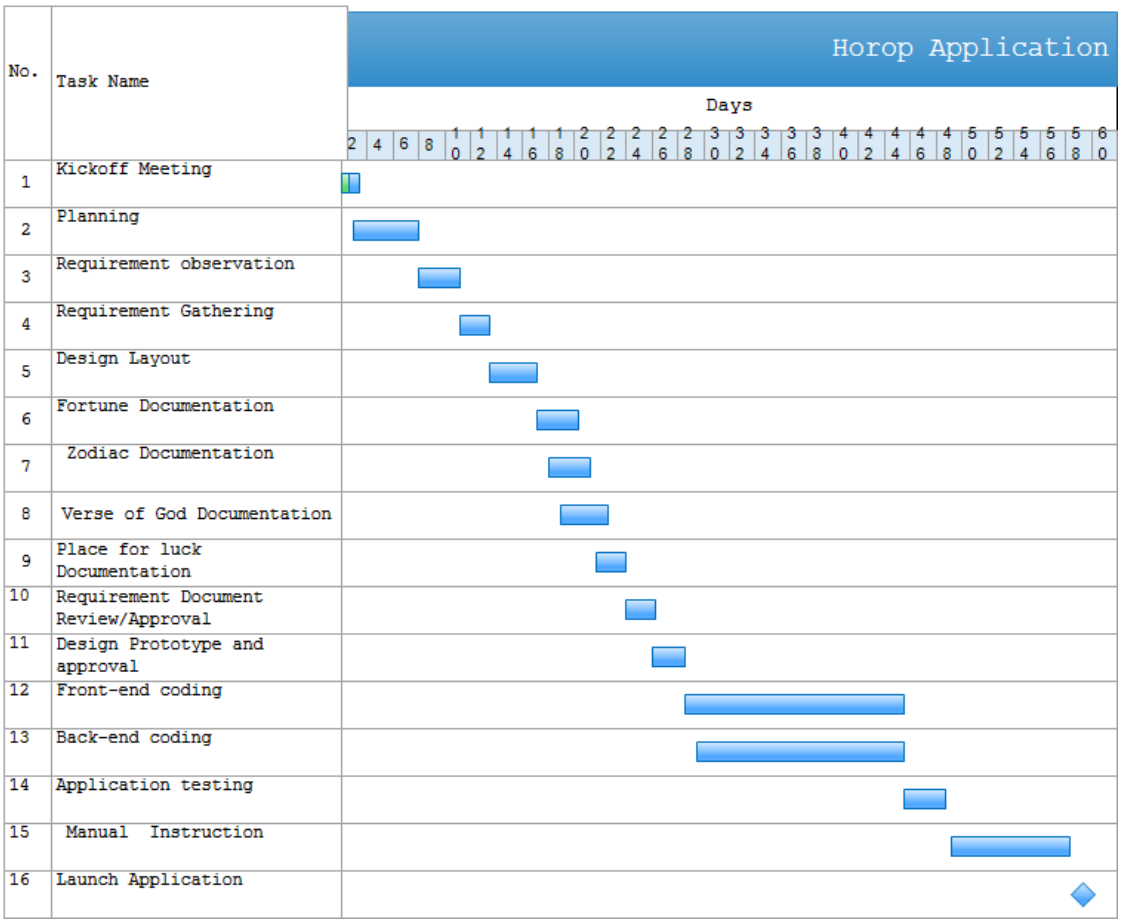
• Sub 3: Audit Configuration



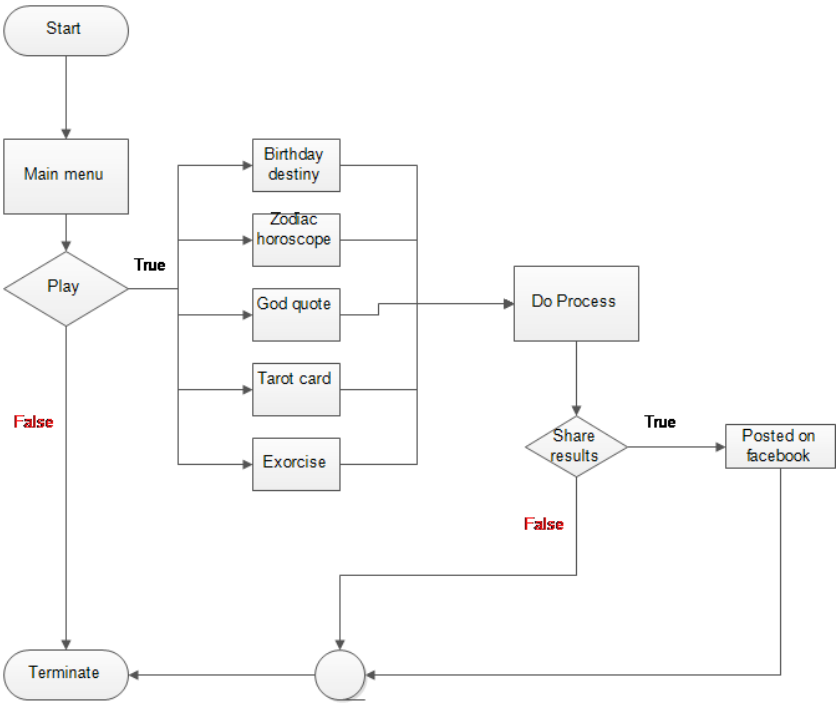
• Sub 4: Reporting Configuration Information



6. Measures for Success in Timely Delivery



7. User Acceptances Process



1. Get start: First we need user to log in as Facebook account or as guest.
2. Main menu: Get user to choose feature that they want to play.
    a. Birthday destiny
        i. User that login as Facebook system will use information from Facebook(birthdate of user).
        ii. If user login as guest system will ask to enter birthdate.
    b. Zodiac horoscope
        i. User choose the symbol that match the zodiac to user.
    c. God quote
        i. System will show content to user automatically.
    d. Tarot card
        i. User choose card 1 out of 14 then system tell the definition that card.

    e. Exorcise(map)
        i. System will use current data of user to tell the nearest to the user.
3. Result: After user choose feature to play system will tell the result to the user such tell the definition of the tarot card that user pick.
4. Share (for logging-in Facebook user): If user want to share their result t Facebook timeline tick Yes to share if not tick no.
5. End

