**System Testing**

**STC 01 (URS 01) - Users can scan Chinese words and Location names by using built-in camera.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-01. Users can scan Chinese words and Location names by using built-in camera. |
| **Prerequisite** | 1. Users have downloaded ‘Scan in Travel’ application on mobile phone.  2. Users unfold the ‘Scan in Travel’ application. |
| **Input Required** | 1. Selection of the service to scan Chinese words or Location names in China.  2. Operation of scanning the image of a Chinese word (or Location name). |
| **Test Steps** | 1. Users select to scan Chinese words or Location names in China.  2. System shall invoke the built-in camera of users’ mobile phones.  3. System shall provide user interface for users to scan Chinese words (or Location names) by using built-in camera.  4. Users use the built-in camera of their mobile phone to scan the image of a Chinese word (or Location name).  5. System shall capture the image of the scanned Chinese word (or Location name).  6. System shall recognize the Chinese word（or Location name) and convert the image into searchable text of the scanned Chinese word (or Location name). |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 1.1 | Users select to scan Chinese words or Location names in China. | Selection of the service to scan Chinese words or Location names in China. | System shall provide user interface for users to scan Chinese words (or Location names) by using built-in camera. |
| System shall provide the user interface to display the error message. “Cannot recognize your camera.” |
| 1.2 | Users use the built-in camera of their mobile phone to scan the image of a Chinese word (or Location name). | Operation of scanning the image of a Chinese word (or Location name). | System shall capture the image of the scanned Chinese word (or Location name). |
| System shall recognize the Chinese word（or Location name) and convert the image into searchable text of the scanned Chinese word (or Location name). |
| System will not get anything about the searchable text of the scanned image. |

**STC 02 (URS 02) - Users can view the explanation (i.e. meaning, pronunciation) of the scanned word in English.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-02. Users can view the explanation (i.e. meaning, pronunciation) of the scanned word in English. |
| **Prerequisite** | 1. Users have scanned Chinese word or Location name successfully.  2. System has got the searchable text of scanned Chinese word (or Location name). |
| **Input Required** | Selection of users to view the explanation of the scanned word. |
| **Test Steps** | 1. Users choose to view the explanation of the scanned word.  2. System shall send the text of the scanned Chinese word (or Location name) to Microsoft Translator API.  3. Microsoft Translator API shall translate the text into English.  4. System shall receive the explanation (i.e. meaning, pronunciation) of the scanned word in English.  5. System shall provide the user interface to display the text of the Chinese word and the meaning of the scanned word in English. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 2.1 | Users choose to view the explanation of the scanned word. | Selection of users to view the explanation of the scanned word. | System shall provide the user interface to display the text of the Chinese word and the meaning of the scanned word in English. |
| System shall provide the user interface to display the error message. “No internet access.” |
| System shall provide the user interface to display the error message. “Cannot find the explanation of this word.” |

**STC 03 (URS 03) - Users can select Text-to-Speech to get the Chinese pronunciation of the word.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-03. Users can select Text-to-Speech to get the Chinese pronunciation of the word. |
| **Prerequisite** | Users have scanned the Chinese word (or Location name) and viewed the explanation of the scanned word successfully. |
| **Input Required** | Selection of users to get the pronunciation of the scanned word in Chinese. |
| **Test Steps** | 1. System shall send the text of the scanned Chinese word (or Location name) to Microsoft Translator API.  2. Microsoft Translator API shall send the Chinese pronunciation of the Chinese word to system.  3. System shall receive the pronunciation of the scanned word in Chinese.  4. System shall provide the service for users to get the proper Chinese pronunciation of the word.  5. Users select to get the pronunciation of the scanned word in Chinese.  6. System shall pronounce the word to users in Chinese. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 3.1 | Users select to get the pronunciation of the scanned word in Chinese. | Selection of users to get the pronunciation of the scanned word in Chinese. | System shall pronounce the word to users in Chinese. |
| System shall provide the user interface to display the error message. “No internet access.” |
| System shall provide the user interface to display the error message. “Cannot find the pronunciation of this word.” |

