

## 9.1 TEST CASES

Table 2: Detect current location Test case

<b>Test Case ID:</b> AN001	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Current Location function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Detect Current Location	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Current Location function	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Current Location” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	Received uuid from the Beacon ={1F78A721-8CC2-9C68-36B6-3F74C3BF5294}.	The Current Location is outputted as a Voice output.	Voice output = “ <i>Main entrance, to start navigating select the navigation function from the Home screen</i> ”.	Pass	Current location is auto detected by the application through the Bluetooth signal.

**Post-conditions:** User is redirected to the Home screen

**Table 3: Detect Current Location – No signal Test case**

<b>Test Case ID:</b> AN002	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Medium	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Current Location function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Detect Current Location – No signal	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Current Location function, No Bluetooth signal received.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Current Location” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	No beacons message.	Voice output = “ <i>No Beacons in range, Redirecting to Home screen</i> ”.	Pass	No Bluetooth signal detected for current location.

**Post-conditions:** User is redirected to the Home screen

**Table 4: Detect Bluetooth Signal Test case**

<b>Test Case ID:</b> AN003	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Medium	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Current Location and Navigation	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Detect Bluetooth Signal	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test to detect the nearest Bluetooth signal for the Current location and Navigation functions.	<b>Test Type:</b> Unit Testing

<b>Pre-conditions:</b> -	<b>Post-conditions:</b> -
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Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	Run current location activity	-	Beacon uuid outputted in the logcat as the nearest place.	Beacon uuid outputted in the logcat as the nearest place.	Pass	

```
.yomal.apiitnavigation I/TextToSpeech: Set up connection to ComponentInfo{com.google.and
.yomal.apiitnavigation D/BluetoothAdapter: STATE_ON
.yomal.apiitnavigation D/BluetoothLeScanner: onClientRegistered() - status=0 clientIf=6
.yomal.apiitnavigation D/Beacon: Nearest Place: 1f78a721-8cc2-9c68-36b6-3f74c3bf5294
.yomal.apiitnavigation D/BluetoothAdapter: STATE_ON
.yomal.apiitnavigation I/TextToSpeech: Sucessfully bound to com.google.android.tts
```

**Figure 70: Detect Bluetooth Signal actual result**

Table 5: Navigation function Test case

<b>Test Case ID:</b> AN004	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	Received uuid from the Beacon ={D36F4997-3385-1408-02A7D46D1FAF}.	The Current Location is given as a Voice output. Prompts the user to enter a Destination.	Voice output 1 = “ <i>Your current location is Library</i> ”. Voice output 2 = “ <i>Tap the middle of the screen and say the Destination</i> ”.	Pass	Current location is auto detected by the application through the Bluetooth signal.
2	Tap the screen and enter “Elevator 2” as the voice input	Destination = {elevator 2}.	Prompts the user to confirm destination as a voice output.	Voice output 3 = “ <i>Destination is Elevator2. To confirm tap once, or to re-enter the destination tap twice.</i> ”.	Pass	

3	Confirm Destination by tapping the screen once.		Notifies the user to tap the screen to get steps, as a voice output.	Voice output 4 = “ <i>Tap the screen to get instructions</i> ”.	Pass	
4	Tap Screen for Steps.		Navigation Steps are given as Voice outputs.	Voice output 5 = “ <i>TURN AROUND &lt;Break&gt; WALK 12 FEET &lt;Break&gt; TURN RIGHT &lt;Break&gt; WALK 8 FEET &lt;Break&gt; TURN LEFT, you are now at your Destination</i> ”.	Pass	<Break> = waiting for the user to tap on the screen.
5	-		Current Location (Destination) is given as a voice Output.	Voice output 6 = “ <i>You are now next to Elevator 2</i> ”.	Pass	Current location is auto detected by the application through the Bluetooth signal.

**Post-conditions:** User is redirected to the Home screen

Table 6: Navigation retry Test case

<b>Test Case ID:</b> AN005	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation retry	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function, When the beacon signal is not detected and the function is reloaded.	
<b>Test Type:</b> Functional Testing	

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-		Prompts the user to enter a selection as a voice output.	Voice output 1 = “No Beacons in range, you can choose one of the following options. Tap the middle of the screen and 1. Say retry, to try again. 2. Say scan, to manually scan the current location. 3. Say home, to return to the home screen. Or 4. Say the location name if you already know the current location”.	Pass	No Bluetooth signal detected for location.