Sourcecode and Comment (https://github.com/kantSunthad/SE_HOROP_LionelMixxi)

```
//import all library to use in this code
import UIKit
import MapKit
import CoreLocation

class ViewController: UIViewController {

    //connect the MKMapView from Main.storyboard to let the code know that we use MKMapview in our application
    @IBOutlet weak var mapView: MKMapView!
    //connect the button to the code to use this button(for share location button)
    @IBOutlet weak var share: UIButton!
    //connect the button to the code to use this button(for navigation button)
    @IBOutlet weak var navigation: UIButton!


    override func viewDidLoad() {
        super.viewDidLoad()
        // Do any additional setup after loading the view, typically from a nib.
        //define the location of the temple 6 temples
        let location = CLLocationCoordinate2DMake(13.721042, 100.470203)
        //first set of number is latitude, second set of number is longitude
        let location1 = CLLocationCoordinate2DMake(13.913485, 100.421095)
        //first set of number is latitude, second set of number is longitude
        let location2 = CLLocationCoordinate2DMake(13.673739, 101.067081)
        //first set of number is latitude, second set of number is longitude
        let location3 = CLLocationCoordinate2DMake(13.738131, 100.514005)
        //first set of number is latitude, second set of number is longitude
        let location4 = CLLocationCoordinate2DMake(13.766598, 100.514043)
        //first set of number is latitude, second set of number is longitude
        let location5 = CLLocationCoordinate2DMake(13.739787, 100.491295)
        //first set of number is latitude, second set of number is longitude
     //define annotation1 to use variable in MKPointAnnotation. The MKPointAnnotation class defines a concrete annotation object located at a
         specified point. You can use this class, rather than define your own, in situations where all you want to do is associate a point on
         the map with a title.
     let annotation1 = MKPointAnnotation()
     let annotation2 = MKPointAnnotation()
     let annotation3 = MKPointAnnotation()
     let annotation4 = MKPointAnnotation()
     let annotation5 = MKPointAnnotation()
     let annotation6 = MKPointAnnotation()

     annotation1.coordinate = location
     //let "location" = annotation1.coordinate to pin in the map
     annotation1.title = "Wat Paknam"
     //set title of the location = "Wat Pkanam"
     annotation1.subtitle = "Located at 300 Ratchamongkolprasat Road, Pak Klong Bhasicharoen Sub-District, Bhasicharoen District, Bangkok
         10160."
     //set subtitle of the this location

     annotation2.coordinate = location1
     annotation2.title = "Wat Leng Nei Yi 2"
     annotation2.subtitle = "Nonthaburi - Bangbua Tong District"

     annotation3.coordinate = location2
     annotation3.title = "Wat Sothornwararamworaviharn"
     annotation3.subtitle = "Amphoe Muang approximately, south of Sala Klang (the City Hall)."

     annotation4.coordinate = location3
     annotation4.title = "Wat Traimit"
     annotation4.subtitle = "Temple of the Golden Buddha"

     annotation5.coordinate = location4
     annotation5.title = "Wat Benchamabopit Dusit Wanaram"
     annotation5.subtitle = " Buddhist temple (wat) in the Dusit district of Bangkok, Thailand. Also known as the marble temple."

     annotation6.coordinate = location5
     annotation6.title = "Wat Kanlayanamit"
     annotation6.subtitle = "Wat Kanlayanamit is located on the Thon Buri bank of the Chao PhrayaRiver."

    //pin the red pin the map if not use mapView.addAnnotation(annotation..) the rep pin will not show in the map in our application.
    mapView.addAnnotation(annotation1)
    mapView.addAnnotation(annotation2)
    mapView.addAnnotation(annotation3)
    mapView.addAnnotation(annotation4)
    mapView.addAnnotation(annotation5)
    mapView.addAnnotation(annotation6)
}

override func didReceiveMemoryWarning() {
    super.didReceiveMemoryWarning()
    // Dispose of any resources that can be recreated.
}

@IBAction func warn(sender: AnyObject) {
    let alert = UIAlertController(title: "Warning can not share your location", message: "You are not loging in to Facebbok", preferredStyle:
        UIAlertControllerStyle.Alert)
    alert.addAction(UIAlertAction(title: "Ok", style: UIAlertActionStyle.Default, handler: nil))
                self.presentViewController(alert, animated: true, completion: nil)


}
}
```

Test case and result

Test No.	Test Description	Test Data	Step	Pre-condition	Post-condition	Expected Result	Actual Result	Status
1.	User can't share fortune result if they don't login to Facebook	User: anyone who use the application	1)User use one function of application 2)select share on Facebook	User didn't log in with Facebook id before use the application	none	Show error message and tell user to login with Facebook first.	Show error message and tell user to login with Facebook first.	Pass
2.	Application can't run if no location in the database.	Location: destination of each temple	1)try to generate path to exorcise location	No location information in the database	none	Application will crash	Application crash	Pass
3.	User have to enter something about result that they want to share to Facebook	User: anyone who use the application	1)login 2)use one function 3)select share on facebook	none	none	Application will be idle and wait for user input.	Application run/build fail	fail
4.	User can't enter their birthdate beyond the present day.	Birthdate: user birthdate.	1)login 2)select exorcise function 3)enter birthdate	none	none	Show error message	Show error message	Pass

Instruction and Manual https://github.com/kantSunthad/SE_HOROP_LionelMixxi

****We have create another file called “HOROP_MANUAL” to tell every minute detail.******** Our main function for this project is “Exorcise”

HOROP INTERFACE

Welcome to HOROP! You are about to experience the excitement of live, Fortune in the application. HOROP Collect 5 main fortune function including God’s quote, Fortune Card, Zodiac fortune, Exorcise, Birthday fortune. This User Manual provides a detailed description of all the HOROP features. We are sure you will find HOROP easy to use.