**STC 04 (URS 04) - Users can lock/unlock the screen which displays the text of the scanned word. (When locked, the scanning function will be disabled temporarily and the screen will keep the scanned image on display.)**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-04. Users can lock/unlock the screen which displays the text of the scanned word. (When locked, the scanning function will be disabled temporarily and the screen will keep the scanned image on display.) |
| **Prerequisite** | Users have scanned the Chinese word (or Location name) and viewed the explanation of the scanned word successfully. |
| **Input Required** | 1. Selection of Users to lock the screen.  2. Selection of Users to unlock the screen. |
| **Test Steps** | 1. Users choose to keep the explanation of scanned word on display.  2. System shall provide the service for users to select to lock/unlock the screen which displays the text of the scanned word.  3. Users choose the ‘Lock’ service to lock the screen.  4. System shall receive the request from users to lock the screen which displays the text of the scanned word.  5. System shall lock the screen which displays the text of the scanned word. When locked, the scanning function will be disabled temporarily and the screen will keep the scanned word image on display.  6. Users choose the ‘Unlock’ service to unlock the screen.  7. System shall receive the request from users to unlock the screen which displays the text of the scanned word.  8. System shall unlock the screen which display the text of the previous scanned word. When unlocked, the scanning function will be available. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 4.1 | Users choose the ‘Lock’ service to lock the screen. | Selection of users to lock the screen | System shall lock the screen which displays the text of the scanned word. When locked, the scanning function will be disabled temporarily and the screen will keep the scanned word image on display. |
| 4.2 | Users choose the ‘Unlock’ service to unlock the screen. | Selection of users to unlock the screen | System shall unlock the screen which display the text of the previous scanned word. When unlocked, the scanning function will be available. |

**STC 05 (URS 05) - Users can view the Location on the map if the scanned word is the name of a Location.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-05. Users can view the Location on the map if the scanned word is the name of a Location. |
| **Prerequisite** | 1. Users have scanned the Location name successfully.  2. System has got the searchable text of the scanned Location name. |
| **Input Required** | 1. Selection of users to view the Location on the map.  2. Selection of users to cancel the service.  3. Selection of one Location name from provided list.  4. Selection of users to zoom in the map.  5. Selection of users to zoom out the map. |
| **Test Steps** | Normal Flow:  1. Users select the service to view the Location on the map.  2. System shall send the text of Location name to the Google Maps API.  3. Google Maps API shall send the information of this Location name to system.  4. System shall receive the related geometry information of the Location from Google Maps API.  5. System shall provide the user interface to display a list of Locations related to the text of the Location name.  6. Users select one Location name he or she wants to know more information.  7. System shall provide the user interface to display the Location selected by users on the map.  8. System shall provide the service to zoom in the map.  9. Users select to zoom in the map.  10. System shall change the location size of the map.  11. System shall show a more detailed map to users.  12. System shall provide the service to zoom out the map.  13. Users select to zoom out the map.  14. System shall change the location size of the map.  15. System shall show a more general map to users.  Alternative Flow:  On Step 1 of Normal Flow  1. System shall provide the service for users to cancel the service of searching the Location from Google Maps API.  2. Users choose to cancel the service.  3. System shall cancel the service of searching the Location from Google Maps API. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 5.1 | Users select the service to view the Location on the map. | Selection of users to view the Location on the map | System shall provide the user interface to display a list of Locations related to the text of the Location name. |
| System shall provide the user interface to display the error message. “No internet access.” |
| System shall provide the user interface to display the error message. “Cannot find any location related to this word.” |
| 5.2 | Users choose to cancel the service. | Selection of users to cancel the service | System shall cancel the service of searching the Location from Google Maps API. |
| 5.3 | Users select one Location name he or she wants to know more information. | Selection of one Location name from provided list | System shall provide the user interface to display the Location selected by users on the map. |
| 5.4 | Users select to zoom in the map. | Selection of users to zoom in the map | System shall show a more detailed map to users. |
| 5.5 | Users select to zoom out the map. | Selection of users to zoom out the map | System shall show a more general map to users. |

**STC 06 (URS 06) - Users can view all Locations from their own Favorites on the map.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-06. Users can view all Locations from their own Favorites on the map. |
| **Prerequisite** | Users have saved Location information into their Favorites before. |
| **Input Required** | 1. Selection of users to view all Locations from their Favorites on the map  2. Selection of users to cancel the service  3. Selection of users to zoom in the map.  4. Selection of users to zoom out the map. |
| **Test Steps** | Normal Flow:   1. Users choose to view all Locations from their Favorites on the map. 2. System shall retrieve all the Location data in their own Favorites from database. 3. System shall send all the Locations geometry information to the Google Maps API. 4. System shall provide the user interface to display all the Locations on the map. 5. System shall provide the service to zoom in the map. 6. Users select to zoom in the map. 7. System shall change the location size of the map. 8. System shall show a more detailed map to users. 9. System shall provide the service to zoom out the map. 10. Users select to zoom out the map. 11. System shall change the location size of the map. 12. System shall show a more general map to users.   Alternative Flow:  On Step 1 of Normal Flow  1. System shall provide the service for users to cancel the service of searching the Location from Google Maps API.  2. Users choose to cancel the service.  3. System shall cancel the service of searching the Location from Google Maps API. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 6.1 | Users choose to view all Locations from their Favorites on the map. | Selection of users to view all Locations from their Favorites on the map | System shall provide the user interface to display all the Locations on the map. |
| System shall provide the user interface to display the error message. “No internet access.” |
| 6.2 | Users choose to cancel the service. | Selection of users to cancel the service | System shall cancel the service of searching the Location from Google Maps API. |
| 6.3 | Users select to zoom in the map. | Selection of users to zoom in the map | System shall show a more detailed map to users. |
| 6.4 | Users select to zoom out the map. | Selection of users to zoom out the map | System shall show a more general map to users. |