2	Tap the screen and enter “Retry” as the voice input.	Input = retry.	Page is reloaded.	Page is reloaded.		
3	-	Received uuid from the Beacon ={D36F4997-3385-1408-02A7D46D1FAF}.	The Current Location is given as a Voice output. Prompts the user to enter a Destination.	Voice output 2 = “ <i>Your current location is Library</i> ”. Voice output 3 = “ <i>Tap the middle of the screen and say the Destination</i> ”.	Pass	Current location is auto detected through the Bluetooth signal.
4	Tap the screen and enter a “Elevator 2” as the voice input	Destination = {elevator 2}.	Prompts the user to confirm destination as a voice output.	Voice output 4 = “ <i>Destination is Elevator 2. To confirm tap once, or to re-enter the destination tap twice.</i> ”.	Pass	
5	Confirm Destination by tapping the screen once.		Notifies the user to tap the screen to get steps, as a voice output.	Voice output 5 = “ <i>Tap the screen to get instructions</i> ”.	Pass	
6	Tap Screen for Steps.		Navigation Steps are given as Voice outputs.	Voice output 6 = “ <i>TURN AROUND &lt;Break&gt; WALK 12 FEET &lt;Break&gt; TURN RIGHT &lt;Break&gt; WALK 8 FEET &lt;Break&gt; TURN LEFT, you are now at your Destination</i> ”.	Pass	<Break> = waiting for the user to tap on the screen.
7	-		Current Location (Destination) is given as a voice Output.	Voice output 7 = “ <i>You are now next to Elevator 2</i> ”.	Pass	Current location is auto detected through the Bluetooth signal.

**Post-conditions:** User is redirected to the Home screen

Table 7: Navigation with manual scan Test case

<b>Test Case ID:</b> AN006	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Medium	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation with manual scan	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function, With manual scan when no beacon being detected in current location.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-		Prompts the user to enter a selection as a voice output.	Voice output 1 = “No Beacons in range, you can choose one of the following options. Tap the middle of the screen and 1. Say retry, to try again. 2. Say scan, to manually scan the current location. 3. Say home, to return to the home screen. Or 4. Say the location name if you already know the current location”.	Pass	No Bluetooth signal detected for location.



2	Tap the screen and enter “Scan” as the voice input.	Input = scan.	Notifies the user to tap the screen when ready to get instructions, as a voice output.	Voice output 2 = “ <i>Tap the screen to get instructions to manually scan</i> ”.		
3	Tap the screen to start getting manual scan instructions.		Gives out steps to start manually scanning as voice outputs.	Voice output 3 = “ <i>Follow these steps., Tap the screen after each step is done. 1. Hold your mobile phone at the level of the door handle. 2. Determine you are at arm’s length from the wall. 3. Position yourself right side of the doorway. Immediately after where the door frame ends. 4. Hold your phones camera outwards</i> ”. Voice output 4 = “ <i>Tap the screen to start scanning</i> ”.	Pass	
4	Tap the screen to start scanning		The current location is given as a voice output. Prompts the user to enter a destination as a voice output.	Voice output 5 = “ <i>Current location is Library</i> ”. Voice output 6 = “ <i>Tap the middle of the screen and say the Destination</i> ”.	Pass	
5	Tap the screen and enter a “Elevator 2” as the voice input	Destination = {elevator 2}.	Prompts the user to confirm destination as a voice output.	Voice output 7 = “ <i>Destination is Elevator 2. To confirm tap once, or to re-enter the destination tap twice.</i> ”.	Pass	
6	Confirm Destination by		Notifies the user to tap the	Voice output 8 = “ <i>Tap the</i> ”.	Pass	

	tapping the screen once.		screen to get steps, as a voice output.	<i>screen to get instructions</i> ".		
7	Tap Screen for Steps.		Navigation Steps are given as Voice outputs.	Voice output 9 = " <i>TURN AROUND &lt;Break&gt; WALK 12 FEET &lt;Break&gt; TURN RIGHT &lt;Break&gt; WALK 8 FEET &lt;Break&gt; TURN LEFT, you are now at your Destination</i> ".	Pass	<Break> = waiting for the user to tap on the screen.
8	-		Current Location (Destination) is given as a voice Output.	Voice output 10 = " <i>You are now next to Elevator 2</i> ".	Pass	Current location is auto detected by the application through the Bluetooth signal.

**Post-conditions:** User is redirected to the Home screen

Table 8: Navigation with manual scan Test case

<b>Test Case ID:</b> AN007	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation with manual scan	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function, With manual scan when scanning is interrupted.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-		Prompts the user to enter a selection as a voice output.	Voice output 1 = “No Beacons in range, you can choose one of the following options. Tap the middle of the screen and 1. Say retry, to try again. 2. Say scan, to manually scan the current location. 3. Say home, to return to the home screen. Or 4. Say the location name if you already know the current location”.	Pass	No Bluetooth signal detected for location.

2	Tap the screen and enter “Scan” as the voice input.	Input = scan.	Notifies the user to tap the screen when ready to get instructions, as a voice output.	Voice output 2 = “ <i>Tap the screen to get instructions to manually scan</i> ”.		
3	Tap the screen to start getting manual scan instructions.		Gives out steps to start manually scanning as voice outputs.	Voice output 3 = “ <i>Follow these steps., Tap the screen after each step is done. 1. Hold your mobile phone at the level of the door handle. 2. Determine you are at arm’s length from the wall. 3. Position yourself right side of the doorway. Immediately after where the door frame ends. 4. Hold your phones camera outwards</i> ”. Voice output 4 = “ <i>Tap the screen to start scanning</i> ”.	Pass	
4	Tap the screen to start scanning.		Scanning unsuccessful message is given as a voice output.	Voice output 5 = “ <i>Scanning was interrupted!</i> ”.	Pass	

**Post-conditions:** User is redirected to the Home screen

Table 9: Navigation function Home Input Test case

<b>Test Case ID:</b> AN008	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation function Home input	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the navigation function, Returning to Home screen when no beacon being detected in current location.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Current Location” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-		Prompts the user to enter a selection as a voice output.	Voice output 1 = “No Beacons in range, you can choose one of the following options. Tap the middle of the screen and 1. Say retry, to try again. 2. Say scan, to manually scan the current location. 3. Say home, to return to the home screen. Or 4. Say the location name if you already know the current location”.	Pass	No Bluetooth signal detected for location.
2	Tap the screen and enter “Home” as the voice input.	Input = home.	Redirect the user to the Home screen.	Redirected to the Home screen	Pass	

**Post-conditions:** None

Table 10: Navigation with voice Test case

<b>Test Case ID:</b> AN009	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Medium	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation with voice	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function, With current location with voice input when no beacon being detected for current location.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-		Prompts the user to enter a selection as a voice output.	Voice output 1 = “ <i>No Beacons in range, you can choose one of the following options. Tap the middle of the screen and 1. Say retry, to try again. 2. Say scan, to manually scan the current location. 3. Say home, to return to the home screen. Or 4. Say the location name if you already know the current location</i> ”.	Pass	No Bluetooth signal detected for location.

2	Tap the screen and enter “Library” as the voice input.	Input = library.	User input is given as a voice output. Prompts the user to confirm current location.	Voice output 2 = “ <i>Current location is Library. To confirm tap once, or to re-enter the location tap twice.</i> ”.	Pass	
3	Tap the screen once to confirm current location.		Prompts the user to enter a destination as a voice output.	Voice output 3 = “ <i>Tap the middle of the screen and say the Destination</i> ”.	Pass	
4	Tap the screen and enter a “Elevator 2” as the voice input	Destination = {elevator 2}.	Prompts the user to confirm destination as a voice output.	Voice output 4 = “ <i>Destination is Elevator 2. To confirm tap once, or to re-enter the destination tap twice.</i> ”.	Pass	
5	Confirm Destination by tapping the screen once.		Notifies the user to tap the screen to get steps, as a voice output.	Voice output 5 = “ <i>Tap the screen to get instructions</i> ”.	Pass	
6	Tap Screen for Steps.		Navigation Steps are given as Voice outputs.	Voice output 6 = “ <i>TURN AROUND &lt;Break&gt; WALK 12 FEET &lt;Break&gt; TURN RIGHT &lt;Break&gt; WALK 8 FEET &lt;Break&gt; TURN LEFT, you are now at your Destination</i> ”.	Pass	<Break> = waiting for the user to tap on the screen.
7	-		Current Location (Destination) is given as a voice Output.	Voice output 7 = “ <i>You are now next to Elevator 2</i> ”.	Pass	Current location is auto detected by the application through the Bluetooth signal.

**Post-conditions:** User is redirected to the Home screen

**Table 11: Navigation – re-enter destination Test case**

<b>Test Case ID:</b> AN010	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation – re-enter destination	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function, Re-enter destination when the given destination is incorrect.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	Received uuid from the Beacon ={D36F4997-3385-1408-02A7D46D1FAF}.	The Current Location is given as a Voice output. Prompts the user to enter a Destination.	Voice output 1 = “ <i>Your current location is Library</i> ”. Voice output 2 = “ <i>Tap the middle of the screen and say the Destination</i> ”.	Pass	Current location is auto detected by the application through the Bluetooth signal.
2	Tap the screen and enter a “Classroom” as the voice input	Destination = {classroom}.	Prompts the user to confirm destination as a voice output.	Voice output 3 = “ <i>Destination is Classroom. To confirm tap once, or to re-enter the destination tap twice.</i> ”	Pass	



3	Tap the screen twice.		The Current Location is given as a Voice output. Prompts the user to enter a Destination.	Voice output 4 = <i>“Your current location is Elevator 1”</i> . Voice output 2 = <i>“Tap the middle of the screen and say the Destination”</i> .	Pass	
4	Tap the screen and enter a “Elevator 2” as the voice input	Destination = {elevator 2}.	Prompts the user to confirm destination as a voice output.	Voice output 5 = <i>“Destination is Elevator 2. To confirm tap once, or to re-enter the destination tap twice.”</i>	Pass	
5	Confirm Destination by tapping the screen once.		Notifies the user to tap the screen to get steps, as a voice output.	Voice output 6 = <i>“Tap the screen to get instructions”</i> .	Pass	
6	Tap Screen for Steps.		Navigation Steps are given as Voice outputs.	Voice output 7 = <i>“TURN AROUND &lt;Break&gt; WALK 12 FEET &lt;Break&gt; TURN RIGHT &lt;Break&gt; WALK 8 FEET &lt;Break&gt; TURN LEFT, you are now at your Destination”</i> .	Pass	<Break> = waiting for the user to tap on the screen.
7	-		Current Location (Destination) is given as a voice Output.	Voice output 8 = <i>“You are now next to Elevator 2”</i> .	Pass	Current location is auto detected through the Bluetooth signal.

**Post-conditions:** User is redirected to the Home screen

**Table 12: Navigation – destination invalid Test case**

<b>Test Case ID:</b> AN011	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Navigation function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Navigation – destination invalid	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Navigation function, When the destination does not exist in the database.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Navigation” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	Received uuid from the Beacon ={D36F4997-3385-1408-02A7D46D1FAF}.	The Current Location is given as a Voice output. Prompts the user to enter a Destination.	Voice output 1 = “ <i>Your current location is Library</i> ”. Voice output 2 = “ <i>Tap the middle of the screen and say the Destination</i> ”.	Pass	Current location is auto detected by the application through the Bluetooth signal.
2	Tap the screen and enter a “Room 2” as the voice input	Destination = {room 2}.	Prompts the user to confirm destination as a voice output.	Voice output 3 = “ <i>Destination is Room 2. To confirm tap once, or to re-enter the destination tap twice.</i> ”.	Pass	

3	Confirm Destination by tapping the screen once.		Notifies the user that the destination is invalid as a voice output.	Voice output 4 = “ <i>Destination does not exist in the database</i> ”.	Pass	
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**Post-conditions:** User is redirected to the Home screen

Table 13: Locations Test case

<b>Test Case ID:</b> AN012	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Locations function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Locations	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Locations function	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Locations” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Floor.	Voice output 1 = “ <i>Tap the middle of your screen once and say a floor to listen to the locations in that floor</i> ”.	Pass	
2	Tap the screen once and enter “6 <sup>th</sup> Floor” as the voice input.	floor = {6th Floor}.	2Outputs floor locations as a voice output.	Voice output 2 = “ <i>ELEVATOR 6, CAFETERIA, GENTS PRAYER ROOM, LADIES PRAYER ROOM, FIRE EXIT 6</i> ”.	Pass	

**Post-conditions:** User is redirected to the Home screen

**Table 14: Locations – invalid floor Test case**

<b>Test Case ID:</b> AN013	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Locations function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Locations – invalid floor	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Locations function, When the floor input is invalid.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Locations” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Floor.	Voice output 1 = “ <i>Tap the middle of your screen once and say a floor to listen to the locations in that floor</i> ”.	Pass	
2	Tap the screen once and enter “10 <sup>th</sup> floor” as the voice input.	floor = {10th Floor}.	Outputs invalid input message as a voice output.	Voice output 2 = “ <i>Invalid floor input 10<sup>th</sup> floor</i> ”.	Pass	

**Post-conditions:** User is redirected to the Home screen

Table 15: Search Test case

<b>Test Case ID:</b> AN014	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Search function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Search	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Search function	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Search” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Location.	Voice output 1 = “ <i>Tap the middle of your screen once and say a location to find the floor</i> ”.	Pass	
2	Tap the screen once and enter “Library” as the voice input.	location = {library}.	Outputs the floor of the Location as a voice output.	Voice output 2 = “ <i>Library is in the second floor</i> ”.	Pass	

**Post-conditions:** User is redirected to the Home screen

Table 16: Search – location invalid Test case

<b>Test Case ID:</b> AN015	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Search function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Search – location invalid	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Search function, When the location input is invalid.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Search” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Location.	Voice output 1 = “ <i>Tap the middle of your screen once and say a location to find the floor</i> ”.	Pass	
2	Tap the screen once and enter “Communications Room” as the voice input.	location = {communications room}.	Output invalid input message as a voice output.	Voice output 2 = “ <i>Location communications room does not exist, try the locations function to listen to all available locations</i> ”.	Pass	

**Post-conditions:** User is redirected to the Home screen

Table 17: Guide - Current Location Test case

<b>Test Case ID:</b> AN016	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Current Location	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Current location topic.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Current Location” as the voice input.	result = current location	Output current location guide as a voice output.	Voice output 2 = “ <i>Current location function allows you to identify your current location. Whenever you are close to a doorway or an entrance,</i> ”	Pass	



				<i>or when you have entered a floor through the lift or through the staircase, deploy the current location function to identify your location. To start the current location function, tap the middle of your phone screen and say current location while in the home screen”.</i>		
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<b>Post-conditions:</b>
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Table 18: Guide - Navigation Test case

<b>Test Case ID:</b> AN017	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Navigation	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Navigation topic.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Navigation” as the voice input.	result = navigation	Output Navigation guide as a voice output.	Voice output 2 = “ <i>Navigation function gives you the steps to navigate from one location to another. When near a doorway or</i> ”.	Pass	

				<p><i>an entrance or a known location, deploy the navigation function and enter the destination. You will get the necessary steps needed to get to your destination. To start the navigation function, tap the middle of your phone screen and say navigation while in the home screen”.</i></p>		
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<b>Post-conditions:</b>
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Table 19: Guide - Search Test case

<b>Test Case ID:</b> AN018	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Search	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Search topic.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Search” as the voice input.	result = search	Output Search guide as a voice output.	Voice output 2 = “ <i>Search function allows you to search for a locations floor. Deploy the search function and say a location. The floor of that</i> ”.	Pass	

				<i>location will be given to you. To start the search function, tap the middle of the screen and say search while in the home screen”.</i>		
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**Post-conditions:**

Table 20: Guide - Other Test case

<b>Test Case ID:</b> AN019	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Low	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Other	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Other topic.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Other” as the voice input.	result = other	Output Other guide as a voice output.	Voice output 2 = “ <i>While in the home screen tap the screen and say the date to know the current date or say time to know the current time.</i> ”.	Pass	

**Post-conditions:**

Table 21: Guide - About Test case

<b>Test Case ID:</b> AN020	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Medium	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - About	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, About topic.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “About” as the voice input.	result = about	Output About guide as a voice output.	Voice output 2 = “ <i>This application is an application made to aid visually impaired individuals to navigate inside the city campus building</i> ”.	Pass	

**Post-conditions:**

Table 22: Guide - Exit Test case

<b>Test Case ID:</b> AN021	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Exit	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Exit topic.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Exit” as the voice input.	result = exit	Output Exit guide as a voice output.	Voice output 2 = “ <i>Exit function makes you exit the application. To do this tap on the phone screen and say exit while in the home screen.</i> ”.	Pass	

**Post-conditions:**



Table 23: Guide - Invalid Input Test case

<b>Test Case ID:</b> AN022	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Invalid input	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, topic is invalid.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Destination” as the voice input.	result = destination	Output invalid input message as a voice output.	Voice output 2 = “ <i>Invalid guide input</i> ”.	Pass	

**Post-conditions:**

Table 24: Guide - Enter new topic Test case

<b>Test Case ID:</b> AN023	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Enter new topic	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Enter a new topic while a guide is being outputted.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Exit” as the voice input.	result = exit	Output Exit guide as a voice output.	Voice output 2 = “ <i>Exit function makes you exit the application. To do this tap on the phone screen and say exit while in the home screen.</i> ”.	Pass	

3	Tap the screen once and enter “About” as the voice input.	result = about	Terminate Exit guide and start outputting About guide as a voice output.	Exit guide gets terminated. Voice output 3 = “ <i>This application is an application made to aid visually impaired individuals to navigate inside the city campus building</i> ”	Pass	

**Post-conditions:**

Table 25: Guide - Close Test case

<b>Test Case ID:</b> AN024	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Guide function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Guide - Close	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Guide function, Go back to home screen.	<b>Test Type:</b> Functional Testing

**Pre-conditions:** Input voice command “Guide” from Home screen

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	-	-	Prompts the user to enter a Guide Topic as a voice output.	Voice output 1 = “ <i>Select one of the following to start listening to the guide on how to use this application. 1. Current location. 2. Navigation. 3. Locations. 4. Search. 5. Other. 6. About. 7. Exit. Please tap the middle of the screen and say a topic or say Home to go back to Home screen.</i> ”.	Pass	
2	Tap the screen once and enter “Home” as the voice input.	result = home	Return to the Home Screen.	Returns to Home screen.	Pass	

**Post-conditions:**

Table 26: Date Test case

<b>Test Case ID:</b> AN025	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Low	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Date function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Date	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Date function	<b>Test Type:</b> Functional Testing

**Pre-conditions:**

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	Tap the Home screen and say "Date"	Input=date	The current date July 23, 2017 is given as a voice output	Voice output = " <i>Sunday, July 23<sup>rd</sup>, 2017</i> ".	Pass	

**Post-conditions:**

Table 27: Time Test case

<b>Test Case ID:</b> AN026	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> Low	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Time function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Time	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Time function	<b>Test Type:</b> Functional Testing

**Pre-conditions:**

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	Tap the Home screen and say "Time"	Input=time	The current time 6.46 pm is given as a voice output	Voice output = "six forty six pm".	Pass	

**Post-conditions:**

Table 28: Exit Test case

<b>Test Case ID:</b> AN027	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Exit function	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Exit	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> Test the Exit function from Home screen	<b>Test Type:</b> Functional Testing

**Pre-conditions:**

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	Tap the Home screen and say "Exit"	Input=exit	The application closes.	The application closes.	Pass	

**Post-conditions:**

Table 29: Home Screen – invalid voice input Test case

<b>Test Case ID:</b> AN028	<b>Test Designed by:</b> Yomal Karunanayake
<b>Test Priority (Low/Medium/High):</b> High	<b>Test Designed date:</b> 23/07/2017
<b>Module Name:</b> Home Screen	<b>Test Executed by:</b> Yomal Karunanayake
<b>Test Title:</b> Home Screen – invalid voice input	<b>Test Execution date:</b> 23/07/2017
<b>Description:</b> entering an invalid voice command from the Home screen	<b>Test Type:</b> Functional Testing

**Pre-conditions:**

Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Comments
1	Tap the Home screen and say “Recognition”	Input=recognition	Output invalid input message as a voice output.	Voice output = “ <i>Sorry, unable to recognize function please try again</i> ”.	Pass	

**Post-conditions:**