SYSTEM REQUIREMENT

iPhone, iPad, and iPod touch

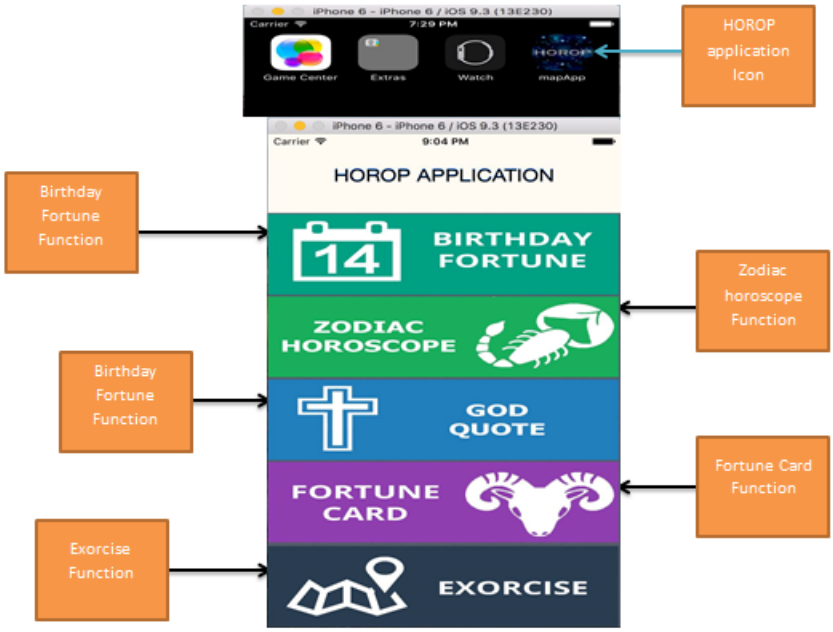
- iOS 9.3

Mac

- OS X El Capitan

Navigating HOROP

The main areas of HOROP are labeled below and are described in detail on thefollowing pages.

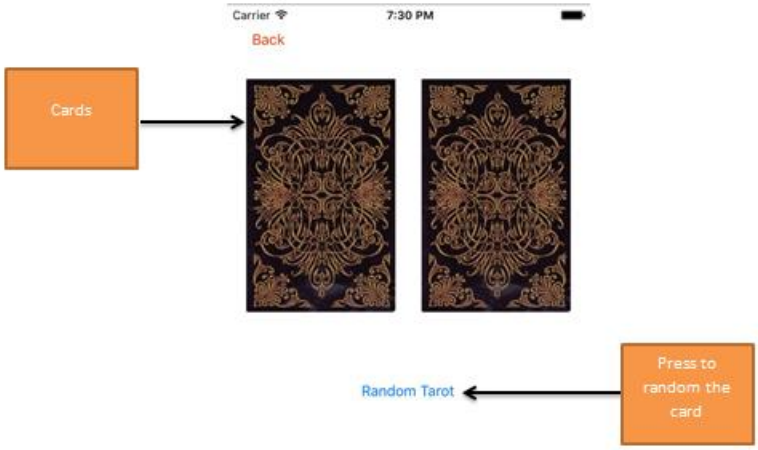


FUNCTION DESCRIPTION

In this project we have create only 2 Functions which are Fortune Cards and Exorcise. This part of the document will explain about each function.(Exorcise is our main function)

