**Use Cases**

**for**

**<**KinderFinder**>**

**Version 1.0 approved**

**Prepared by <author>**

**<organization>**

**<29 August 2019>**

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
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# **Guidance for Use Case Template**

Document each use case using the template shown in the Appendix. This section provides a description of each section in the use case template.

# **Use Case Identification**

## **Use Case ID**

Give each use case a unique numeric identifier, in hierarchical form: X.Y. Related use cases can be grouped in the hierarchy. Functional requirements can be traced back to a labeled use case.

## **Use Case Name**

State a concise, results-oriented name for the use case. These reflect the tasks the user needs to be able to accomplish using the system. Include an action verb and a noun. Some examples:

* View part number information.
* Manually mark hypertext source and establish link to target.
* Place an order for a CD with the updated software version.

## **Use Case History**

### **Created By**

Supply the name of the person who initially documented this use case.

### **Date Created**

Enter the date on which the use case was initially documented.

### **Last Updated By**

Supply the name of the person who performed the most recent update to the use case description.

### **Date Last Updated**

Enter the date on which the use case was most recently updated.

# **Use Case Definition**

## **Actor**

An actor is a person or other entity external to the software system being specified who interacts with the system and performs use cases to accomplish tasks. Different actors often correspond to different user classes, or roles, identified from the customer community that will use the product. Name the actor(s) that will be performing this use case.

## **Description**

Provide a brief description of the reason for and outcome of this use case, or a high-level description of the sequence of actions and the outcome of executing the use case.

## **Preconditions**

List any activities that must take place, or any conditions that must be true before the use case can be started. Number each precondition. Examples:

1. User’s identity has been authenticated.
2. User’s computer has sufficient free memory available to launch task.

## **Postconditions**

Describe the state of the system at the conclusion of the use case execution. Number each postcondition. Examples:

1. Document contains only valid SGML tags.
2. Price of item in database has been updated with new value.

## **Priority**

Indicate the relative priority of implementing the functionality required to allow this use case to be executed. The priority scheme used must be the same as that used in the software requirements specification.

## **Frequency of Use**

Estimate the number of times this use case will be performed by the actors per some appropriate unit of time.

## **Flow of Events**

Provide a detailed description of the user actions and system responses that will take place during execution of the use case under normal, expected conditions. This dialog sequence will ultimately lead to accomplishing the goal stated in the use case name and description. This description may be written as an answer to the hypothetical question, “How do I <accomplish the task stated in the use case name>?” This is best done as a numbered list of actions performed by the actor, alternating with responses provided by the system.

## **Alternative Flows**

Document other, legitimate usage scenarios that can take place within this use case separately in this section. State the alternative course, and describe any differences in the sequence of steps that take place. Number each alternative course using the Use Case ID as a prefix, followed by “AC” to indicate “Alternative Course”. Example: X.Y.AC.1.

## **Exceptions**

Describe any anticipated error conditions that could occur during execution of the use case, and define how the system is to respond to those conditions. Also, describe how the system is to respond if the use case execution fails for some unanticipated reason. Number each exception using the Use Case ID as a prefix, followed by “EX” to indicate “Exception”. Example: X.Y.EX.1.

## **Includes**

List any other use cases that are included (“called”) by this use case. Common functionality that appears in multiple use cases can be split out into a separate use case that is included by the ones that need that common functionality.

## **Special Requirements**

Identify any additional requirements, such as nonfunctional requirements, for the use case that may need to be addressed during design or implementation. These may include performance requirements or other quality attributes.

## **Assumptions**

List any assumptions that were made in the analysis that led to accepting this use case into the product description and writing the use case description.

## **Notes and Issues**

List any additional comments about this use case or any remaining open issues or TBDs (To Be Determined) that must be resolved. Identify who will resolve each issue, the due date, and what the resolution ultimately is.