**STC 07 (URS 07) - Users can view the map that shows the route from the current position to a Location stored in Favorites.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-07. Users can view the map that shows the route from the current position to a Location stored in Favorites. |
| **Prerequisite** | Users have saved Location information into their Favorites before. |
| **Input Required** | 1. Selection of a Location from users’ own Favorites  2. Selection of users to get route  3. Selection of users to cancel the service  4. Selection of users to zoom in the map.  5. Selection of users to zoom out the map. |
| **Test Steps** | Normal Flow:  1. Users select a Location from their own Favorites.  2. System shall provide the service for users to get the route of the Location.  3. Users shall choose the service to get route.  4. System shall send the Location geometry information selected by users to the Google Maps API.  5. System shall use Global Position System to get the current position of users.  6. System shall send the current position geometry information of users to the Google Maps API.  7. Google Maps API shall send the related information to the system.  8. System shall receive the route information from the current position to the Location selected by users in their own Favorites.  9. System shall provide the user interface to display the pin of the users’ current position and the Location selected by users.  10. System shall provide the user interface to display the route from the current position to the Location selected by users in their own Favorites.  11. System shall provide the service to zoom in the map.  12. Users select to zoom in the map.  13. System shall change the location size of the map.  14. System shall show a more detailed map to users.  15. System shall provide the service to zoom out the map.  16. Users select to zoom out the map.  17. System shall change the location size of the map.  18. System shall show a more general map to users.  Alternative Flow:  On Step 4 of Normal Flow:  1. System shall provide the service for users to cancel the service of searching the route from the current position to the selected Location.  2. Users choose to cancel the service.  3. System shall cancel the service of searching the route from the current position to the selected Location. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 7.1 | Users select a Location from their own Favorites. | Selection of a Location from users’ own Favorites | System shall provide the service for users to get the route of the Location. |
| 7.2 | Users choose the service to get route. | Selection of users to get route | System shall provide the user interface to display the pin of the users’ current position and the Location selected by users. |
| System shall provide the user interface to display the route from the current position to the Location selected by users in their own Favorites. |
| System shall provide the user interface to display the error message. “Please open your GPS service to allow Google Map to get your location.” |
| System shall provide the user interface to display the error message. “No internet access.” |
| 7.3 | Users choose to cancel the service. | Selection of users to cancel the service | System shall cancel the service of searching the route from the current position to the selected Location. |
| 7.4 | Users select to zoom in the map. | Selection of users to zoom in the map | System shall show a more detailed map to users. |
| 7.5 | Users select to zoom out the map. | Selection of users to zoom out the map | System shall show a more general map to users. |