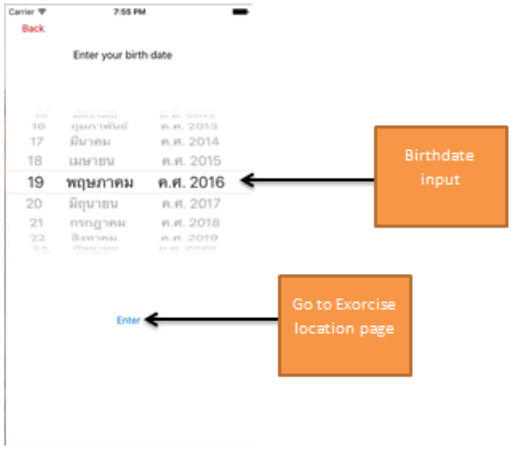
Fortune Card

This function will let user select 2 cards and fortune. This function is just the addition so it can only random the cards.



EXORCISE

This is our main function for the project. This function will let the user enter their birthdate and generate the location for exorcise due to their zodiac. Which the application will compute the zodiac automatically.



GOD's QUOTE

A quote from the god delivery directly into users hands every single day. Which contain a warning message, fortune teller, encouraging quotes all from the god.

Birthday Fortune

- This detailed astrological analysis of user day of birth can reinforce user personality, true love, destiny, suitable jobs.

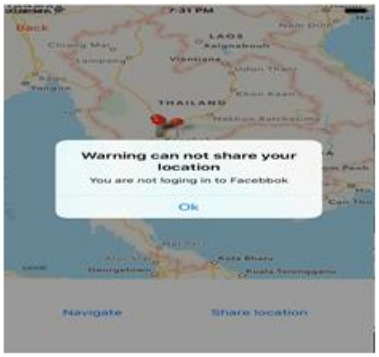
ZODIAC HOROSCOPE

- Fortuning user's fate by their zodiac in each month.

SHARING CONTENT

Our application have an function to share Exorcise location or Fortune result on Facebook. This are some example.

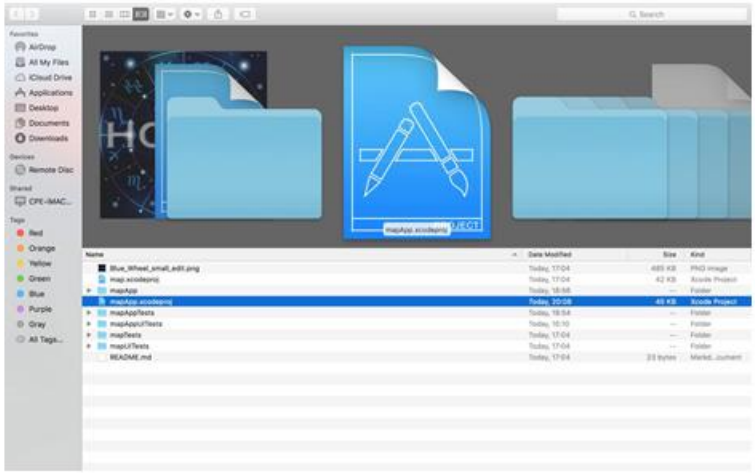
If user are not login with Facebook yet. This error message will show up.