**Use Case Template**

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| --- | --- | --- | --- |
| Use Case ID: | UC001 | | |
| Use Case Name: | Login to App | | |
| Created By: | Vivian Siow | Last Updated By: | Vivian Siow |
| Date Created: | 1st September 2019 | Date Last Updated: | 2nd September 2019 |

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| --- | --- |
| Actor: | User |
| Description: | User logs into the app using their account |
| Preconditions: | 1. Invoked when user opens the KinderFinder app. 2. The user already has a registered, verified KinderFinder account. 3. This use case extends UC006 Lock Account 4. KinderFinder database must be online 5. An active internet connection is required. 6. App must be downloaded. |
| Postconditions: | User will be logged into the application and access all functionalities of the application. |
| Priority: | Very High. Users must first login to the app in order to access the app and utilise the services it provides. |
| Frequency of Use: | High |
| Flow of Events: | 1. User launches the app 2. The app prompts the user to login with their account 3. User enters their username and password 4. The user’s credentials are validated by the app’s database 5. If the user’s credentials are valid, app logs user in and shows a toast message that they have successfully logged in. |
| Alternative Flows: | AF-S5 If the user’s credentials are invalid   1. App will display a toast message stating that the user did not login successfully 2. The app will return to step 2. |
| Exceptions: | EX1: Incorrect login details provided by users three times in a row   1. The user provides to the application incorrect login details for three consecutive times. 2. The use case UC006 Lock Account is invoked. |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC002 | | |
| Use Case Name: | Create Account | | |
| Created By: | Shearman Chua | Last Updated By: | Shearman Chua |
| Date Created: | 31st August 2019 | Date Last Updated: | 2nd September 2019 |

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| --- | --- |
| Actor: | User |
| Description: | User registers for an account with verifiable information such as email and phone number to be able to use and access the KinderFinder mobile application. |
| Preconditions: | 1. Invocation by the user when he click the “Create Account” button at UC001 Login to App page if the User do not already have an account for the KinderFinder mobile application 2. An active internet connection is required 3. User must not already have a registered account |
| Postconditions: | 1. User will have a verified KinderFinder account that is stored in the application’s database 2. The next time the user uses the application, he will not be required to create an account, he will just be required to log in to his existing account. |
| Priority: | High. As the information provided within the application involves sensitive information regarding kindergartens in Singapore, our application requires all users to be verifiable to prevent the information provided by the application from being misused. |
| Frequency of Use: | Once by each unique user. |
| Flow of Events: | 1. User downloads and opens the mobile application for the first time. User will see the log in page from UC001 Login to App. The user clicks on “Create Account” button to create an account. 2. The user will be redirected to another page to register for an account. User will be required to enter verifiable information namely, First and Last name, email address and phone number. 3. An email verification will be sent to the user. If the operation was a success, a toast message will appear, indicating the success. 4. User is brought to UC005 Tutorial Pop-Up page for a mandatory tutorial on how to use the application. |
| Alternative Flows: | AF-S1 : If user try to log in without a registered account   1. If the user tries to log in without a registered account, a toast message will be displayed stating that the user does not have a registered account and a hyperlink that prompts the user to create an account. 2. The application returns to step 2.   AF-S3 : If the operation fails   1. A toast message will be displayed indicating the error. 2. The application returns to step 2. |
| Exceptions: | EX 1: If the application is unable to contact the database to register an account   1. An error message is displayed. 2. Application will return to step 2. |
| Includes: | UC005 Tutorial Pop-Up |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC003 | | |
| Use Case Name: | Share Kindergarten | | |
| Created By: | Shearman Chua | Last Updated By: | Shearman Chua |
| Date Created: | 31st August 2019 | Date Last Updated: | 2nd September 2019 |

