Use Cases

for

<KinderFinder>

**Version 1.0 approved**

**Prepared by <Siek Ming Jun>**

**<Team 5>**

**<29 August 2019>**

**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| Vivian Siow | 2/9/2019 | Changes to UC001 | 2 |
| Shearman Chua | 2/9/2019 | Changes to UC003 | 2 |
| Poh Ying Xuan | 19/10/2019 | Changes to UC002 | 2 |
| Hoo Bing Yuan | 2/9/2019 | Changes to UC011 | 2 |

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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, Database |
| 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. KinderFinder database must be online 4. An active internet connection is required. 5. 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 utilize 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: | - |
| 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: | Poh Ying Xuan |
| Date Created: | 31st August 2019 | Date Last Updated: | 19 October 2019 |

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| Actor: | User, Database |
| Description: | User registers for an account with verifiable information such as email to be able to use and access the KinderFinder mobile application. |
| Preconditions: | 1. Invocation by the user when he clicks the “Create Account” button at UC001 Login to App page if the User does not have an account for the KinderFinder mobile application 2. An active internet connection is required 3. User must not already have a registered account 4. User must have an existing email address |
| 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. User must be registered in order to fully utilize the app. |
| 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 such as email address, username and profile picture. 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. 2. The application returns to step 1.   AF-S2: If the required email is an incorrect format   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, Social Media API |
| 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 UC006 View Kindergarten Details when the user clicks on the “share” button in the UC006 View Kindergarten Details page. 2. An active internet connection is required. 3. Permission must be granted by the user to 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: | Medium. 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 UC006 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 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.   AF2- 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: | UC006 View Kindergarten Details |
| 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, Database |
| 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 UC006 View Kindergarten Details 2. An active internet connection is required 3. User must be verified. |
| Postconditions: | User submits a rating and the rating is archived in the database. |
| Priority: | High. The kindergartens 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. The app displays 4 categories each with 5 greyed out stars 2. User then selects the rating as per his/her discretion (greyed out stars would then turn yellow) 3. Once completed, user taps on the confirm button at the bottom to submit the rating. 4. User is will be directed back to the UC006 View Kindergarten details |
| Alternative Flows: | AF-S2: User taps on the “Back” button   1. Application returns to UC006 View Kindergarten Details   AF-S3: If the operation fails   1. A toast message will be displayed indicating the error 2. Application returns to UC006 View Kindergarten Details |
| 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. Application returns to step 1 |
| Includes: | UC006 View Kindergarten details |
| 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 from UC002, 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 slides the carousel 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 redirected to UC011. |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | - |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC006 | | |
| 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, Government Data API |
| 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 UC010 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, user would have to do it from this page. 2. Every time a user wants to leave a rating or review, user would have to do so from this page. 3. Any actions that is linked to a particular Kindergarten centre would have to be done through this page as this action outlines the selection of a Kindergarten 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 UC007 Share or UC008 Rate/Review. |
| Alternative Flows: | AF-S1: If data cannot be obtained   1. The app displays a toast indicating that the data cannot be obtained. 2. Application returns to step 1.   AF-S1: Change their choice of selected kindergarten   1. User can tap the back button to return to UC010 View Kindergarten List to reselect another kindergarten of their choice. |
| Exceptions: | - |
| Includes: | UC001 Login to App  UC007 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: | UC007 | | |
| 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 |

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| Actor: | User, Database |
| Description: | The application displays a list of ratings according to 4 categories (Cleanliness, Manpower, Facilities, Curriculum) with an average score of the total 4 categories and reviews submitted by other users. |
| Preconditions: | 1. Invocation as an included use case of UC006 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 be using ratings and review function to look for reviews provided by other users about a particular kindergarten. |
| Flow of Events: | 1. User taps on the Kindergarten in UC010 View Kindergarten List. 2. User is redirected to UC006 View Kindergarten Details, which includes UC007 View Ratings and Reviews. 3. The app displays 4 categories each with 5 stars and average ratings based on that 4 categories 4. The app displays reviews left by other users 5. Application retrieves ratings and reviews submitted by other users from the database. 6. Application displays the data retrieved on the screen. 7. User taps the “Back” button to go back to UC010 View Kindergarten List. |
| Alternative Flows: | AF-S2: If data cannot be obtained   1. The app displays a toast indicating that the data cannot be obtained.   AF-S2: If there are no reviews or ratings left by other users for a particular kindergarten.   1. “No Reviews” would be shown and ratings would be left at 0. |
| Exceptions: | - |
| Includes: | UC001 Login to App |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC008 | | |
| 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 |

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| Actor: | User, Database |
| Description: | User will be able to submit reviews, commenting on the kindergartens their children are schooling in. |
| Preconditions: | 1. Invocation as an extended use case of UC006 View Kindergarten Details. 2. An active internet connection is required. 3. User must be verified. |
| 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 will be able to type in a string of not more than 300 characters. 2. User taps the “Submit” button, review will be stored in the database. |
| Alternative Flows: | AF-S1: User taps on the “Back” button   1. Application returns to UC006 View Kindergarten Details |
| Exceptions: | EX1: If the operation fails   1. A toast message will be displayed indicating the error 2. Application 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: | UC009 | | |
| 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 nearest to farthest kindergarten. |
| 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 UC011 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  UC010 View Kindergarten List  UC011 View Map |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC010 | | |
| 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 |

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| Actor: | User |
| Description: | The user selects a kindergarten from the list |
| Preconditions: | 1. This use case is invoked as an included case from UC009 Search For Kindergarten and UC011 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 UC009 Search For Kindergarten and UC011 View Map. 2. The app will show a list of kindergartens which are listed in ascending order according to the distance nearest to the user. Information such as the address and the name of kindergarten shown. 3. If user taps on the selected kindergarten of his/her preferred choice, he/she will be redirected to the extended use case UC006 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.   AF-S1: If a search request is null from UC009 Search For Kindergarten   1. The View Kindergarten List would show “No results” |
| Exceptions: | - |
| Includes: | UC001 Login to App |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC011 | | |
| 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, Google Map API |
| Description: | Users will be shown a map of Singapore in which kindergartens are pinned on the map using Markers. |
| Preconditions: | 1. Invocation as an included use case of UC012 Plot Kindergartens Marker on Map when the user first loaded the map. 2. An active internet connection is required. |
| Postconditions: | User may be directed to UC010 View Kindergarten List or UC009 Search For Kindergarten based on their actions in UC011 View Map. |
| Priority: | High. |
| Frequency of Use: | Very High. Map would be used when the user requests to search for a particular kindergarten |
| Flow of Events: | 1. Upon first load, user would be prompted to allow permission to access device location. 2. Upon accepting, the map will be zoomed in to within a 5km radius of the user’s current location. 3. Application retrieves coordinates of kindergartens and UC012 Plot Kindergartens Marker on Map will be invoked. 4. Markers will appear on the map indicating the kindergartens. 5. User taps on a Markers and that particular Kindergarten would be shown on UC010 View Kindergarten List. |
| Alternative Flows: | AF-S1: If data cannot be obtained   1. The app displays a toast indicating that the data cannot be obtained. |
| Exceptions: | EX1: If user did not allow permission to access device   1. The application would zoom to an overview of Singapore 2. Application would be able to retrieve coordinates of kindergarten and UC012 Plot Kindergartens Marker on Map will be invoked. 3. However, the device location would not be known and UC011 View Map would not show the location of the user 4. UC010 View Kindergarten list would only show Kindergarten in an alphabetical order and not distance based. 5. Once user allow device location permission, application returns to step 2. |
| Includes: | UC001 Login to App  UC009 Search For Kindergarten  UC010 View Kindergarten List  UC012 Plot Kindergartens Marker on Map |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC012 | | |
| Use Case Name: | Plot Kindergartens Marker on 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, Google Map API |
| Description: | Application retrieves coordinates of kindergartens and markers would be plotted on the map. |
| Preconditions: | 1. Invocation as an included use case of UC011 View Map to plot the marker. 2. An active internet connection is required. |
| Postconditions: | Users will see markers plotted on the map |
| Priority: | High. |
| Frequency of Use: | High. On every first load, markers would be plotted each time the user visits UC011 View Map |
| Flow of Events: | 1. On UC011 View Map being loaded, UC012 Plot Kindergartens Marker on Map will be invoked. 2. Application retrieves Kindergarten coordinates and plots it on the map 3. User taps on one of the markers and the name and the address of the kindergarten would be shown on UC010 View Kindergarten List |
| Alternative Flows: | AF-S1: If data cannot be obtained  The app displays a toast indicating that the data cannot be obtained. |
| Exceptions: | - |
| Includes: | UC001 Login to App  UC010 View Kindergarten List |
| Special Requirements: | - |
| Assumptions: | 1. Starting location will be current location if the user allowed permission for application to access the user’s location. |
| Notes and Issues: | - |

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| Use Case ID: | UC013 | | |
| Use Case Name: | View Profile Page | | |
| Created By: | Poh Ying Xuan | Last Updated By: | Poh Ying Xuan |
| Date Created: | 19 October 2019 | Date Last Updated: | 19 October 2019 |

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| Actor: | User |
| Description: | User account information such as email, username and display picture are shown. User may update their password, request for email verification or Sign out from the application. |
| 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 the updated account information or signed out from the application |
| Priority: | Medium. User needs to be able to update their particulars. |
| Frequency of Use: | Low. User would enter profile page when they need to send email verification or update their particulars on profile page. |
| Flow of Events: | 1. Information is loaded and shown on View Profile Page 2. User taps on menu bar and clicks on “change password” 3. User enters current and new password 4. Password is updated |
| Alternative Flows: | AF-S2: User taps on “Send email verification”   1. UC014 Send Verification Email will be invoked   AF-S2: User taps on “Sign out”   1. User would be signed out from the application and returned to UC001 Login to App   AF-S1: If data cannot be obtained  The app displays a toast indicating that the data cannot be obtained. |
| Exceptions: | - |
| Includes: | UC014 Send Verification Email  UC001 Login to App |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |

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| Use Case ID: | UC014 | | |
| Use Case Name: | Send Verification Email | | |
| Created By: | Poh Ying Xuan | Last Updated By: | Poh Ying Xuan |
| Date Created: | 19 October 2019 | Date Last Updated: | 19 October 2019 |

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| Actor: | User |
| Description: | User request for email verification and email verification would be generated and sent to the user email |
| Preconditions: | 1. User must be logged into the application with a registered KinderFinder account. 2. An active internet connection is required. 3. Invocation as an included use case of UC013 View Profile Page |
| Postconditions: | New Email verification would be generated for the user |
| 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: | Low. Once user has verified their emails, it would not be required for them to verify again. |
| Flow of Events: | 1. User clicks on generate new verification email from UC013 View Profile Page 2. Email Verification gets sent out to user |
| Alternative Flows: | - |
| Exceptions: | - |
| Includes: | UC013 View Profile Page |
| Special Requirements: | - |
| Assumptions: | - |
| Notes and Issues: | - |