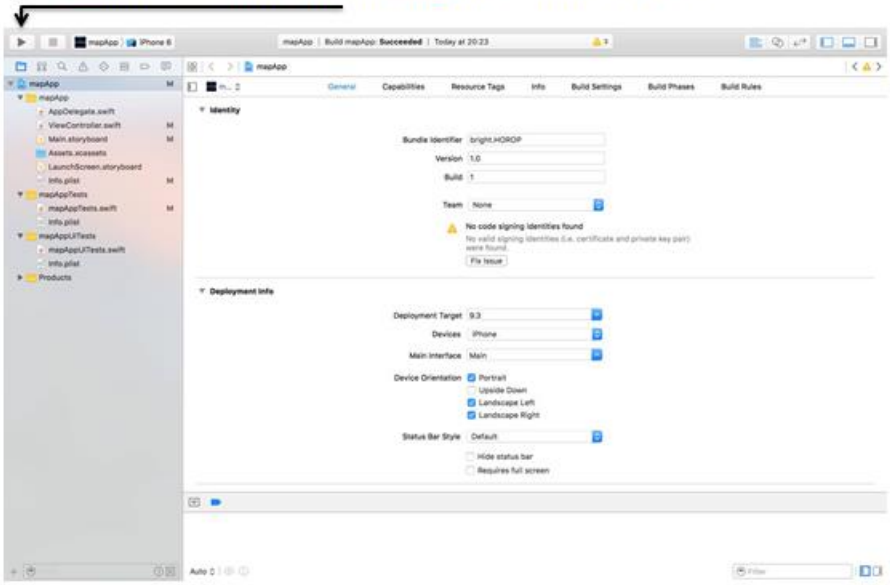
EXECUTION

Execution steps

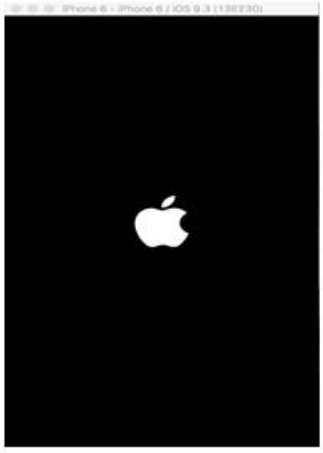
1) Select mapApp.xcodeproj and execute with XCODE.



2)Press play and program will automatically complie. Then, our application is ready to use



3)Wait for program to complie.



6) This screen will come up. Select the application icon and welcome to HOROP.

TEST CASE EXPLANATION

1. Test the date that user have entered. To prevent the date after present day and test if the calendar is Gregorian or not.

```
override func setUp() {
    super.setUp()
    var calender
    var locale
    calendar = NSCalendar(identifier: NSCalendarIdentifierGregorian)
    locale = NSLocale(localeIdentifier: "th_TH")
    // Put setup code here. This method is called before the invocati
        the class.
}
```

► NSCalendar use to identify if it Gregorian calendar else it will be error.

2. Test if our application have a location in the map for exorcise.

```
func testLoad(){
    let store = CLLocation()
    CLLocation.init()
}
```

► Store is the variable that store the location if it null the program will crash.

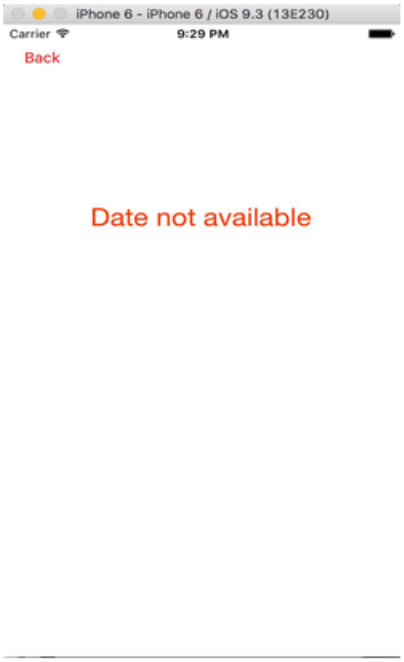
3. Test if user have interact with HOROP application or not.

```
func testUserService(){
    let playData = mapAppTests()
    playData.setUp()
    stopMeasuring()
}
```

► playData is use for check if any user interact with our application.

TESE CASE EXCUTATION

1)Test the date if it beyond the present day.



For Number 2) and 3) the application will crash and show the build fail message. (No interact from user and Location lost. This is in the condition that there are no location at all but in our code we have already add the location. If the user not interact with our application on the share result method the application will crash.