All Deliverables

for

Hawkere

**Version 1.0 approved**

**Prepared by Prem Adithya Suresh**

**PilsnerUrquell**

**4 April 2019**

**Table of Contents**

[1. Use Case Model 4](#_Toc5567203)

[1.1 Use Case Diagram 4](#_Toc5567204)

[1.2 Use Case Description 4](#_Toc5567205)

[1.2.1 Login with Google Account 4](#_Toc5567206)

[1.2.2 View the Map 6](#_Toc5567207)

[1.2.3 Submit Rating 8](#_Toc5567208)

[1.2.4 View Details of a Hawker Centre 10](#_Toc5567209)

[1.2.5 Submit Review 12](#_Toc5567210)

[1.2.6 Search for a Hawker Centre 13](#_Toc5567211)

[1.2.7 Upload a Photo 14](#_Toc5567212)

[1.2.8 Share Details 15](#_Toc5567213)

[1.2.9 View the List 16](#_Toc5567214)

[1.2.10 Enter a Search String 17](#_Toc5567215)

[1.2.11 Sign Out 18](#_Toc5567216)

[1.2.12 Take a Photo 19](#_Toc5567217)

[1.2.13 Get Directions to a Hawker Centre 20](#_Toc5567218)

[1.2.14 Choose Photo from Gallary 21](#_Toc5567219)

[1.2.15 Open Menu 22](#_Toc5567220)

[1.2.16 View Reviews 23](#_Toc5567221)

[1.2.17 View Photos 24](#_Toc5567222)

[2. Sequence Diagrams 25](#_Toc5567223)

[2.1 Open Menu 25](#_Toc5567224)

[2.2 View Reviews 25](#_Toc5567225)

[2.3 Upload Photo 26](#_Toc5567226)

[2.4 User Login 27](#_Toc5567227)

[2.5 View Photos 27](#_Toc5567228)

[2.6 View Details 28](#_Toc5567229)

[2.7 Submit Rating 29](#_Toc5567230)

[3. Dialog Map 30](#_Toc5567231)

[4. Class Diagram 31](#_Toc5567232)

[5. System Architecture 32](#_Toc5567233)

[6. Tests 33](#_Toc5567234)

[6.1 Blackbox Test 33](#_Toc5567235)

[6.2 Whitebox Test 34](#_Toc5567236)

[6.2.1 Control Flow Test for getLocation() 34](#_Toc5567237)

[6.2.2 Control Flow Test for uploadRating() 35](#_Toc5567238)

[6.3 Other Tests 37](#_Toc5567239)

[6.3.1 Login with Google Account 37](#_Toc5567240)

[6.3.2 View The Map 38](#_Toc5567241)

[6.3.3 Submit rating 39](#_Toc5567242)

[6.3.4 Upload Photo from Gallary 40](#_Toc5567243)

[6.3.5 Take and Upload a Photo 41](#_Toc5567244)

[6.3.6 Share Details 42](#_Toc5567245)

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Prem Adithya Suresh | 7 Apr | Completed the documentation | 1.0 |

# 

# UI Mockups

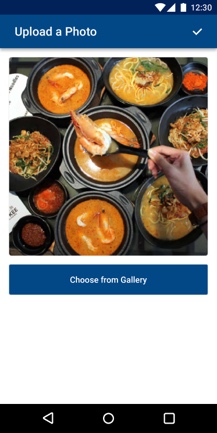
A screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA close up of many different types of food

Description automatically generatedA close up of food

Description automatically generated

A close up of food

Description automatically generatedA close up of a map

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA close up of a map

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a social media post

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA close up of a map

Description automatically generatedA close up of a device

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA screenshot of a cell phone

Description automatically generatedA close up of a map

Description automatically generatedA screenshot of a cell phone

Description automatically generated

# Use Case Model

## Use Case Diagram



## Use Case Description

### Login with Google Account

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC001 | | |
| Use Case Name: | Login with Google Account | | |
| Created By: | Chua Peng Hong | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 5/2/2019 | Date Last Updated: | 10/2/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User logs into the app using their Google account |
| Preconditions: | 1. Invocation as an included use case by UC003, UC007 and UC011. 2. User must have Google account 3. App must be downloaded 4. Google server must be online 5. An internet connection is required |
| Postconditions: | 1. App stores user’s name and profile picture |
| Priority: | Medium. Uploading photos and posting ratings/reviews will not be available. |
| Frequency of Use: | Once. The first time user tries to upload a photo or post a rating/review. |
| Flow of Events: | 1. User launches the app 2. User looks up the details of a hawker centre 3. User tries to upload a photo 4. The app prompts the user to login with their Google account 5. User enters their username and password 6. The user’s credentials are validated on Google’s servers 7. If the user’s credentials are valid, app logs user in and shows a message that they have successfully logged in. |
| Alternative Flows: | AF-S7: If the user’s credentials are invalid   1. App displays the error message fetched from Google’s servers 2. The app returns to step 4. |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### View the Map