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| Actor: | User |
| Description: | User will be able to share information about a kindergarten to various social media platforms linked to the application. |
| Preconditions: | 1. Invocation as an extension from UC007 View Kindergarten Details when the user clicks on the “share” button in the UC007 View Kindergarten Details page. 2. An active internet connection is required. 3. Permission must be granted by the user to be shared on selected social media platform. 4. User must have a registered account with social media platform of choice. |
| Postconditions: | User will be able to share information about the kindergartens they selected through the various social media platforms. |
| Priority: | Medium. |
| Frequency of Use: | High. Parents will usually want to share information about a good kindergarten they found to their friends and family. |
| Flow of Events: | 1. User taps on the “Share” button from the options at the top right hand corner in UC007 View Kindergarten Details. 2. A menu will appear showing the various platforms through which the user will be able to share information about the kindergarten. 3. User selects a social media platform of choice and the application will prompt a confirmation message as well as permission to share on the social media platform. 4. User confirms and will be redirected to the selected social media platform to share the kindergarten information. |
| Alternative Flows: | AF1- S3: Permission not granted by user to share on selected social media   1. A toast message will be displayed stating that an error occurred while trying to share on social media platform. 2. The application returns to step 2.   AF1- S3: User does not have registered account with social media platform   1. A toast message will be displayed stating that an error occurred while trying to share on social media platform. 2. The application returns to step 2. |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | User have a registered account with social media platform of choice. |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC004 | | |
| Use Case Name: | Submit Ratings | | |
| Created By: | Vivian Siow | Last Updated By: | Vivian Siow |
| Date Created: | 1st September 2019 | Date Last Updated: | 2nd September 2019 |

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| --- | --- |
| Actor: | User |
| Description: | To allow users to rate a particular kindergarten from 1 star to 5 stars according to 4 categories (Cleanliness, Manpower, Facilities, Curriculum) |
| Preconditions: | 1. Invocation as an extension from UC007 View Kindergarten Details 2. An active internet connection is required |
| Postconditions: | User submits a rating and the rating is archived in the database. |
| Priority: | High. The kindergarten are rated based on user’s ratings and hence it is important for the app to store and display the ratings. |
| Frequency of Use: | Only 1 rating is permitted per user per kindergarten. Once the user has already provided a rating, he/she can only edit the existing ratings and not provide another to prevent cluttering and spam. |
| Flow of Events: | 1. User taps on the “Ratings/Review” button in UC007 View Kindergarten Details and UC009 Submit Ratings is invoked. 2. The app displays 4 categories each with 5 greyed out stars 3. User then selects the rating as per his/her discretion (greyed out stars would then turn yellow) 4. Once completed, user taps on the confirm button at the bottom to submit the rating. 5. If the operation was a success, a toast message will appear, indicating the success. 6. User is will be directed back to the UC007 View Kindergarten details page |
| Alternative Flows: | AF-S3 : User taps on the “Back” button   1. Application will prompt a confirmation message 2. User confirms, application returns to UC007 View Kindergarten Details   AF-S5: If the operation fails   1. A toast message will be displayed indicating the error 2. App returns to step 3 |
| Exceptions: | EX1: If user does not give a rating for all 4 categories.create acc   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 to App |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC005 | | |
| Use Case Name: | Tutorial Pop-Up | | |
| Created By: | Shearman Chua | Last Updated By: | Shearman Chua |
| Date Created: | 31st August 2019 | Date Last Updated: | 2nd September 2019 |

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| --- | --- |
| Actor: | User |
| Description: | A step by step guide on how to use the application for first time users. |
| Preconditions: | 1. Invocation as an included use case UC002 Create Account. 2. User must have successfully created an account in UC002 Create Account. 3. An active internet connection is required. |
| Postconditions: | User will go through a step by step guide on how to use the application as well as an introduction to the main features of the application |
| Priority: | Medium. A step by step guide is necessary for first time users so that they will understand how to use the application and there will be lesser user dissatisfaction. |
| Frequency of Use: | Once for each unique user. |
| Flow of Events: | 1. After the user successfully register for an account, they will be redirected to the tutorial page. 2. The tutorial will consist of step by step guides for each main feature of the application. 3. User presses the “next” button to see the next guide for another feature. 4. When user reaches the last tutorial guide, after pressing the “next” button, the user will be automatically logged in and be able to start using the application. |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC006 | | |
| Use Case Name: | Lock Account | | |
| Created By: | Shearman Chua | Last Updated By: | Shearman Chua |
| Date Created: | 31st August 2019 | Date Last Updated: | 2nd September 2019 |

