**Emergency Information on Mobile**

Software Requirement Specification

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# Chapter One | Introduction

## Objective

Software Requirement Specification of Emergency Information on Mobile is the document that describes each function, process, software environment, and constraint. The document is based on the contract and project plan. It is created for software developer and software tester to more understanding in the requirement. The purpose of Emergency Information on Mobile is providing area for presenting information of help place for the users. Admin also can manage information of help place.

## Intended Audience and Reading Suggestions

The Software Requirement Specification was created for everyone that involved with the Emergency Information on Mobile. The document of Software Requirement Specification will make the benefit for people as following:

**1.2.1 Development Team**

• Make strategies and planning process convenient

• Improve the system in right needed and use for prioritize what process become first or what process should be after.

• Reference in testing system because tester will validate if the system is correct and appropriate.

• Verify and specify requirements to ensure the same understanding about requirements. The ensuring can help in working and discuss all detail about requirements for avoid any error in work.

• Control and guarantee qualities of the system to make it right regarding the standard and contract.

• Easier discussion all information about the system because the constant and reliability source of the system.

**1.2.2 Customer**

• Easy for users to understand about quality and limitation of the system.

• Ensure the same understanding about requirement.

## Project Scope

The objective of this software requirement specification is to specify requirements to establish the application that:

• Emergency Information on Mobile is a web application for both computer website and mobile devices.

• Emergency Information on Mobile for mobile devices supports android operating system.

• Emergency Information on Mobile provides offline map and last downloaded information of help places.

• Emergency Information on Mobile supports English language.

• Emergency Information on Mobile provides admin to manage the information of help place, such as add, edit and remove help place.

## User Characteristic

**1.4.1 User**

• The group of person who already to use online map and offline map. The user of the application that will receive the information of help place to call and get an address.

**1.4.2 Administrator**

• The group of person who manage the information of the help place.

## 1.5 Acronyms and Definitions

**1.5.1 Acronyms**

EIOM Emergency Information on Mobile

SRS Software Requirement Specification

URS User Requirement Specification

UC Use Case

UI User Interface

**1.5.2 Definitions**

|  |  |
| --- | --- |
| Feature | Transformation of input parameters to output parameters based on a specified algorithm. It describes the functionality of a product. Used for requirements analysis, design, coding, testing or maintenance. [IEEE90] |
| IEEE | Institute for Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and for computer scientists. [IEEE90] |
| Requirement | (1) A condition or capability needed by a user to solve a problem or achieve an objective. (2) A condition or capability that must be met or processed by system or system component to satisfy a contract, standard, specification, or other formally imposed document. (3) A documented representation of a condition or capability as in definition (1) or (2). [IEEE90] |
| Specification | Precise description of an activity or work product which serves as basis or input for further activities or work product. A specification can comprise requirements to a product and how they will be solved. Different parts of a specification (e.g. what is to be done, how it will be done) must not be mixed. [IEEE90] |
| Design | The period of time in the software life cycle during which the designs for architecture, software component, interfaces and data are created, documented, and verified to satisfy requirements. [IEEE90] |
| UML | Unified Modeling Language. Standardized notation for Modeling design descriptions, architecture or scenarios. Not depending on a specific method. Issued and maintained by the Object Management Group (OMG). [IEEE90] |
| Use Case | (1) Concept to describe a system based on usage of system resource by its environment. Characterized by an objective set of interactions within and at the borders a scenario (Usage approach, operational scenario) from the perspective of this user. [IEEE90] |

# Chapter Two | Functional Requirement

## 2.1 User Requirement Specification

**• Feature 5: Manage Information System**

[URS-01]: The administrator can add help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.

[URS-02]: The administrator can edit help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.

[URS-03]: The administrator can remove help place.

[URS-04]: The administrator can view help information of each help place.

[URS-05]: The administrator can browse the help place by category.

[URS-06]: The administrator can browse the help place by province of Thailand.

[URS-07]: The administrator can browse the help place by category and province of Thailand.

**• Feature 1: Map and Help Information System**

[URS-08]: The user can view the online map with their current location.

[URS-09]: The user can view the offline map with their current location.

[URS-10]: The user can view help places in online map.

[URS-11]: The user can view help places in offline map.

[URS-12]: The user can view help information of each help place in online map.

[URS-13]: The user can view help information of each help place in offline map.

[URS-14]: The user can make emergency call to each help place in online map.

[URS-15]: The user can make emergency call to each help place in offline map.

## 2.2 Software Requirement Specification

**[URS-01]: The administrator can add help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.**

1. The system provides the UI, which receive name, address, district, province, zip code, phone number, category, latitude and longitude.
2. The system provides map UI.
3. The system provides searched province UI.
4. The system shall receive latitude and longitude from map.
5. The system shall check the name length. The name must be 1- 50 characters.
6. The system shall check the address length. The address must be 0- 50 characters.
7. The system shall check the district length. The district must be 0- 50 characters.
8. The system shall check the zip code length. The zip code must be 0-5 characters.
9. The system shall check the phone number format. The phone number should be 9-10 digits.
10. The system shall check the latitude format. The latitude should not be null.
11. The system shall check the longitude format. The longitude should not be null.
12. The system shall check the province format. The province should not be null.
13. The system shall check the category format. The category should not be null.
14. The system shall display the error message “Name must between 1 to 50 characters”
15. The system shall display the error message “The address length should be 0-50 characters”
16. The system shall display the error message “The district length should be 0-50 characters”
17. The system shall display the error message “The zip code length should be 0-5 characters”
18. The system shall display the error message “Please choose province”
19. The system shall display the error message “The phone number length should be 9-10 characters”
20. The system shall display the error message“Please put latitude”
21. The system shall display the error message“Please put longitude”
22. The system shall display the error message “Please choose province”
23. The system shall add a new help place into the database.
24. The system shall provide the successful adding help information UI with message “The help place has been added to database.”

**[URS-2]: The administrator can edit help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.**

1. The system shall retrieve all help places from system database.
2. The system shall provide UI to show all lists of help places.
3. The system shall provide edit UI for all lists of help places.
4. The system retrieves information of the selected help place from database.
5. The system shall show information of the selected help place which include name, address, district, province, zip code, phone number, category, latitude and longitude.
6. The system provides the UI, which receive name, address, district, province, zip code, phone number, category, latitude and longitude.
7. The system provides map UI.
8. The system provides searched province UI.
9. The system shall receive latitude and longitude from map.
10. The system shall check the name length. The name must be 1- 50 characters.
11. The system shall check the address length. The address must be 0- 50 characters.
12. The system shall check the district length. The district must be 0- 50 characters.
13. The system shall check the zip code length. The zip code must be 0-5 characters.
14. The system shall check the phone number format. The phone number should be 9-10 digits.
15. The system shall check the latitude format. The latitude should not be null.
16. The system shall check the longitude format. The longitude should not be null.
17. The system shall check the province format. The province should not be null.
18. The system shall check the category format. The category should not be null.
19. The system shall display the error message “Name must between 1 to 50 characters”
20. The system shall display the error message “The address length should be 0-50 characters”
21. The system shall display the error message “The district length should be 0-50 characters”
22. The system shall display the error message “The zip code length should be 0-5 characters”
23. The system shall display the error message “Please choose province”
24. The system shall display the error message “The phone number length should be 9-10 characters”
25. The system shall display the error message “Please put latitude”
26. The system shall display the error message “Please put longitude”
27. The system shall display the error message “Please choose province”
28. The system shall update the help information into the database.
29. The system shall provide the successful editing help information UI with message “The help place has been added to database.”

**[URS-3]: The administrator can remove help place.**

1. The system shall retrieve all help places from system database.
2. The system shall provide UI to show all lists of help places.
3. The system shall provide remove UI for all lists of help places.
4. The system shall provide UI with message “Are you sure to delete?” to ask permission before remove help place.
5. The system shall delete the help place out of the database.
6. The system shall provide the successful removing help place UI with message “The help place has been removed!”

**[URS-4]: The admin can view help information of each help place.**

1. The system shall retrieve all help places from system database.
2. The system shall provide UI to show all lists of help places.
3. The system retrieves information of the selected help place from database.
4. The system shall show information of the selected help place which include name, address, district, province, zip code, phone number, category, latitude and longitude.

**[URS-5]: The administrator can browse the help place by category.**

1. The system provides categories UI, which are police station, highway police station, hospital, and garage.
2. The system shall retrieve help places from database by the selected category.
3. The system shall show lists of help places by selected category.

**[URS-6]: The administrator can browse the help place by province of Thailand.**

1. The system provides UI to show lists of Thailand’s provinces.
2. The system shall retrieve the help place from database by the selected province.
3. The system shall show lists of help places by the selected province.

**[URS-7]: The administrator can browse the help place by category and province of Thailand.**

1. The system provides UI to show lists of categories and Thailand’s provinces.
2. The system shall retrieve help places from database by the selected category and province.
3. The system shall show lists of help places by the selected category and selected province

**[URS-08]: The user can view the online map with their current location.**

1. The system shall obtain the latitude and longitude of the user’s current location.
2. The system shall show the online map UI.
3. SRS-: The system shall show the user’s current location on the online map.

**[URS-09]: The user can view the offline map with their current location.**

1. The system shall obtain the latitude and longitude of the user’s current location.
2. The system shall check MapsWithMe application is installed in the device.
3. The system shall show dialog to offer user download MapsWithMe application.
4. The system shall connect MapsWithMe application.
5. SRS-: The system shall show the offline map UI.
6. SRS-: The system shall show the user’s current location on the offline map.

**[URS-10]: The user can view the help places in online map.**

1. The system shall show the online map UI
2. The system will retrieve all help places from server.
3. The system shall input marker of help places into online map UI.
4. The system shall show all markers of help places on an online map UI.

**[URS-11]: The user can view the help places in offline map.**

1. The system shall check MapsWithMe application is installed in device.
2. The system shall show dialog to offer user download MapsWithMe application**.**
3. The system shall connect MapsWithMe application**.**
4. The system shall show the offline map UI**.**
5. The system shall retrieve the loaded help places from the user’s device**.**
6. The system shall input marker of help places into offline map UI.
7. The system shall show all markers of help places on an offline map UI.

**[URS-12]: The user can view help information of each help place in online map.**

1. The system shall receive the help place object that user selected from online map.
2. The system shall retrieve information of help place object.
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.

**[URS-13]: The user can view help information of each help place in offline map.**

1. The system shall receive the help place object that user selected from offline map.
2. The system shall retrieve information of help place object.
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.

**[URS-14]: The user can make emergency call to each help place in online map.**

1. The system shall receive the help place object that user selected from offline map.
2. The system shall retrieve information of help place object.
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.
4. The system shall provide the call UI.
5. The system shall call to the selected help place.

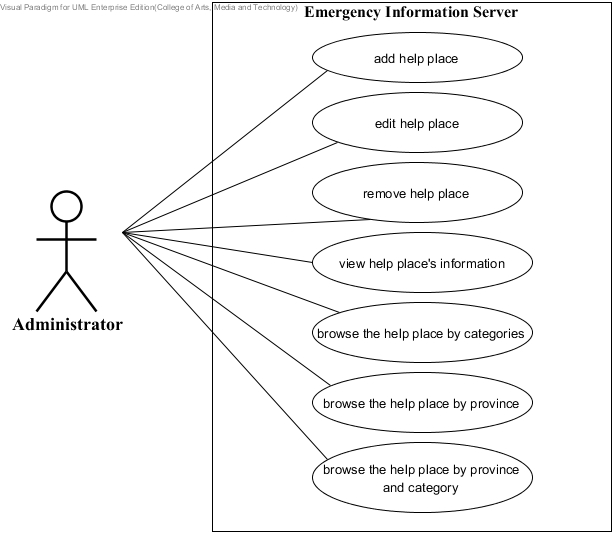
**[URS-15]: The user can make emergency call to each help place in offline map.**

1. The system shall receive the help place object that user selected from offline map.
2. The system shall retrieve information of help place object.
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.
4. The system shall provide the call UI.
5. The system shall call to the selected help place.

# Chapter Three | Specific Requirement

## 3.1 Use Case Scenarios

**• Emergency Information Server**



**Figure 1 Show use case of “Emergency Information Server”**

**• Emergency Information on Mobile**

****

**Figure 2 Show use case of “Emergency Information on Mobile”**

## 3.2 Use Case Description

**UC-01:** Add help place

The administrator can add the details of help information, which should be real and up to date. The information include name, address, district, province, zip code, phone number, category, latitude and longitude.

**Actor**

Administrator

**Prerequisite**

The administrator has to enter to the home page.

**Input**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Remarks** |
| Name | Name of help place should have the length 1-50 characters. | "Chiangmai Ram Hospital" | The word can be numeric, character or special alphabet. |
| Address | Address should be real information. The length should be 0-50   characters. | "8 Boonreungrit Rd” | Address should be the real information. |
| District | District should be real information. The length should be 0-50 characters. | “Muang” | District should be the real information. |
| Province | Province should be real information. | “Chiang Mai” | Province should be the real information. |
| Zip code | Zip code should be real information. The length should be 0-5 characters. | “50200” | Zip code should be the real information. |
| Phone Number | Phone number should be 9-10 digits. | "053920300" | Phone number should be the numeric. |
| Latitude | Latitude should be the DD (decimal degrees) format, which base on Google maps. | 18.809011 | Latitude should locate to the real location. |
| Longitude | Longitude should be the DD (decimal degrees) format, which base on Google maps. | 99.218742 | Longitude should locate to the real location. |
| Category | There are four categories, which are police station, highway police station, hospital and garage. | “Hospital” | Category should base on each help place. |

**Output**

The new help place with its information will add into the database.

**Flow of Execution**

1. The administrator browses to the add information page.
2. The system provides UI to add name, address, district, province, zip code, phone number, latitude and longitude.
3. The system provides map UI with pinning and searched province UI to get latitude and longitude.
4. The administrator adds the information of the help place.
5. The system checks the format of information.
6. The system adds the new help place into database.
7. The system shows successful UI with message “The help place has been added to database.” and returns to home page.

**Alternative flow A, the validation error**

A.5 If the administrator input data in the wrong format, the system returns to step 2, and provides the error message as followed:

The wrong name format: The error message is “Name must between 1 to 50 characters”

The wrong address format: The error message is “The address length should be 0-50 characters”

The wrong district format: The error message is “The district length should be 0-50 characters”

The wrong zip code format: The error message is “The zip code length should be 0-5 characters”

The wrong province format: The error message is “Please choose province”

The wrong phone number format: The phone number length should be 9-10 characters”

The wrong latitude format: The error message is “Please put longitude”

The wrong longitude format: The error message is “Please put longitude”

The wrong category format: The error message is “Please choose province”

**Use Case:** Add help information (UC-01)

**URS-01:** The administrator can add help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.

**System Requirement Specification:**

1. The system provides the UI, which receive name, address, district, province, zip code, phone number, category, latitude and longitude.
2. The system provides map UI.
3. The system provides searched province UI.
4. The system shall receive latitude and longitude from map.
5. The system shall check the name length. The name must be 1- 50 characters.
6. The system shall check the address length. The address must be 0- 50 characters.
7. The system shall check the district length. The district must be 0- 50 characters.
8. The system shall check the zip code length. The zip code must be 0-5 characters.
9. The system shall check the phone number format. The phone number should be 9-10 digits.
10. The system shall check the latitude format. The latitude should not be null.
11. The system shall check the longitude format. The longitude should not be null.
12. The system shall check the province format. The province should not be null.
13. The system shall check the category format. The category should not be null.
14. The system shall display the error message “Name must between 1 to 50 characters”
15. The system shall display the error message “The address length should be 0-50 characters”
16. The system shall display the error message “The district length should be 0-50 characters”
17. The system shall display the error message “The zip code length should be 0-5 characters”
18. The system shall display the error message “Please choose province”
19. The system shall display the error message “The phone number length should be 9-10 characters”
20. The system shall display the error message “Please put latitude”
21. The system shall display the error message “Please put longitude”
22. The system shall display the error message “Please choose province”
23. The system shall add a new help place into the database.
24. The system shall provide the successful adding help information UI with message “The help place has been added to database.”

**UC-02:** Edit help place

The administrator can edit the details of help place’s information, which should be real and up to date. The information include name, address, district, province, zip code, phone number, category, latitude and longitude.

**Actor**

Administrator

**Prerequisite**

The administrator has to enter to the home page.

The administrator has to choose the help place, where they want to edit.

**Input**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Remarks** |
| Name | Name of help place should have the length 1-50 characters. | "Chiangmai Ram Hospital" | The word can be numeric, character or special alphabet. |
| Address | Address should be real information. The length should be 0-50   characters. | "8 Boonreungrit Rd” | Address should be the real information. |
| District | District should be real information. The length should be 0-50 characters. | “Muang” | District should be the real information. |
| Province | Province should be real information. | “Chiang Mai” | Province should be the real information. |
| Zip code | Zip code should be real information. The length should be 0-5 characters. | “50200” | Zip code should be the real information. |
| Phone Number | Phone number should be 9-10 digits. | "053920300" | Phone number should be the numeric. |
| Latitude | Latitude should be the DD (decimal degrees) format, which base on Google maps. | 18.809011 | Latitude should locate to the real location. |
| Longitude | Longitude should be the DD (decimal degrees) format, which base on Google maps. | 99.218742 | Longitude should locate to the real location. |
| Category | There are four categories, which are police station, highway police station, hospital and garage. | “Hospital” | Category should base on each help place. |

**Output**

The selected help place with new information will update into the database.

**Flow of Execution**

1. The administrator browses to the edit information page.
2. The system retrieves information of the selected help place from database.
3. The system shows information of the selected help place.
4. The system provides UI to receive name, address, district, province, zip code, phone number, category, latitude and longitude.
5. The system provides map UI with pinning and searched province UI to get latitude and longitude.
6. The administrator edits the information of the help place.
7. The system checks the format of information.
8. The system updates the help information into database.
9. The system shows successful UI with message “The help place has been added to database.” and returns to home page.

**Alternative flow A, the validation error**

A.5 If the administrator input data in the wrong format, the system returns to step 2 ,and provides the error message as followed:

The wrong name format: The error message is “Name must between 1 to 50 characters”

The wrong address format: The error message is “The address length should be 0-50 characters”

The wrong district format: The error message is “The district length should be 0-50 characters”

The wrong zip code format: The error message is “The zip code length should be 0-5 characters”

The wrong province format: The error message is “Please choose province”

The wrong phone number format: The phone number length should be 9-10 characters”

The wrong latitude format: The error message is “Please put longitude”

The wrong longitude format: The error message is “Please put longitude”

The wrong category format: The error message is “Please choose province”

**Use Case:** Edit help information (UC-02)

**URS-02:** The administrator can edit help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.

**System Requirement Specification:**

1. The system shall retrieve all help places from system database.
2. The system shall provide UI to show all lists of help places.
3. The system shall provide edit UI for all lists of help places.
4. The system retrieves information of the selected help place from database.
5. The system shall show information of the selected help place which include name, address, district, province, zip code, phone number, category, latitude and longitude.
6. The system provides the UI, which receive name, address, district, province, zip code, phone number, category, latitude and longitude.
7. The system provides map UI.
8. The system provides searched province UI.
9. The system shall receive latitude and longitude from map.
10. The system shall check the name length. The name must be 1- 50 characters.
11. The system shall check the address length. The address must be 0- 50 characters.
12. The system shall check the district length. The district must be 0- 50 characters.
13. The system shall check the zip code length. The zip code must be 0-5 characters.
14. The system shall check the phone number format. The phone number should be 9-10 digits.
15. The system shall check the latitude format. The latitude should not be null.
16. The system shall check the longitude format. The longitude should not be null.
17. The system shall check the province format. The province should not be null.
18. The system shall check the category format. The category should not be null.
19. The system shall display the error message “Name must between 1 to 50 characters”
20. The system shall display the error message “The address length should be 0-50 characters”
21. The system shall display the error message “The district length should be 0-50 characters”
22. The system shall display the error message “The zip code length should be 0-5 characters”
23. The system shall display the error message “Please choose province”
24. The system shall display the error message “The phone number length should be 9-10 characters”
25. The system shall display the error message “Please put latitude”
26. The system shall display the error message “Please put longitude”
27. The system shall display the error message “Please choose province”
28. The system shall update the help information into the database.
29. The system shall provide the successful editing help information UI with message “The help place has been added to database.”

**UC-03:** Remove help place

The administrator can delete the help place out of the database.

**Actor**

Administrator

**Prerequisite**

The administrator has to enter to the home page.

**Input**

The identity number of selected help place.

**Output**

System deletes the selected help place from database.

**Flow of Execution**

1. The administrator browses the home page.
2. The system retrieves the help place from database.
3. The system shows list of help place with remove UI.
4. The administrator selects help place, where they want to remove.
5. The system provides UI with message “Are you sure to delete?” to ask permission before remove help place.
6. The administrator accepts to delete help place.
7. The system deletes the help place from database.
8. The system shows successful remove UI with message “The help place has been removed!” and returns to home page.

**Alternative flow A, the validation error**

A.5 If the administrator chooses cancel the system will go back to step 3.

**Use Case:** Remove help place (UC-03)

**URS-03:** The administrator can remove help place.

**System Requirement Specification:**

1. The system shall retrieve all help places from system database.
2. The system shall provide UI to show all lists of help places.
3. The system shall provide remove UI for all lists of help places.
4. The system shall provide UI with message “Are you sure to delete?” to ask permission before remove help place.
5. The system shall delete the help place out of the database.
6. The system shall provide the successful removing help place UI with message “The help place has been removed!”

**UC-04:** View help place’s information

The admin can view the help place’s information, which include name, address, district, province, zip code, phone number, category, latitude and longitude of each help place.

**Actor**

Administrator

**Prerequisite**

The admin has to enter to the home page.

**Input**

The identity number of the selected help place.

**Output**

Systemwill show the information of the selected help place.

**Flow of Execution**

1. The admin browses the home page.
2. The system retrieves the help place from database.
3. The system shows all list of the help places.
4. The administrator selects help place, where they want to view.
5. The system retrieves information of the selected help place from database.
6. The system shows the help information, which include name, address, district, province, zip code, phone number, category, latitude and longitude.

**Use Case:** View information of each help place in web server (UC-04)

**URS-04:** The administrator can view help information of each help place.

**System Requirement Specification:**

1. The system shall retrieve all help places from system database.
2. The system shall provide UI to show all lists of help places.
3. The system retrieves information of the selected help place from database.
4. The system shall show information of the selected help place which include name, address, district, province, zip code, phone number, category, latitude and longitude.

**UC-05:** Browse the help place by category

The administrator can browse the help place by help place’s categories, which are police station, highway police station, hospital, and garage.

**Actor**

Administrator

**Prerequisite**

The administrator has to enter to the home page.

**Input**

The identity number of category that administrator selected.

**Output**

Systemwill show list of help places.

**Flow of Execution**

1. The system shows categories UI, which are police station, highway police station, hospital, and garage.
2. The administrator selects category, which they want to view.
3. The system shall retrieve the help place’s information from database by the selected category.
4. The system shall show list of help places by the selected category.

**Use Case:** Browse the help place by help place’s category (UC-05)

**URS-05:** The administrator can browse the help place by category.

**System Requirement Specification:**

1. The system provides categories UI, which are police station, highway police station, hospital, and garage.
2. The system shall retrieve help places from database by the selected category.
3. The system shall show lists of help places by selected category.

**UC-06:** Browse the help place by province

The administrator can browse the help place by selects province of Thailand that they want to view.

**Actor**

Administrator

**Prerequisite**

The administrator has to enter to the home page.

**Input**

The identity number of province that administrator selected.

**Output**

Systemwill show list of help places by selected province.

**Flow of Execution**

1. The system provides UI to show list province of Thailand.
2. The administrator selects province, which they want to view.
3. The system shall retrieve the help place’s information from database by the selected province.
4. The system shall show list of help places by selected province.

**Use Case:** Browse the help place by province of Thailand (UC-06)

**URS-06:** The administrator can browse the help place by province of Thailand.

**System Requirement Specification:**

1. The system provides UI to show lists of Thailand’s provinces.
2. The system shall retrieve the help place from database by the selected province.
3. The system shall show lists of help places by the selected province.

**UC-07:** Browse the help place by province and category

The administrator can browse the help place by selects category and province of Thailand that they want to view.

**Prerequisite**

The administrator has to enter to the home page.

**Input**

The identity number of category that administrator selected.

The identity number of province that administrator selected.

**Output**

Systemwill show the list of help places by selected category and province.

**Flow of Execution**

1. The system provides UI to show list province of Thailand, and category of help place.
2. The administrator selects category and province, which they want to view.
3. The system shall retrieve the help place’s information from database by the selected category and province.
4. The system shall show the list of help places by selected category and province.

**Use Case:** Browse the help place by category and province (UC-07)

**URS-07:** The administrator can browse the help place by category and province of Thailand.

**System Requirement Specification:**

1. The system provides UI to show lists of categories and Thailand’s provinces.
2. The system shall retrieve help places from database by the selected category and province.
3. The system shall show list of help places by the selected category and selected province.

**UC-08:** View the online map

The user can view the offline map with their current location on the offline map page.

**Actor**

Users

**Prerequisite**

The user has to turn on GPS and enter to the offline map page.

The user has to download Thailand map from MapsWithMe application.

The user installs MapsWithMe application on their device.

**Input**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Remarks** |
| Latitude | Latitude of user’s current location should be the DD (decimal degrees) format, which base on MapsWithMe. | 18.809011 | Latitude must be decimal number of degrees. |
| Longitude | Longitude of user’s current location should be the DD (decimal degrees) format, which base on MapsWithMe. | 99.218742 | Longitude must be decimal number of degrees. |

**Output**

The offline map is shown with the current location of the user.

**Flow of Execution**

1. The user enters to the offline map.
2. The system connects MapsWithMe application.
3. The system obtains the latitude and longitude of the user’s current location.
4. The system provides offline map UI, which shows offline map with the user’s current location.

**Use Case:** View the online map (UC-08)

**URS-08:** The user can view the online map with their current location.

**System Requirement Specification:**

1. The system shall obtain the latitude and longitude of the user’s current location.
2. The system shall show the online map UI.
3. The system shall show the user’s current location on the online map.

**UC-09:** View the offline map

The user can view the offline map with their current location on the offline map page.

**Actor**

Users

**Prerequisite**

The user has to turn on GPS and enter to the offline map page.

The user has to download Thailand map from MapsWithMe application.

The user installs MapsWithMe application on their device.

**Input and Output**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Example** | **Remarks** |
| Latitude | Latitude of user’s current location should be the DD (decimal degrees) format, which base on MapsWithMe. | 18.809011 | Latitude must be decimal number of degrees. |
| Longitude | Longitude of user’s current location should be the DD (decimal degrees) format, which base on MapsWithMe. | 99.218742 | Longitude must be decimal number of degrees. |

**Output**

The offline map is shown with the current location of the user.

**Flow of Execution**

1. The user enters to the offline map.
2. The system connects MapsWithMe application.
3. The system obtains the latitude and longitude of the user’s current location.
4. The system provides offline map UI, which shows offline map with the user’s current location.

**Use Case:** View the offline map (UC-09)

**URS-09:** The user can view the offline map with their current location.

**System Requirement Specification:**

1. The system shall obtain the latitude and longitude of the user’s current location.
2. The system shall check MapsWithMe application is installed in the device.
3. The system shall connect MapsWithMe application.
4. The system shall connect MapsWithMe application.
5. The system shall show the offline map UI.
6. The system shall show the user’s current location on the offline map.

**UC-10:** View help places in online map

All help places will show in an online map. The user can view all help places on the map.

**Actor**

Users

**Prerequisite**

The user has to connect with the internet.

The user has to turn on GPS and enter to the online map page.

**Input**

The user input the uniform resource location automatic when start the application.

**Output**

All help places shows on the online map.

**Flow of Execution**

1. The user enters to the online map.
2. The system get map from Google Maps.
3. The system retrieve help places from server.
4. The system shall input marker of help places into online map.
5. The system shall provide all markers of help places on an online map.

**Use Case:** View help places in online map (UC-10)

**URS-10:** The user can view help places in online map.

**System Requirement Specification:**

1. The system shall show the online map UI
2. The system will retrieve all help places from server.
3. The system shall input marker of help places into online map UI.
4. The system shall show all markers of help places on an online map UI.

**UC-11:** View help places in offline map

The user can view the location of help places, where are loaded and saved in the user’s device.

**Actor**

Users

**Prerequisite**

The user enters to the offline map page.

The user has to turn on GPS.

The user has to download Thailand map from MapsWithMe application.

The user installs MapsWithMe application on their device.

There is information of help place, which is loaded, on the user device.

**Input**

The user enters to the offline map.

**Output**

The help location shows on the offline map.

**Flow of Execution**

1. The user enters to the offline map.
2. The system connects MapsWithMe application.
3. The system retrieves the loaded help places from the user’s device.
4. The system shall input marker of help places into offline map.
5. The system shows help places on the offline map UI.

**Use Case:** View help places in offline map (UC-11)

**URS-11:** The user can view help places in offline map.

**System Requirement Specification:**

1. The system shall check MapsWithMe application is installed in device **.**
2. The system shall show dialog to offer user download MapsWithMe application**.**
3. The system shall connect MapsWithMe application.
4. The system shall show the offline map UI**.**
5. The system shall retrieve the loaded help places from the user’s device**.**
6. The system shall input marker of help places into offline map UI**.**
7. The system shall show all markers of help places on an offline map UI**.**

**UC-12:** View information of each help place in online map

The user can view the help information of each help place. The help information is name, address, district, province, zip code, and phone number of help place.

**Actor**

Users

**Prerequisite**

The user enters to the online map page, which shows the location of help place.

**Input**

The selected help place object.

**Output**

The help information of the selected help place, which is name, address, district, province, zip code, and phone number of help place.

**Flow of Execution**

1. The user selects the help place they want to see information on the online map page.
2. The system shall receive the help place object that user selected from online map.
3. The system shall retrieve information of help place object.
4. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.

**Use Case:** View help information of each help place in online map (UC-12)

**URS-12:** The user can view help information of each help place in online map.

**System Requirement Specification:**

1. The system shall receive the help place object that user selected from online map**.**
2. The system shall retrieve information of help place object**.**
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.

**UC-13:** View information of each help place in offline map

The user can view the help information of each help place. The help information is name, address, district, province, zip code, and phone number of help place.

**Actor**

Users

**Prerequisite**

The user enters to the offline map page, which shows the location of help place.

There is information of help place, which is loaded, on the user device.

**Input**

The selected help place object.

**Output**

The help information of the selected help place, which is name, address, district, province, zip code, and phone number of help place.

**Flow of Execution**

1. The user selects the help place they want to see information on offline map.
2. The system shall receive the help place object that user selected from offline map.
3. The system shall retrieve information of help place object.
4. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.

**Use Case:** View help information of each help place in offline map (UC-13)

**URS-13:** The user can view help information of each help place in offline map.

**System Requirement Specification:**

1. The system shall receive the help place object that user selected from online map**.**
2. The system shall retrieve information of help place object**.**
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.

**UC-14:** Make emergency call to each help place in online map

The user can call to each help place directly from the application.

**Prerequisite**

The user enters to the online map page, which shows the location of help place.

**Actor**

Users

**Input**

The selected help place object, where the user want to make a call.

**Output**

The system connects to call system of the device and make a call to the selected help place.

**Flow of Execution**

1. The user selects the help place they want to call on an online map.
2. The system shall receive the help place object that user selected from online map.
3. The system shall retrieve information of help place object.
4. The system provides the information of the selected help place with call UI.
5. The user selects phone number to call.
6. The system call to the selected help place.

**Use Case:** Make emergency call to each help place in online map (UC-14)

**URS-14:** The user can make emergency call to each help place in online map.

**System Requirement Specification:**

1. The system shall receive the help place object that user selected from online map**.**
2. The system shall retrieve information of help place object**.**
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.
4. The system shall provide the call UI.
5. The system shall call to the selected help place.

**UC-15:** Make emergency call to each help place in offline map

The user can call to each help place directly from the application.

**Actor**

Users

**Prerequisite**

The user enters to the offline map page, which shows the location of help place.

There is information of help place, which is loaded, on the user device.

**Input**

The selected help place object, where the user want to make a call.

**Output**

The system connects to call system of the device and make a call to the selected help place.

**Flow of Execution**

1. The user selects the help place they want to call on an offline map.
2. The system shall receive the help place object that user selected from offline map.
3. The system shall retrieve information of help place object.
4. The system provides the information of the selected help place with call UI.
5. The user selects phone number to call.
6. The system call to the selected help place.

**Use Case:** Make emergency call to each help place in offline +map (UC-15)

**URS-15:** The user can make emergency call to each help place in offline map.

**System Requirement Specification:**

1. The system shall receive the help place object that user selected from online map**.**
2. The system shall retrieve information of help place object**.**
3. The system provides information UI to show the help information, which are name, address, district, province, zip code, and phone number.
4. The system shall provide the call UI.
5. The system shall call to the selected help place.