**STC 08 (URS 08) - Users can view the map that shows the route from the current position to the Location whose name is scanned.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-08. Users can view the map that shows the route from the current position to the Location whose name is scanned. |
| **Prerequisite** | 1. Users have scanned the Location name successfully.  2. System has got the searchable text of the scanned Location name. |
| **Input Required** | 1. Selection of users to get the route of the scanned Location name  2. Selection of users to get route  3. Selection of users to cancel the service  4. Selection of users to zoom in the map  5. Selection of users to zoom out the map |
| **Test Steps** | Normal Flow:  1. Users choose to get the route of the scanned Location name.  2. System shall send the text of the scanned Location name to the Google Maps API.  3. System shall provide the service for users to get the route of the Location.  4. Users choose the service to get route.  5. System shall send the Location geometry information of scanned Location to the Google Maps API.  6. System shall use Global Position System to get the current position of users.  7. System shall send the current position geometry information of users to the Google Maps API.  8. Google Maps API shall send the related information to the system.  9. System shall receive the route information from the current position to the scanned Location from Google Maps API.  10. System shall provide the user interface to display the pin of the users’ current position and the scanned Location.  11. System shall provide the user interface to display the route from the current position to the scanned Location.  12. System shall provide the service to zoom in the map.  13. Users select to zoom in the map.  14. System shall change the location size of the map.  15. System shall show a more detailed map to users.  16. System shall provide the service to zoom out the map.  17. Users select to zoom out the map.  18. System shall change the location size of the map.  19. System shall show a more general map to users.  Alternative Flow:  On Step 4 of Normal Flow:  1. System shall provide the service for users to cancel the service of searching the route from the current position to the scanned Location.  2. Users choose to cancel the service.  3. System shall cancel the service of searching the route from the current position to the scanned Location. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 8.1 | Users choose to get the route of the scanned Location name. | Selection of users to get the route of the scanned Location name | System shall provide the service for users to get the route of the Location. |
| 8.2 | Users shall choose the service to get route. | Selection of users to get route | System shall provide the user interface to display the pin of the users’ current position and the scanned Location. |
| System shall provide the user interface to display the route from the current position to the scanned Location. |
| System shall provide the user interface to display the error message. “Please open your GPS service to allow Google Map to get your location.” |
| System shall provide the user interface to display the error message. “No internet access.” |
| 8.3 | Users choose to cancel the service. | Selection of users to cancel the service | System shall cancel the service of searching the route from the current position to the scanned Location. |
| 8.4 | Users select to zoom in the map. | Selection of users to zoom in the map | System shall show a more detailed map to users. |
| 8.5 | Users select to zoom out the map. | Selection of users to zoom out the map | System shall show a more general map to users. |

**STC 09 (URS 09) - Users can add the scanned Location with its name, pictures, geometry location, and descriptions into their Favorites.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-09. Users can add the scanned Location with its name, pictures, geometry location, and descriptions into their Favorites. |
| **Prerequisite** | 1. The service to add the scanned Location into Favorites is available.  2. The system is on running status, and is on the interface which displays the scanned Location. |
| **Input Required** | 1. Selection of users to add the scanned Location into their own Favorites  2. The pictures and description provided by users for scanned Location addition  3. The name provided by users for edition  4. Selection of users to cancel the addition of the scanned Location into the Favorites  5. Selection of users to confirm to add this Location |
| **Test Steps** | Normal Flow:   1. Users select the service to add the scanned Location into their own Favorites. 2. System shall provide the user interface to receive the data from users to add the scanned Location. The data include pictures and description information. 3. System shall provide the name and geometry information of the scanned Location for users. 4. Users add the pictures and description information about the scanned Location. 5. Users select to add this Location. 6. System shall add the scanned Location with its name, pictures, geometry information, and description into database. 7. System shall provide the user interface to display the successful message. “Location added successfully!”   Alternative Flow:  On Step 3 of Normal Flow:  1. System shall provide the service for users to edit the name of the Location.  2. Users edit the name of the scanned Location.  3. Test case resumes on Step 4 of Normal Flow.  On Step 4 of Normal Flow:  1. System shall provide the service for users to cancel the service of adding the scanned Location.  2. Users select the service to cancel the addition of the scanned Location into the Favorites.  3. System shall cancel the service of adding the scanned Location. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 9.1 | Users select the service to add the scanned Location into their own Favorites. | Selection of users to add the scanned Location into their own Favorites | System shall provide the user interface to receive the data from users to add the scanned Location. The data include pictures and description information. On the same user interface, system shall provide the name and geometry information of the scanned Location for users. |
| 9.2 | Users add the pictures and description information about the scanned Location. | The pictures and description provided by users for scanned Location addition | None |
| 9.3 | Users edit the name of the scanned Location. | The name provided by users for edition | None |
| 9.4 | Users select the service to cancel the addition of the scanned Location into the Favorites. | Selection of users to cancel the addition of the scanned Location into the Favorites | System shall cancel the service of adding the scanned Location. |
| 9.5 | Users select to add this Location. | Selection of users to confirm to add this Location | System shall provide the user interface to display the successful message. “Location added successfully!” |
| System shall provide the user interface to display the error message. “The length of the name should be shorter than 50.” |
| System shall provide the user interface to display the error message. “The length of the description should be shorter than 500.” |

**STC 10 (URS 10) - Users can delete a Location from their own Favorites.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-10. Users can delete a Location from their own Favorites. |
| **Prerequisite** | 1. The service to delete a Location from Favorites is available.  2. The system is on running status, and is on the interface which displays the Locations from Favorites. |
| **Input Required** | 1. Selection of users to delete a Location from their own Favorites  2. Selection of a Location to delete  3. Selection of users to confirm the deletion  4. Selection of users to cancel the service of deleting the selected Location |
| **Test Steps** | Normal Flow:  1. Users select the service to delete a Location from their own Favorites.  2. System shall provide the service for users to delete a Location from their own Favorites.  3. System shall provide the user interface for users to select the Location that they want to delete.  4. Users select a Location to delete.  5. System shall prompt users to confirm the deletion of a selected Location in their own Favorites.  6. System shall provide the user interface to display the prompt message. “Are you sure to delete this Location?”  7. Users confirm the deletion of the selected Location.  8. System shall retrieve the data of the selected Location in the database.  9. System shall delete the data of the selected Location from database.  10. System shall provide the user interface to display the successful message. “Location deleted successfully!”  Alternative Flow:  On Step 4 of Normal Flow:  1. System shall provide the service for users to cancel the service of deleting the selected Location.  2. Users select to cancel the service of deleting the selected Location.  3. System shall cancel the service of deleting the selected Location. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 10.1 | Users select the service to delete a Location from their own Favorites | Selection of users to delete a Location from their own Favorites | System shall provide the user interface for users to select the Location that they want to delete. |
| 10.2 | Users select a Location to delete. | Selection of a Location to delete | System shall provide the user interface to display the prompt message. “Are you sure to delete this Location?” |
| 10.3 | Users confirm the deletion of the selected Location. | Selection of users to confirm the deletion | System shall provide the user interface to display the successful message. “Location deleted successfully!” |
| System shall provide the user interface to display the error message. “Deletion failed.” |
| 10.4 | Users select to cancel the service of deleting the selected Location. | Selection of users to cancel the service of deleting the selected Location | System shall cancel the service of deleting the selected Location. |

**STC 11 (URS 11) - Users can view the Location information with name, pictures, geometry location and descriptions in their Favorites.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-11. Users can view the Location information with name, pictures, geometry location and descriptions in their Favorites. |
| **Prerequisite** | 1. The service to view the information of a Location in Favorites is available.  2. The system is on running status, and is on the interface which displays the Locations from Favorites. |
| **Input Required** | 1. Selection of users to view the Location information in their Favorites  2. Selection of a Location to be viewed |
| **Test Steps** | 1. Users select the service to view the Location information in their Favorites.  2. System shall provide the service for users to view the Location information with name, pictures, geometry information and descriptions in their Favorites.  3. System shall retrieve all the Location data in their own Favorites from database.  4. System shall provide a list of Locations from Favorites.  5. Users select a Location to view its information.  6. System shall retrieve the data of the selected Location in the database.  7. System shall provide the user interface to display the selected Location information with name, pictures, geometry information and description in their favorites. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 11.1 | Users select the service to view the Location information in their Favorites. | Selection of users to view the Location information in their Favorites | System shall provide a list of Locations from Favorites. |
| System shall provide the user interface to show prompt message. “No Location in your Favorites. You can add wherever you like.” |
| 11.2 | Users select a Location to view its information. | Selection of a Location to be viewed | System shall provide the user interface to display the selected Location information with name, pictures, geometry information and description in their favorites. |

**STC 12 (URS 12) - Users can sort the Locations in Favorites by district name.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-12. Users can sort the Locations in Favorites by district name. |
| **Prerequisite** | 1. The service to sort Locations in Favorites by district name is available.  2. The system is on running status, and is on the interface which displays the Locations from Favorites. |
| **Input Required** | 1. Selection of service for users to sort Location in their Favorites  2. Selection of users to sort Locations in Favorites by district name |
| **Test Steps** | 1. Users select the service to sort Location in their Favorites.  2. System shall provide the service for users to sort the Locations in Favorites by district name.  3. Users select to sort Locations in Favorites by district name.  4. System shall retrieve all the Location data in their own Favorites from database.  5. System shall sort all the Location data from database by district name.  6. System shall provide the user interface to display a list of names of sorted Locations by district. Districts’ names are sorted alphabetically. In each district, Location names are sorted alphabetically. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 12.1 | Users select the service to sort Location in their Favorites by district name. | Selection of service for users to sort Location in their Favorites | System shall provide the service for users to sort the Locations in Favorites by district name. |
| System shall provide the user interface to show prompt message. “No Location in your Favorites. You can add wherever you like.” |
| 12.2 | Users select to sort Locations in Favorites by district name. | Selection of users to sort Locations in Favorites by district name | System shall provide the user interface to display a list of names of sorted Locations by district. Districts’ names are sorted alphabetically. In each district, Location names are sorted alphabetically. |

**STC 13 (URS 13) - Users can sort the Locations in Favorites by date they are added.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-13. Users can sort the Locations in Favorites by date they are added. |
| **Prerequisite** | 1. The service to sort Locations in Favorites by date they are added is available.  2. The system is on running status, and is on the interface which displays the Locations from Favorites. |
| **Input Required** | 1. Selection of service for users to sort Location in their Favorites  2. Selection of users to sort the Locations in Favorites by date they are added |
| **Test Steps** | 1. Users select the service to sort the Location in their Favorites.  2. System shall provide the service for users to sort the Locations in Favorites by date they are added.  3. Users select to sort the Locations in Favorites by date they are added.  4. System shall retrieve all the Location data in their own Favorites from database.  5. System shall sort all the Location data from database by date they are added.  6. System shall provide the user interface to display a list of names of sorted Locations by date. Dates are sorted from the latest to the earliest. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 13.1 | Users select the service to sort the Location in their Favorites by date they are added. | Selection of service for users to sort Location in their Favorites | System shall provide the service for users to sort the Locations in Favorites by date they are added. |
| System shall provide the user interface to show prompt message. “No Location in your Favorites. You can add wherever you like.” |
| 13.2 | Users select to sort the Locations in Favorites by date they are added. | Selection of users to sort the Locations in Favorites by date they are added | System shall provide the user interface to display a list of names of sorted Locations by date. Dates are sorted from the latest to the earliest. |

**STC 14 (URS 14) - Users can search Locations by keyword in their Favorites.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-14. Users can search Locations by keyword in their Favorites. |
| **Prerequisite** | 1. The service to search Locations in Favorites by key word is available.  2. The system is on running status, and is on the interface which provides the service to search Locations in Favorites. |
| **Input Required** | 1. Selection of users to search Locations in their Favorites  2. The key word provided by users to search Locations in Favorites |
| **Test Steps** | 1. Users select the service to search Locations in their Favorites by key word.  2. System shall provide the service for users to search Locations by key word in their Favorites.  3. System shall provide the user interface to receive the key word inputted by users.  4. Users provide the key word to search Locations in Favorites.  5. System retrieve the data of the Location(s) from database by key word.  6. System shall provide the user interface to display a (list of) name(s) of related Location(s). |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 14.1 | Users select the service to search Locations in their Favorites by key word. | Selection of users to search Locations in their Favorites | System shall provide the user interface to receive the key word inputted by users. |
| 14.2 | Users provide the key word to search Locations in Favorites. | The key word provided by users to search Locations in Favorites | System shall provide the user interface to display a (list of) name(s) of related Location(s). |
| System shall provide the user interface to display the error message. “No Location found related to the key word.” |

**STC 15 (URS 15) - Users can select Text-To-Speech to get the pronunciation of the Location name in their Favorites.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-15. Users can select Text-To-Speech to get the pronunciation of the Location name in their Favorites. |
| **Prerequisite** | 1. The service to get the pronunciation of Location name in Favorites is available.  2. The system is on running status, and is on the interface which displays a Location from Favorites.  3. The connection between system and Microsoft Translator API is available. |
| **Input Required** | The selection of users to request for the pronunciation of the selected |
| **Test Steps** | 1. System shall provide the service for users to request for the proper pronunciation of the Location name in their Favorites.  2. Users request for the pronunciation of the selected Location name.  3. System shall send the name of the selected Location to Microsoft Translator API.  4. Microsoft Translator API shall retrieve the pronunciation data of the name.  5. Microsoft Translator API shall send the pronunciation data to system.  6. System shall receive the pronunciation of the selected Location name in Chinese.  7. System shall provide the service for users to get the proper Chinese pronunciation of the selected Location name. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 15.1 | Users request for the pronunciation of the selected Location name. | The selection of users to request for the pronunciation of the selected | System shall provide the service for users to get the proper Chinese pronunciation of the selected Location name. |
| System shall provide the user interface to display the error message. “No internet access.” |
| System shall provide the user interface to display the error message. “Cannot find the pronunciation of this word.” |

**STC 16 (URS 16) - Users can add the scanned words into their own Word book.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-16. Users can add the scanned words into their own Word book. |
| **Prerequisite** | 1. The service to add the scanned words into Word book is available.  2. The system is on running status, and is on the interface which displays the scanned word. |
| **Input Required** | Selection of users to add this scanned word into Word book |
| **Test Steps** | 1. Users select to add this scanned word into Word book.  2. System shall retrieve all the word data in Word book from database.  3. System shall add the scanned word into database.  4. System shall provide the user interface to display the successful message. “Word added successfully!” |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 16.1 | Users select to add this scanned word into Word book. | Selection of users to add this scanned word into Word book | System shall provide the user interface to display the successful message. “Word added successfully!” |
| System shall provide the user interface to display the error message. “This word has existed in your Word book already.” |
|

**STC 17 (URS 17) - Users can delete a word from their own Word book.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-17. Users can delete a word from their own Word book. |
| **Prerequisite** | 1. The service to delete a word from Word book is available.  2. The system is on running status, and has opened Word book already. |
| **Input Required** | 1. Selection of service to delete a word from Word book  2. Selection of a word to delete  3. Selection of users to confirm the deletion  4. Selection of users to cancel the deletion |
| **Test Steps** | Normal Flow:  1. Users select the service to delete a word from their own Word book.  2. System shall retrieve all the word data in Word book from database.  3. System shall provide the user interface for users to select the word that they want to delete.  4. Users select the word they want to delete.  5. System shall retrieve the data of the word selected by users from database.  6. System shall provide user interface to display the prompt message “Are you sure to delete selected word?”  7. Users confirms the deletion.  8. System shall delete the data of the selected word from database.  9. System shall provide the user interface to display the successful message. “Word deleted successfully!”  Alternative Flow:  On Step 7 of Normal Flow  1. System shall provide the service for users to cancel the service of deleting the selected word.  2. Users select to cancel the deletion.  3. System shall cancel the service of deleting the selected word.  4. Test case resumes on Step 3 of Normal Flow. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 17.1 | Users select the service to delete a word from their own Word book. | Selection of service to delete a word from Word book | System shall provide the user interface for users to select the word that they want to delete. |
| System shall provide the user interface to show prompt message. “No word in your Word book. You can add whatever you like.” |
| 17.2 | Users select the word they want to delete. | Selection of a word to delete | System shall provide user interface to display the prompt message “Are you sure to delete selected word?” |
| 17.3 | Users confirms the deletion. | Selection of users to confirm the deletion | System shall provide the user interface to display the successful message. “Word deleted successfully!” |
| System shall provide the user interface to display the error message. “Deletion failed, please try again.” |
| 17.4 | Users select to cancel the deletion. | Selection of users to cancel the deletion | System shall cancel the service of deleting the selected word. |

**STC 18 (URS 18) - Users can view the Chinese words and related information in their own Word book.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-18. Users can view the Chinese words and related information in their own Word book. |
| **Prerequisite** | 1. The service to view a Chinese word with its related information in Word book is available.  2. The system is on running status, and has opened Word book already. |
| **Input Required** | 1. Selection of service to view a Chinese word with its related information in Word book  2. Selection of a word to view |
| **Test Steps** | 1. Users select the service to view a Chinese word with its related information in Word book.  2. System shall retrieve all the word data in Word book from database.  3. System shall provide the user interface displaying all the words from database for users to select the word that they want to view.  4. Users select the word that they want to view.  5. System shall retrieve the data of the selected word in their Word book from database.  6. System shall provide the user interface to display the selected Chinese word and related information in their own Word book. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 18.1 | Users select the service to view a Chinese word with its related information in Word book. | Selection of service to view a Chinese word with its related information in Word book | System shall provide the user interface displaying all the words from database for users to select the word that they want to view. |
| System shall provide the user interface to show prompt message. “No word in your Word book. You can add whatever you like.” |
| 18.2 | Users select the word that they want to view. | Selection of a word to view | System shall provide the user interface to display the selected Chinese word and related information in their own Word book. |

**STC 19 (URS 19) - Users can sort the words in their Word book by date when they are added.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-19. Users can sort the words in their Word book by date when they are added. |
| **Prerequisite** | 1. The service to sort words in Word book by date when they are added is available.  2. The system is on running status, and is on the interface which displays words from Word book. |
| **Input Required** | 1. Selection of service to sort words in Word book  2. Selection of users to sort words by date when they are added |
| **Test Steps** | 1. Users select the service to sort words in Word book.  2. System shall provide the service for users to sort the words in their Word book by date when they are added.  3. Users select to sort the words in Word book by date when they are added.  4. System shall retrieve all the word data in their own Word book from database.  5. System shall sort all the words data from database by date they are added.  6. System shall provide the user interface to display a list of the sorted words by date. Dates are sorted from the latest to the earliest. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 19.1 | Users select the service to sort words in Word book. | Selection of service to sort words in Word book | System shall provide the service for users to sort the words in their Word book. |
| System shall provide the user interface to show prompt message. “No word in your Word book. You can add whatever you like.” |
| 19.2 | Users select to sort the words in Word book by date when they are added. | Selection of users to sort words by date when they are added | System shall provide the user interface to display a list of the sorted words by date. Dates are sorted from the latest to the earliest. |

**STC 20 (URS 20) - Users can sort the words in their Word book alphabetically.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-20. Users can sort the words in their Word book alphabetically. |
| **Prerequisite** | 1. The service to sort words in Word book alphabetically is available.  2. The system is on running status, and is on the interface which displays words from Word book. |
| **Input Required** | 1. Selection of service to sort words in Word book  2. Selection of users to sort the words in Word book alphabetically |
| **Test Steps** | 1. Users select the service to sort words in Word book.  2. System shall provide the service for users to sort the words in their Word book alphabetically.  3. Users select to sort the words in Word book alphabetically.  4. System shall retrieve all the word data in their own Word book from database.  5. System shall sort all the word data from database alphabetically.  6. System shall provide the user interface to display a list of the sorted words. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 20.1 | Users select the service to sort words in Word book. | Selection of service to sort words in Word book | System shall provide the service for users to sort the words in their Word book. |
| System shall provide the user interface to show prompt message. “No word in your Word book. You can add whatever you like.” |
| 20.2 | Users select to sort the words in Word book alphabetically. | Selection of users to sort the words in Word book alphabetically | System shall provide the user interface to display a list of the sorted words. |

**STC 21 (URS 21) -** Users can search Chinese words in the Word book by their meaning in English.

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-21. Users can search Chinese words in the Word book by their meaning in English. |
| **Prerequisite** | 1. The service to search Chinese words in Word book is available.  2. The system is on running status, and has opened Word book already. |
| **Input Required** | 1. Selection of service to search Chinese words in Word book  2. English meaning provided by users for Chinese word searching |
| **Test Steps** | 1. Users select the service to search Chinese words in Word book by their meaning in English.  2. System shall provide the service for users to search Chinese words in the Word book by their meaning in English.  3. System shall provide the user interface to receive the English meaning inputted by users.  4. Users provide the English meaning for searching Chinese word(s).  5. System retrieve the data of the word(s) from database by the English meaning.  6. System shall provide the user interface to display a (list of) related word(s). |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 21.1 | Users select the service to search Chinese words in Word book by their meaning in English. | Selection of service to search Chinese words in Word book | System shall provide the user interface to receive the English meaning inputted by users. |
| 21.2 | Users provide the English meaning for searching Chinese word(s). | English meaning provided by users for Chinese word searching | System shall provide the user interface to display a (list of) related word(s). |
| System shall provide the user interface to display the error message. “No word found related to the meaning.” |

**STC 22 (URS 22) - Users can select Text-To-Speech to get the pronunciation of a Chinese word in their Word book.**

|  |  |
| --- | --- |
| **Test Description** | This test case is a system testing for URS-22. Users can select Text-To-Speech to get the pronunciation of a Chinese word in their Word book. |
| **Prerequisite** | 1. The service to get the pronunciation of a Chinese word in Word book is available.  2. The system is on running status, and is on the interface which displays a Chinese word from Word book. |
| **Input Required** | 1. Selection of service to get the pronunciation of a Chinese word in Word book  2. Selection of users to request for the pronunciation of the selected Chinese word |
| **Test Steps** | 1. Users select the service to get the pronunciation of a Chinese word in Word book.  2. System shall provide the service for users to request for the proper pronunciation of a Chinese word in their Word book.  3. Users request for the pronunciation of the selected Chinese word.  4. System shall send the selected Chinese word to Microsoft Translator API.  5. Microsoft Translator API shall retrieve the pronunciation data of the word.  6. Microsoft Translator API shall send the pronunciation data to system.  7. System shall receive the pronunciation of the selected word in Chinese.  8. System shall provide the service for users to get the proper Chinese pronunciation of the selected word. |

**Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Input** | **Expected Result** |
| 22.1 | Users select the service to get the pronunciation of a Chinese word in Word book. | Selection of service to get the pronunciation of a Chinese word in Word book | System shall provide the service for users to request for the proper pronunciation of a Chinese word in their Word book. |
| 22.2 | Users request for the pronunciation of the selected Chinese word. | Selection of users to request for the pronunciation of the selected Chinese word | System shall provide the service for users to get the proper Chinese pronunciation of the selected word. |
| System shall provide the user interface to display the error message. “No internet access.” |
| System shall provide the user interface to display the error message. “Cannot find the pronunciation of this word.” |