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| Actor: | User |
| Description: | The application locks the user’s KinderFinder account if there had been three incorrect attempts to log into the account. |
| Preconditions: | Invocation as an extended use case from UC001 Login to App when the user incorrectly provided the login details for logging in to a registered account for more than three times. |
| Postconditions: | User gets locked out of their KinderFinder account. |
| Priority: | High. Prevent unauthorized access into a user’s KinderFinder account. |
| Frequency of Use: | Low. |
| Flow of Events: | 1. User attempts to log in to his KinderFinder account in UC001 Login to App and incorrectly enter his log in details three times. 2. User is brought to the UC006 Lock Account Page where a toast message will be displayed stating that the user has been locked out of his account. 3. User will be shown a step-by-step guide on how to remedy the account lock out. |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC007 | | |
| Use Case Name: | View Kindergarten Details | | |
| Created By: | Vivian Siow | Last Updated By: | Vivian Siow |
| Date Created: | 1st September 2019 | Date Last Updated: | 1st September 2019 |

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| --- | --- |
| Actor: | User, System |
| Description: | User selects a kindergarten and its directed to this page where more information of the selected kindergarten is shown. |
| Preconditions: | 1. A kindergarten must be selected 2. An active internet connection is required 3. Invocation as an extension from UC011 View Kindergarten List |
| Postconditions: | Users will see more information of the selected kindergarten. |
| Priority: | Very high. It shows important information that allows users to make a final informed decision whether to enroll their child to a particular kindergarten. Without this feature, the app will lose its main purpose. |
| Frequency of Use: | Very high.   1. Every time a user wants to share this page, he/she would have to do from this page. 2. Every time a user wants to leave a rating or review, 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 of the kindergarten from the Gov Data API 2. If the user taps on the menu icon, he/she can select to use the extending use case UC008 Share or UC009 Rate/Review. |
| Alternative Flows: | AF-S1: If data cannot be obtained   1. The app displays a toast indicating that the data cannot be obtained.   AF-S1: Change their choice of selected kindergarten   1. User can tap the back button to return to UC0011 View Kindergarten List to reselect another kindergarten of their choice. |
| Exceptions: | - |
| Includes: | UC001 Login to App  UC008 View Ratings and Reviews |
| Special Requirements: | - |
| Assumptions: | The API has sufficient information for every kindergarten listed in its database. |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC008 | | |
| Use Case Name: | View Ratings and Reviews | | |
| Created By: | Hoo Bing Yuan | Last Updated By: | Hoo Bing Yuan |
| Date Created: | 2nd September 2019 | Date Last Updated: | 2nd September 2019 |

|  |  |
| --- | --- |
| Actor: | User, System |
| Description: | The application displays a list of ratings and reviews submitted by other users. |
| Preconditions: | 1. Invocation as an included use case of UC011 View Kindergarten Details. 2. An active internet connection is required. |
| Postconditions: | User will be able to view ratings and reviews submitted by other users. |
| Priority: | High. |
| Frequency of Use: | High. User will generally be using KinderFinder for the ratings and review function. |
| Flow of Events: | 1. UC008 View Ratings and Review is invoked from UC011 View Kindergarten Details. 2. Application retrieves ratings and reviews submitted by other users from the System. 3. Application displays the data retrieved on the screen. |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | UC001 Login to App |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC009 | | |
| Use Case Name: | Submit Reviews | | |
| Created By: | Hoo Bing Yuan | Last Updated By: | Hoo Bing Yuan |
| Date Created: | 2nd September 2019 | Date Last Updated: | 2nd September 2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | User will be able to submit reviews. |
| Preconditions: | 1. Invocation as an extended use case of UC007 View Kindergarten Details. 2. An active internet connection is required. |
| Postconditions: | User submits a review and the review is archived in the database. |
| Priority: | High. |
| Frequency of Use: | Only 1 review is permitted per user per kindergarten. 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. User taps on the “Ratings/Review” button in UC007 View Kindergarten Details and UC009 Submit Reviews is invoked. 2. User will be able to type in a string of not more than 1000 characters. 3. User taps the “Submit” button, review will be archived in the database. |
| Alternative Flows: | AF-S3 : User taps on the “Back” button   1. Application will prompt a confirmation message. 2. User confirms, application returns to UC007 View Kindergarten Details. |
| Exceptions: | EX1: If the operation fails   1. A toast message will be displayed indicating the error 2. App returns to step 2 |
| Includes: | UC001 Login to App |
| Special Requirements: | - |
| Assumptions: | The users will mostly write reviews in English language |
| Notes and Issues: |  |