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC002 | | |
| Use Case Name: | View the map | | |
| Created By: | Chua Peng Hong | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 5/2/2019 | Date Last Updated: | 10/2/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User uses the interactive map view with markers indicating the location of the hawker centres |
| Preconditions: | 1. Invocation as an included use case by UC006 Search for hawker centre 2. User must have location services turned on and location permissions granted to view hawker centres within a 5km radius of the user’s location 3. An internet connection is required |
| Postconditions: | Invocation of UC004 View details of hawker centre, if user chooses to view more details |
| Priority: | High. Having an interactive map marking all the locations of the hawker centres would provide the user with a bird’s eye view of all the hawker centres at a glance. |
| Frequency of Use: | Very high.   1. The “Map” view would be the default screen that the user would be on it on every launch. 2. User would heavily rely on the map as it is the most intuitive and interactive out of the other functions of the app. |
| Flow of Events: | 1. If location services is turned on and location services permissions are granted, the app will display hawker centres within a 5km radius of the user’s location 2. User can drag the map around to view hawker centres around Singapore depicted as markers on the map. 3. If the user taps on a marker, the user will then use extending use case UC013 Get directions to the hawker centre or extending use case UC004 View details of a hawker centre depending on what he/she chooses to do. |
| Alternative Flows: | AF-S2: If location services is turned off or location services permission is not granted and if user presses on the locate button   1. The app will urge the user for location services to be turned on and request for location services permission 2. The app will return to step 2   AF-S2: If location services is turned off or location services permission is not granted   1. The app will display all hawker centres in Singapore as markers on the map 2. The app returns to step 4 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Submit Rating

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC003 | | |
| Use Case Name: | Submit rating | | |
| Created By: | Chua Peng Hong | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 5/2/2019 | Date Last Updated: | 10/2/2019 |

|  |  |
| --- | --- |
| Actor: | User, App Database |
| Description: | User rates a particular hawker centre from 1 star to 5 stars according to 4 categories (Hygiene, Variety, Seating and Food) and they have the option to leave a review alongside the rating. |
| Preconditions: | 1. Invocation as an included use case by UC001 Login with Google Account 2. Invocation as an included use case by UC015 Open menu 3. An internet connection is required |
| Postconditions: | 1. User will see their rating and/or review on the “Reviews” page of the hawker centre |
| Priority: | High. The hawker centres are rated based on user’s ratings and reviews, hence it is important for the app to store and display the ratings and reviews |
| Frequency of Use: | Only 1 review is permitted per user per hawker centre.  Once the user has already provided a review, he/she can only edit the existing review and not provide another to prevent cluttering and spam. |
| Flow of Events: | 1. The app displays 4 categories each with 5 greyed out stars and indicated as well as a textbox for the user to input his/her comments. 2. User then selects the rating as per his/her discretion (greyed out stars would then turn dark blue) 3. If user types in a review, he/she will use the extending use case UC005 Submit review 4. Once completed, user taps on the tickbox at the top-right corner to submit review. 5. If the operation was a success, a toast message will appear, indicating the success 6. User is brought back to the details page |
| Alternative Flows: | AF-S8: If the operation fails   1. A toast message will be displayed indicating the error 2. App returns to step 7 |
| Exceptions: | EX1: If user does not give a rating for all 4 categories.   1. Submission would fail as it is required for the user to rate it on all 4 categories. 2. App returns to step 1 |
| Includes: | UC001 Login with Google Account |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### View Details of a Hawker Centre

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC004 | | |
| Use Case Name: | View details of a Hawker Centre | | |
| Created By: | Chua Peng Hong | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 5/2/2019 | Date Last Updated: | 10/2/2019 |

|  |  |
| --- | --- |
| Actor: | User, Gov Data API |
| Description. | User selects a hawker centre and is shown more details of selected hawker centre. |
| Preconditions: | 1. This use case extends UC002 View the map and UC009 View the list 2. An internet connection is required |
| Postconditions: | User will see details of the selected hawker centre. |
| Priority: | High. Having the user see detailed descriptions of the hawker is one of the defining points of the app. This allows the user to gain more information and make an informed decision on whether to visit selected hawker centre. Without this feature, the app will lose its purpose. |
| Frequency of Use: | Very high.   1. Every time a user wants to leave a comment/rating, he/she would have to do so from this page. 2. Every time a user wants to upload a photo of the selected hawker centre, he/she would also have to do so from this page. 3. Any actions that is linked to a particular hawker centre would have to be done through this page as this action outlines the selection of a hawker centre. |
| Flow of Events: | 1. The app shows a page with detailed description, comments, ratings and photos from the Gov Data API. 2. If the user taps on the menu icon, he/she will use the extending use case UC015 Open menu |
| Alternative Flows: | AF-1: If the data cannot be obtained   1. The app displays a toast indicating that the data cannot be obtained and the user is not brought to the details page |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | The API has sufficient information for every hawker centre listed in its database. |
| Notes and Issues: | - |

### Submit Review

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC005 | | |
| Use Case Name: | Submit review | | |
| Created By: | Lin Chien Yeh | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 07/02/2019 | Date Last Updated: | 10/02/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | The user attaches a written review to their rating. UC005 extends UC003 (Submit Rating) |
| Preconditions: | 1. This use case extends UC003 Submit rating 2. An internet connection is required |
| Postconditions: |  |
| Priority: | Medium. This is an optional part of ratings and most users may not write a review. |
| Frequency of Use: | Low |
| Flow of Events: | 1. The user writes the review after choosing the star rating in UC003 Submit review. 2. Once completed, user taps on the tickbox at the top-right corner to submit review. 3. If the operation was a success, a toast message will appear, indicating the success 4. User is brought back to the details page |
| Alternative Flows: | AF-S3: If the operation fails   1. A toast message will be displayed indicating the error 2. App returns to step 7 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | The users will mostly write the reviews in English language, so that the separation of reviews by language is not necessary. |
| Notes and Issues: | - |

### Search for a Hawker Centre

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC006 | | |
| Use Case Name: | Search for Hawker Centre | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 10/2/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | The user searches for a hawker centre through the map view |
| Preconditions: | An internet connection is required |
| Postconditions: | The user is shown results of the closest match to the user’s search |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. The user launches the app 2. If the user enters a search string then he/she uses the included use case UC010 Enter search string, to find results according to the search query 3. If the user manually interacts with the map then he/she uses the included use case UC002 View the map. 4. If the user scrolls through the list then he/she uses the included use case UC009 View the list |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | 1. UC002 View the map 2. UC009 View the list 3. UC010 Enter search string |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Upload a Photo

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC007 | | |
| Use Case Name: | Upload photo | | |
| Created By: | Lin Chien Yeh | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 07/02/2019 | Date Last Updated: | 10/02/2019 |

|  |  |
| --- | --- |
| Actor: | User, App Database |
| Description: | The user uploads photos of a hawker center |
| Preconditions: | 1. Invocation as an included use case UC001 Login with Google account 2. Invocation as an included use case UC015 Open menu 3. An internet connection is required |
| Postconditions: | 1. Photo is uploaded 2. User’s uploaded photo is displayed along with other photos |
| Priority: | Medium |
| Frequency of Use: | Low |
| Flow of Events: | 1. If the user decides to take a photo, he/she uses the included use case UC012 Take a photo 2. If the user decides to choose a photo from the gallery, he/she uses the included use case UC014 Choose photo from gallery 3. If the user presses back, the use case ends and goes back to the previous screen |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | UC012 Take a photo  UC014 Choose photo from gallery |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Share Details

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC008 | | |
| Use Case Name: | Share Details | | |
| Created By: | Lin Chien Yeh | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 07/02/2019 | Date Last Updated: | 10/02/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User shares hawker centre details through social media or a link intended for sharing is generated by the app for them. |
| Preconditions: | Invocation as an included use case UC015 Open menu |
| Postconditions: | The user will be presented with the share menu |
| Priority: | Low |
| Frequency of Use: | Low |
| Flow of Events: | 1. The user is presented with the share menu 2. The user selects one of the presented ways to share an internal app link of this hawker center 3. The share menu is dismissed and this use case comes to an end |
| Alternative Flows: | AF-S2: If the user taps the back button   1. The use case comes to an end |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### View the List

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC009 | | |
| Use Case Name: | View the list | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 10/02/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | The user selects a hawker centre from the list |
| Preconditions: | 1. Invocation as an included use case UC006 Search for hawker centre 2. Invocation as an extending use case UC010 Enter search string 3. An internet connection is required |
| Postconditions: | The user will use the use case UC004 View details of a hawker centre |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. If location services is turned on and location services permissions are granted, the app will display a list of nearby hawker centres will be displayed sorted by the shortest distance first 2. User can scroll through the list to view all hawker centres around Singapore. |
| Alternative Flows: | AF-S2: If location services is turned off or location services permission is not granted and if user presses on the locate button   1. The app will urge the user for location services to be turned on and request for location services permission 2. The app will return to step 2   AF-S2: If location services is turned off or location services permission is not granted   1. The app will display all hawker centres in Singapore as markers on the map 2. A list of all hawker centres will be shown, arranged in ascending alphabetical order 3. The app returns to step 4 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Enter a Search String

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC010 | | |
| Use Case Name: | Enter search string | | |
| Created By: | Chua Peng Hong | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 11/2/2019 | Date Last Updated: | 11/2/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | 1. User types in keywords in a textbox to search for relevant hawker centres. 2. An internet connection is required |
| Preconditions: | 1. Invocation as an included use case UC006 Search for hawker centre 2. An internet connection is required |
| Postconditions: | User would be provided with a list of hawker centres that fit the relevant keywords as in UC009 Select from list. |
| Priority: | High |
| Frequency of Use: | High |
| Flow of Events: | 1. User taps on the search bar 2. User types in either the name or address of a hawker centre that he/she wants to search for 3. If results are found, search results will be displayed accordingly |
| Alternative Flows: | AF-S3: If search is invalid   1. “No matching results were found” will be displayed to the user 2. The app returns to step 2 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Sign Out

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC011 | | |
| Use Case Name: | Sign Out | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 10/2/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User logs out of previously logged in Google account |
| Preconditions: | 1. Invocation as an included use case by UC001 Login with Google account 2. Invocation as an included use case by UC015 Open menu |
| Postconditions: | User is no longer logged in. |
| Priority: | High. |
| Frequency of Use: | Low. |
| Flow of Events: | 1. User selects the sign out option in the opened menu. 2. The app prompts the user to confirm that they want to sign out. 3. If the user confirms, the app signs out the user. |
| Alternative Flows: | AF-S3: If the user cancels the prompt   1. The app returns to its initial state before the use case initiation and this use case comes to an end |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Take a Photo

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC012 | | |
| Use Case Name: | Take a photo | | |
| Created By: | Tollar Vojtech | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 10/02/2019 | Date Last Updated: | 11/02/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: |  |
| Preconditions: | 1. Invocation as an included use case UC007 Upload photo 2. User’s device has a camera 3. User has given the app the appropriate permissions to use the camera. 4. An internet connection is required |
| Postconditions: | A photo taken by the user is ready to be uploaded by the app. |
| Priority: | High. The purpose of this app is to provide users with as much details as possible about the hawker centres. Hence it is highly important for users to be able to upload photos of the hawker centre. |
| Frequency of Use: | Low. Most users may not upload photos. |
| Flow of Events: | 1. App displays the camera UI with live camera feed. 2. User takes a photo. 3. App shows the taken photo. 4. If user is satisfied with the photo, the user will press the tick icon on the top right 5. App uploads the photo. |
| Alternative Flows: | AF-S4: If the user is not satisfied with the photo   1. The user can choose to retake the photo by pressing on retake 2. The app will return to step 1 |
| Exceptions: | EX1: If the app is unable to contact the server to upload the photo   1. An error message is displayed 2. App returns to step 3 |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Get Directions to a Hawker Centre

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC013 | | |
| Use Case Name: | Get directions to Hawker Centre | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 11/02/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User, Google Maps |
| Description: | User gets is given directions to the hawker centre from their current location |
| Preconditions: | 1. This use case extends UC002 View the map 2. An internet connection is required |
| Postconditions: | User ends up on the Google Maps app with directions shown |
| Priority: | Medium. The primary goal of this app is to provide details about the hawker centre and reviews from people. Directions is a sub feature which is meant to help the user skip a step of manually entering the address of the hawker centre in Google Maps |
| Frequency of Use: | Medium. |
| Flow of Events: | 1. After the user selects a hawker centre on the map, a bubble will be shown above the marker on the map 2. If the user taps on the bubble, the user will be redirected to the Google Maps app with directions shown from his/her current location |
| Alternative Flows: | - |
| Exceptions: | Any and all exceptions will be handled by the Google Maps app and is not part of this app |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Choose Photo from Gallary

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC014 | | |
| Use Case Name: | Choose photo from gallery | | |
| Created By: | Tollar Vojtech | Last Updated By: | Prem Adithya Suresh |
| Date Created: | 10/2/2019 | Date Last Updated: | 11/02/2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User chooses a photo from the gallery for upload |
| Preconditions: | 1. Invocation as an included use case by UC007 Upload photo. 2. Appropriate permissions to access the device’s photo gallery granted. 3. An internet connection is required |
| Postconditions: | A photo taken by the user is ready to be uploaded by the app. |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. The user selects a photo from the device gallery 2. Selected photo is shown by the app 3. If user is satisfied, then the user presses on the tick icon on the top right 4. App uploads the photo |
| Alternative Flows: | AF-S3: If the user is not satisfied   1. User taps on “Choose from gallery” 2. User selects a different photo for upload 3. App returns to step 3 |
| Exceptions: | EX1: If the app is unable to contact the server to upload the photo   1. An error message is displayed 2. App returns to step 3 |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### Open Menu

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC015 | | |
| Use Case Name: | Open Menu | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 11/2/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | A menu open up showing various actions such as Rate/Review, Upload a Photo, Share and Sign Out |
| Preconditions: | Invocation as an extending use case of UC004 View details of a Hawker Centre |
| Postconditions: | User uses appropriate use cases based on the selected action |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. User taps on the three dot icon to open the menu 2. If the user taps on “Rate / Review”, he/she uses the use case UC003 Submit Rating 3. If the user taps on “Upload a Photo”, he/she uses the use case UC007 Upload Photo 4. If the user taps on “Share”, he/she uses the use case UC008 Share Details 5. If the user taps on “Sign Out”, he/she uses the use case UC011 Sign Out 6. If the user taps on back to go back, the use case comes to an end |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | 1. UC003 Submit Rating 2. UC007 Upload Photo 3. UC008 Share Details 4. UC011 Sign Out |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### View Reviews

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC016 | | |
| Use Case Name: | View Reviews | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 16/3/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User chooses to view a list of reviews |
| Preconditions: | Invocation as an extending use case of UC004 View details of a Hawker Centre |
| Postconditions: | - |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. User taps on “See All” 2. If more reviews are available, a list of reviews will be shown |
| Alternative Flows: | AF-S2: If more reviews are not available   1. A toast message will be shown notifying the user that no more reviews are available to be shown 2. App returns to step 1 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

### View Photos

|  |  |  |  |
| --- | --- | --- | --- |
| Use Case ID: | UC017 | | |
| Use Case Name: | View Photos | | |
| Created By: | Prem Adithya Suresh | Last Updated By: |  |
| Date Created: | 16/3/2019 | Date Last Updated: |  |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User chooses to view a list of photos |
| Preconditions: | Invocation as an extending use case of UC004 View details of a Hawker Centre |
| Postconditions: | - |
| Priority: | High |
| Frequency of Use: | Medium |
| Flow of Events: | 1. User taps on the photos area 2. If more photos are available, a list of photos will be shown |
| Alternative Flows: | AF-S2: If more photos are not available   1. A toast message will be shown notifying the user that no more photos are available to be shown 2. App returns to step 1 |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

# Sequence Diagrams

## Open Menu

## View Reviews

## Upload Photo

## User Login

## View Photos

## View Details

## Submit Rating

# Dialog Map



# Class Diagram

****

# System Architecture

A screenshot of a computer

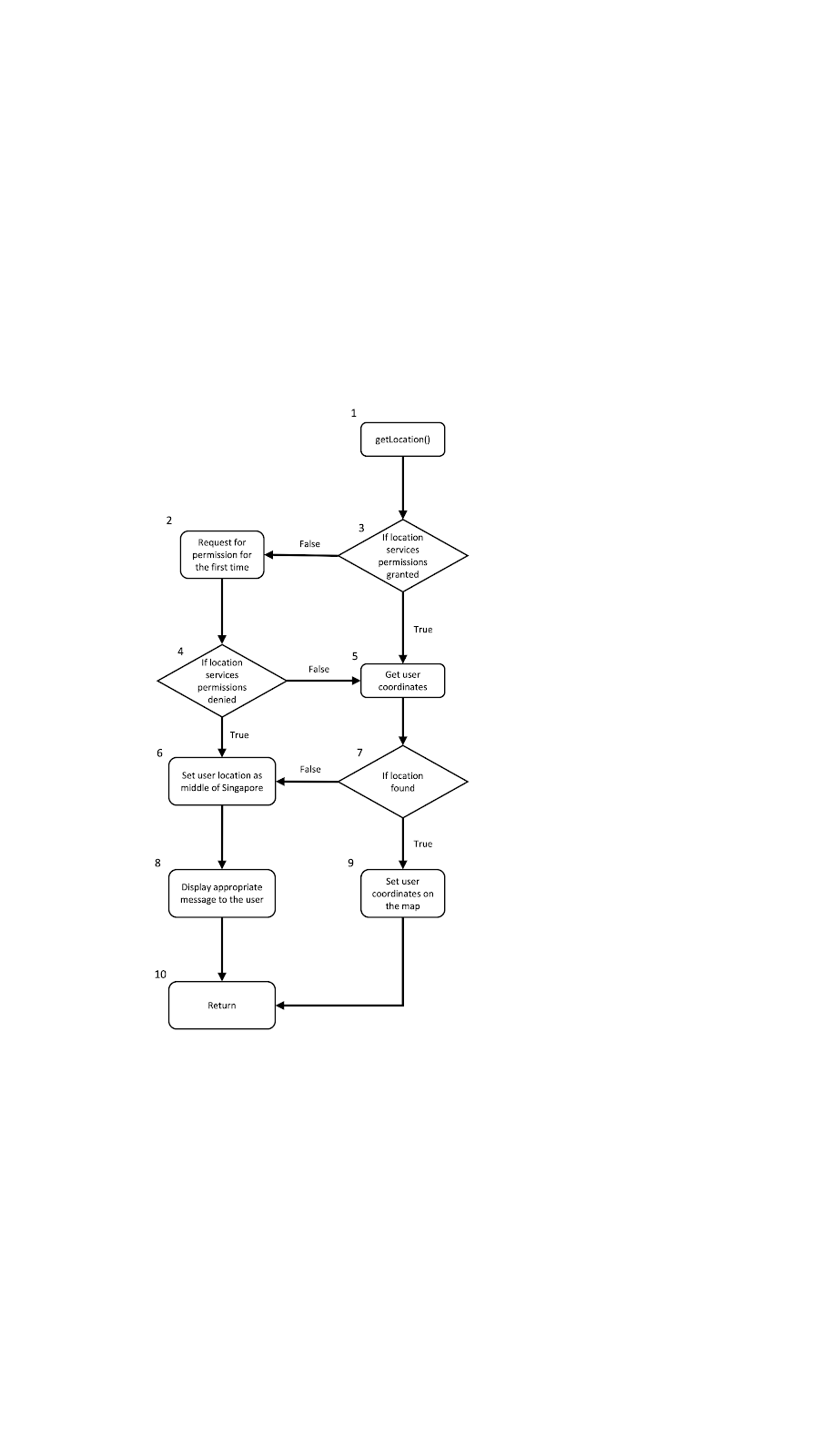
Description automatically generated

# Tests

## Blackbox Test

## Whitebox Test

### Control Flow Test for getLocation()



Cyclomatic Complexity

CC = 12 - 10 + 2 = 4

CC = 3 + 1 = 4

Basis Paths

1. 1, 3, 5, 7, 9, 10
2. 1, 3, 2, 4, 5, 7, 9, 10
3. 1, 3, 5, 7, 6, 8, 10
4. 1, 3, 2, 4, 6, 8, 10

Test Cases

1. Location services permissions granted
2. Location services permissions requested and granted
3. Set phone location services to GPS mode where fetching of location takes a longer time on first app launch
4. Location services permissions requested and denied

Real Execution Paths

1. 1, 3, 5, 7, 9, 10
2. 1, 3, 2, 4, 5, 7, 9, 10
3. 1, 3, 5, 7, 6, 8, 10
4. 1, 3, 2, 4, 6, 8, 10

### https://lh4.googleusercontent.com/lPk0mn2k8mbrzPQrTAvGb25nXIQuMD5D9qnURSM-ManYeTGIJh8U1ouCV8lnC2fMkMztJGQ_4_FMsrqbIn982LZHJ-ndgmU8cbaib_mUaY-VAmn0_FXspVZPhXIkEpPhzNfWRFy6Control Flow Test for uploadRating()

Cyclomatic Complexity

CC = 18 - 14 + 2 = 6

CC = 5 + 1 = 6

Basis Paths

1. 1, 3, 5, 7, 8, 10, 11, 13, 14
2. 1, 3, 2, 4, 5, 7, 8, 10, 11, 13, 14
3. 1, 3, 5, 7, 6, 8, 10, 11, 13, 14
4. 1, 3, 5, 7, 8, 9, 5, 7, 8, 10, 11, 13, 14
5. 1, 3, 5, 7, 8, 10, 11, 13, 12, 6, 8, 10, 11, 13, 14
6. 1, 3, 2, 4, 2, 4, 5, 7, 8, 10, 11, 13, 14

Test Cases

1. User is logged in and no existing rating by user for that hawker centre is found
2. User is not logged in, logs in successfully and no existing rating by user for that hawker centre is found
3. User is logged in and there is an existing rating by user for that hawker centre is found
4. User is logged in, there is no existing rating by user for that hawker centre is found and user submits an incomplete rating form
5. User is logged in, there is no existing rating by user for that hawker centre is found, user submits an incomplete rating form, upload of rating fails due to an unknown error and user has to try again
6. User is not logged in, logs in unsuccessfully the first time, followed by a successful login and no existing rating by user for that hawker centre is found

Real Execution Paths

1. 1, 3, 5, 7, 8, 10, 11, 13, 14
2. 1, 3, 2, 4, 5, 7, 8, 10, 11, 13, 14
3. 1, 3, 5, 7, 6, 8, 10, 11, 13, 14
4. 1, 3, 5, 7, 8, 9, 5, 7, 8, 10, 11, 13, 14
5. 1, 3, 5, 7, 8, 10, 11, 13, 12, 6, 8, 10, 11, 13, 14
6. 1, 3, 2, 4, 2, 4, 5, 7, 8, 10, 11, 13, 14

## Other Tests

### Login with Google Account

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case Name** | | Login with Google Account | | | **Test Case ID** | | | UC001 | |
| **Test Case Description** | | User logs into the app using their Google account | | | **Test Priority** | | | Medium | |
| **Pre-Requisite** | | A valid user account | | | **Post-Requisite** | | | NA | |
| Test Execution Steps: | | | | | | | | | |
| **S.No** | **Action** | | **Inputs** | **Expected Output** | | **Actual Output** | **Test Result** | | **Test Comments** |
| 1 | Launch application | |  | App Interface | | App Interface | Pass | | [LIN CHIENYEH 30/03/2019 20:44 AM]: Launch successful |
| 2 | looks up the details of a hawker centre | | Select Jurong West Hawker Center | Details of Hawker center | | Details of Hawker center ogin success | Pass | | [LIN CHIENYEH 30/03/2019 20:44 AM]: Details showed up |
| 3 | app prompts the user to login with their Google account when the user try to rate/review | | Select Rate/Review | Google Account Login Interface | | Google Account Login Interface | Pass | | [LIN CHIENYEH 30/03/2019 22:30 AM]: Login Interface showed up successful |
| 4 | Login with the valid google Account | | Type google account and password | Rate/Review page | | Rate/Review page | Pass | | [LIN CHIENYEH 30/03/2019 22:31 AM]: Review page showed up successfully |

### View The Map

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case Name** | | View the map | | | **Test Case ID** | | | UC002 | |
| **Test Case Description** | | User uses the interactive map view with markers indicating the location of the hawker centres | | | **Test Priority** | | | HIGH | |
| **Pre-Requisite** | | location services turned on  location permissions granted | | | **Post-Requisite** | | | NA | |
| Test Execution Steps: | | | | | | | | | |
| **S.No** | **Action** | | **Inputs** | **Expected Output** | | **Actual Output** | **Test Result** | | **Test Comments** |
| 1 | Launch application | |  | App Interface | | App Interface | Pass | | [LIN CHIENYEH 31/03/2019 10:49 AM]: Launch successful |
| 2 | wait for default screen Map show up | |  | default screen Map show up | | default screen Map showed up | Pass | | [LIN CHIENYEH 31/03/2019 10:50 AM]: see the map of my location at NTU |
| 3 | drag the map and see if markers are there | | drag map | map screen move and markers of hawker center show up | | map screen move and markers of hawker center showed up | Pass | | [LIN CHIENYEH 31/03/2019 10:52 AM]: correct informations showed up when drag the map |
| 4 | tap on a marker | | tap on a marker | directions or details | | directions or details | Pass | | [LIN CHIENYEH 31/03/2019 10:52 AM]: Review page showed up successfully |

### Submit rating

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case Name** | | Submit rating | | | **Test Case ID** | | | UC003 | |
| **Test Case Description** | | User rates a particular hawker centre from 1 star to 5 stars according to 4 categories (Hygiene, Variety, Seating and Food) and they have the option to leave a review alongside the rating. | | | **Test Priority** | | | HIGH | |
| **Pre-Requisite** | | Logged in with a valid Google account.         tap open menu button at the top left corner | | | **Post-Requisite** | | | User will see their rating and/or review on the “Reviews” page of the hawker centre | |
| Test Execution Steps: | | | | | | | | | |
| **S.No** | **Action** | | **Inputs** | **Expected Output** | | **Actual Output** | **Test Result** | | **Test Comments** |
| 1 | Launch application | |  | App Interface | | App Interface | Pass | | [LIN CHIENYEH 31/03/2019 10:54 AM]: Launch successful |
| 2 | wait for default screen Map show up | |  | default screen Map show up | | default screen Map showed up | Pass | | [LIN CHIENYEH 31/03/2019 10:54 AM]: see the map of my location at NTU |
| 3 | select one hawker center | | select Jurong West Hawker center | details of hawker center show up | | details of hawker center show up | Pass | | [LIN CHIENYEH 31/03/2019 10:55 AM]: saw the details on the screen correctly |
| 4 | tap open menu and select Rate/Review | | tap  top left and tap Rate/Review | Login Interface | | Login Interface | Pass | | [LIN CHIENYEH 31/03/2019 10:56 AM]: Login Interface showed up |
| 5 | Login with a valid Google Account | | log in | Rate/Rating Screen | | Rate/Rating Screen | pass | | [LIN CHIENYEH 31/03/2019 10:56 AM]: Rate/Rating  Interface showed up |
| 6 | Rate with stars | | rate | rating result will appear on details | | rating result was counted  into details | pass | | [LIN CHIENYEH 31/03/2019 10:57 AM]: Rate/Rating  submitted successfully |

### Upload Photo from Gallary

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case Name** | | Upload photo from gallery | | | **Test Case ID** | | | UC004 | |
| **Test Case Description** | | User uploads a photo from theirs phone photo gallery for a particular hawker centre. | | | **Test Priority** | | | Low | |
| **Pre-Requisite** | | Media access permission granted  Logged in with a valid user account  Tapped on menu button at the top left corner | | | **Post-Requisite** | | | User will see their photo at the ‘Detail’ view of a hawker centre. | |
| Test Execution Steps: | | | | | | | | | |
| **S.No** | **Action** | | **Inputs** | **Expected Output** | | **Actual Output** | **Test Result** | | **Test Comments** |
| 1 | Launch application | |  | App Interface | | App Interface | Pass | | [LIN CHIENYEH 31/03/2019 22:12 AM]: Launch successfully |
| 2 | wait for default screen Map show up | |  | default screen Map show up | | default screen Map showed up | Pass | | [LIN CHIENYEH 31/03/2019 22:12 AM]: successful |
| 3 | select one hawker center | | select Jurong West Hawker center | details of hawker center show up | | details of hawker center showed  up | Pass | | [LIN CHIENYEH 31/03/2019 22:13 AM]:   correct details showed up |
| 4 | tap open menu and select upload photo | | tap  top left and tap upload photo | Gallery Interface | | Gallery Interface | Pass | | [LIN CHIENYEH 31/03/2019 22:13 AM]:   my gallery showed up |
| 5 | choose photo | | tap on the photo  i want to upload | submission interface | | submission interface | Pass | | [LIN CHIENYEH 31/03/2019 22:13 AM]:   can tap the correct marker |
| 6 | confirm submission | | tap correct button | photo appears in details | | photo appeared in details | Pass | | [LIN CHIENYEH 31/03/2019 22:14 AM]:  uploaded successfully |

### Take and Upload a Photo

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case Name** | | Take and upload a photo | | | **Test Case ID** | | | UC012 | |
| **Test Case Description** | | User uploads a photo taken by their camera for a particular hawker centre. | | | **Test Priority** | | | Low | |
| **Pre-Requisite** | | Camera access permission granted  Media access permission granted  Logged in with a valid user account  Tapped on menu button at the top left corner | | | **Post-Requisite** | | | User will see their photo at the ‘Detail’ view of a hawker centre. | |
| Test Execution Steps: | | | | | | | | | |
| **S.No** | **Action** | | **Inputs** | **Expected Output** | | **Actual Output** | **Test Result** | | **Test Comments** |
| 1 | Launch application | |  | App Interface | | App Interface | Pass | | [LIN CHIENYEH 31/03/2019 22:15 AM]: Launch successfully |
| 2 | wait for default screen Map show up | |  | default screen Map show up | | default screen Map showed up | Pass | | [LIN CHIENYEH 31/03/2019 22:15 AM]: successful |
| 3 | select one hawker center | | select Jurong West Hawker center | details of hawker center show up | | details of hawker center showed  up | Pass | | [LIN CHIENYEH 31/03/2019 22:16 AM]:   correct details showed up |
| 4 | tap open menu and select upload photo | | tap  top left and tap upload photo | Gallery Interface | | Gallery Interface | Pass | | [LIN CHIENYEH 31/03/2019 22:16 AM]:   my gallery showed up |
| 5 | take photo | | tap on take a photo and take a photo | submission interface | | submission interface | Pass | | [LIN CHIENYEH 31/03/2019 22:17 AM]:   can tap the correct marker |
| 6 | confirm submission | | tap correct button | photo appears in details | | photo appeared in details | Pass | | [LIN CHIENYEH 31/03/2019 22:17 AM]:  uploaded successfully |

### Share Details

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Test Case Name** | Share Details | | **Test Case ID** | | UC008 | |
| **Test Case Description** | User shares hawker centre details through social media or a link intended for sharing is generated by the app for them. | | **Test Priority** | | Low | |
| **Pre-Requisite** | open menu | | **Post-Requisite** | |  | |
| Test Execution Steps: | | | | | | |
| **S.No** | **Action** | **Inputs** | **Expected Output** | **Actual Output** | **Test Result** | **Test Comments** |
| 1 | Launch application |  | App Interface | App Interface | Pass | [LIN CHIENYEH 31/03/2019 22:22 AM]: Launch successfully |
| 2 | wait for default screen Map show up |  | default screen Map show up | default screen Map showed up | Pass | [LIN CHIENYEH 31/03/2019 22:23 AM]: successful |
| 3 | select one hawker center | select Jurong West Hawker center | details of hawker center show up | details of hawker center showed  up | Pass | [LIN CHIENYEH 31/03/2019 22:16 AM]:   correct details showed up |
| 4 | tap open menu and select share | tap share | Other APP logos | Other APP logos | pass | [LIN CHIENYEH 31/03/2019 22:16 AM]:   correct details showed up |
| 5 | select one app and share | share | link share | link shared | pass | [LIN CHIENYEH 31/03/2019 22:16 AM]:   correct details showed up |