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| --- | --- | --- | --- |
| Use Case ID: | UC0010 | | |
| Use Case Name: | Search for Kindergarten | | |
| Created By: | Shearman Chua | Last Updated By: | Shearman Chua |
| Date Created: | 31st September 2019 | Date Last Updated: | 2nd September 2019 |

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| --- | --- |
| Actor: | User |
| Description: | User types in keywords in a textbox to search for relevant kindergartens. |
| Preconditions: | 1. User must be logged into the application with a registered KinderFinder account. 2. An active internet connection is required. |
| Postconditions: | User would be provided with a list of kindergartens that fit the relevant keywords being entered by the user. |
| 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 kindergarten that he/she wants to search for. 3. If results are found, the search results will be displayed accordingly from highest to lowest kindergarten rating. |
| Alternative Flows: | AF-S1: User taps on the map in the background   1. User manually interacts with the map 2. User is directed to the included use case UC012 View Map.   AF-S3: If search is invalid   1. “No matching results were found” will be displayed on a pop-up toast message to the user. 2. The app returns to step 2. |
| Exceptions: | - |
| Includes: | UC001 Login to App  UC011 View Kindergarten List  UC012 View Map |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC011 | | |
| Use Case Name: | View Kindergarten List | | |
| Created By: | Vivian Siow | Last Updated By: | Vivian Siow |
| Date Created: | 1st September 2019 | Date Last Updated: | 2nd September 2019 |

|  |  |
| --- | --- |
| Actor: | User |
| Description: | The user selects a kindergarten from the list |
| Preconditions: | 1. This use case is invoked as an included case from UC010 Search For Kindergarten and UC012 View Map. 2. An active internet connection is required. |
| Postconditions: | Users will see a list of selected kindergartens displayed, with summarized details like Kindergarten Rating, latest comment and address. |
| Priority: | Very high. It displays critical summarized information of each kindergarten that was listed in this page. This allows the user to make fast comparisons and help he/she to decide on which to select. |
| Frequency of Use: | High. Any actions that related to searching for a particular kindergarten would have to be done through this page as this action allows the selection of a kindergarten. |
| Flow of Events: | 1. User taps on the Kindergarten Results Box at the bottom of the screen or use case is invoked as an included case from UC010 Search For Kindergarten and UC012 View Map. 2. The app will show a list of kindergartens which are listed in ascending order according to the ratings. Information such as address of kindergartens and radius distance of up to 5 km is shown. 3. If user taps on the selected kindergarten of his/her preferred choice, he/she will be redirected to the extended use case UC007 View Kindergarten Details. |
| Alternative Flows: | AF-S1: If data cannot be obtained   1. The app displays a toast indicating that the data cannot be obtained. |
| Exceptions: | - |
| Includes: | UC001 Login to App |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| --- | --- | --- | --- |
| Use Case ID: | UC012 | | |
| Use Case Name: | View Map | | |
| Created By: | Hoo Bing Yuan | Last Updated By: | Hoo Bing Yuan |
| Date Created: | 1st September 2019 | Date Last Updated: | 2nd September 2019 |

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| --- | --- |
| Actor: | User, System |
| Description: | Users will be shown a map of Singapore in which kindergartens are pinned on the map using drop pins. |
| Preconditions: | 1. User is successfully logged in. 2. An active internet connection is required. |
| Postconditions: | UC011 View Kindergarten List will be invoked if the ‘See All” button is tapped and UC010 View Map may be invoked if the user taps on a drop pin. |
| Priority: | High. |
| Frequency of Use: | High. |
| Flow of Events: | 1. Map will be zoomed in to within a 5km radius when user logs in. 2. Application retrieves coordinates of kindergartens from System. 3. Drop pins will appear on the map indicating the kindergartens and user may tap on a drop pin to invoke UC007 View Kindergarten Details. |
| Alternative Flows: | AF1-S3 : If user interacts with the kindergarten result box at the bottom of the screen.   1. UC011 View Kindergarten List will be invoked.   AF2-S3 : If user taps the “Back” button   1. The application returns to UC010 Search for Kindergarten. |
| Exceptions: | - |
| Includes: | UC001 Login to App  UC011 View Kindergarten List |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |