Test Case 37

Route used for test case 37

Test Execution Date: 31/7/2018				

Test Duration: 2 minutes 14 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 34 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

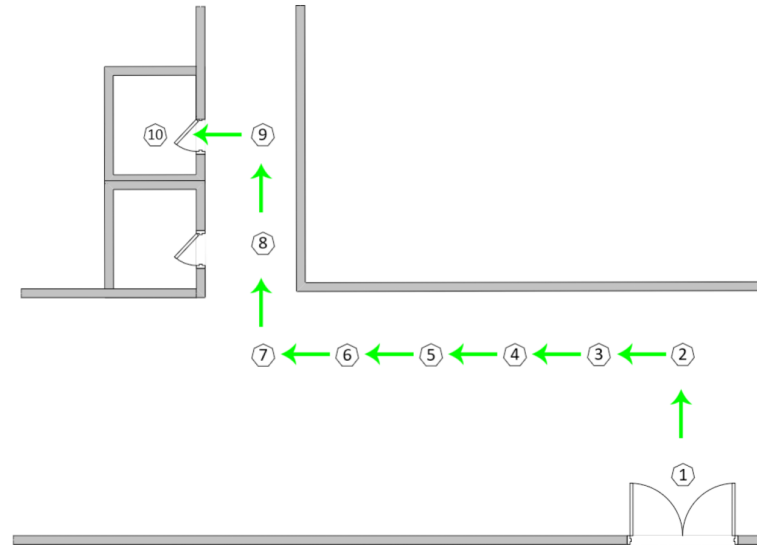| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| | | | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user | |
|---|---|---|---|---|---|
| 12 | | User navigates from beacon 9 to beacon 10. | his/her destination. | that he has reached the destination promptly. | Pass |

Test Case 38

Route used for test case 38

Test Execution Date: 31/7/2018

Test Duration: 2 minutes 3 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 32 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

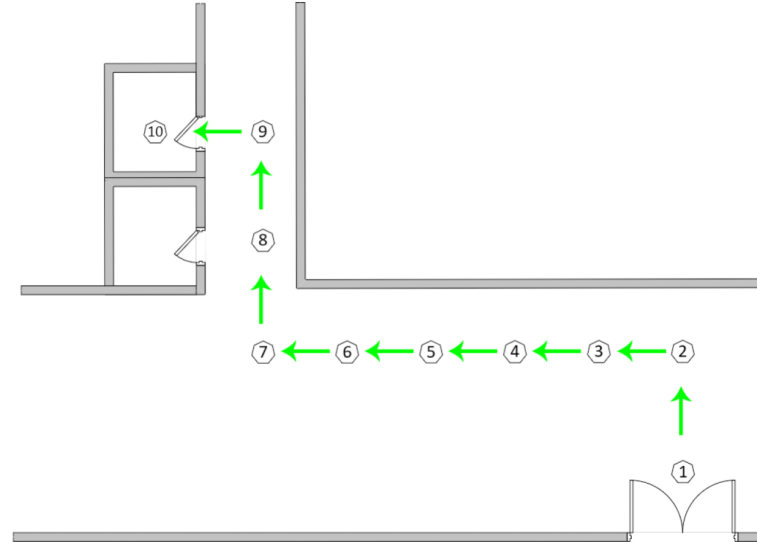| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 4 successfully and the application will inform that he has reached beacon 4. | The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 4 and the voice message has informed the user of it promptly. | Pass |
| 7 | User navigates from beacon 4 to beacon 5. | A voice message will tell the user to walk straight from beacon 4 to beacon 5.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 6 successfully and the application will inform that he has reached beacon 6. | The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 5 and the voice message has informed the user of it promptly. | Pass |
| 8 | User navigates from beacon 5 to beacon 6. | A voice message will tell the user to walk straight from beacon 5 to beacon 6.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 6 successfully and the application will inform that he has reached beacon 6. | The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 6 and the voice message has informed the user of it promptly. | Pass |

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 but the application did not detect it, causing the user to continue moving forward.	Fail

12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass	

Test Case 39

Route used for test case 39

Test Execution Date: 31/7/2018

Test Duration: 2 minutes 14 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 34 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

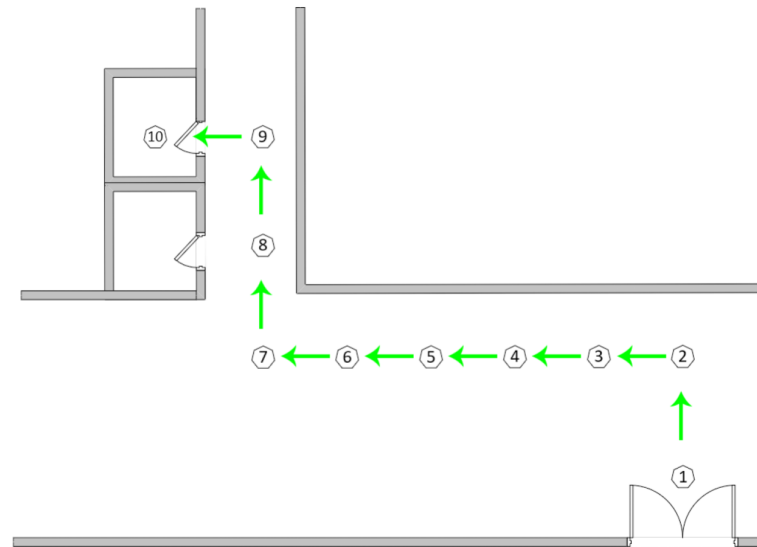| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	
9	User navigates from beacon 6 to beacon 7.			Pass
		A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	
10	User navigates from beacon 7 to beacon 8.			Pass
		A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	
11	User navigates from beacon 8 to beacon 9.			Pass

			A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.	
			The voice message guiding the user to face the correct direction should be in sync with the one being displayed.	Message read out was in sync with the instrcutions that is displayed.	
12		User navigates from beacon 9 to beacon 10.	User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 40

Route used for test case 40

Test Execution Date: 31/7/2018

Test Duration: 4 minutes 56 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 28 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

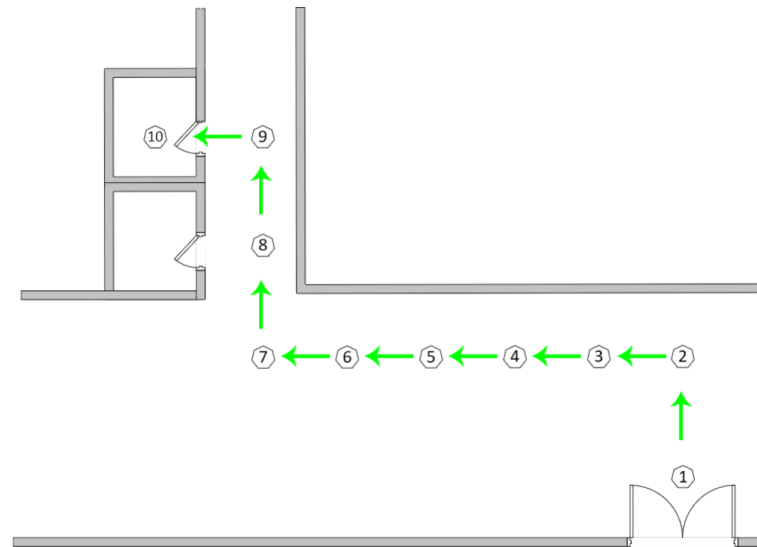| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

| | | A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7. | The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 7 and the voice message has informed the user of it promptly. | |
|---|---|---|---|---|
| 9 | User navigates from beacon 6 to beacon 7. | | | Pass |
| | | A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 8 successfully and the application will inform that he has reached beacon 8. | The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 8 and the voice message has informed the user of it promptly. | |
| 10 | User navigates from beacon 7 to beacon 8. | | | Pass |
| | | A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9. | The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 9 and the voice message has informed the user of it promptly. | |
| 11 | User navigates from beacon 8 to beacon 9. | | | Pass |

12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 41

Route used for test case 41

Test Execution Date: 31/7/2018

Test Duration: 5 minutes 11 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 25 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

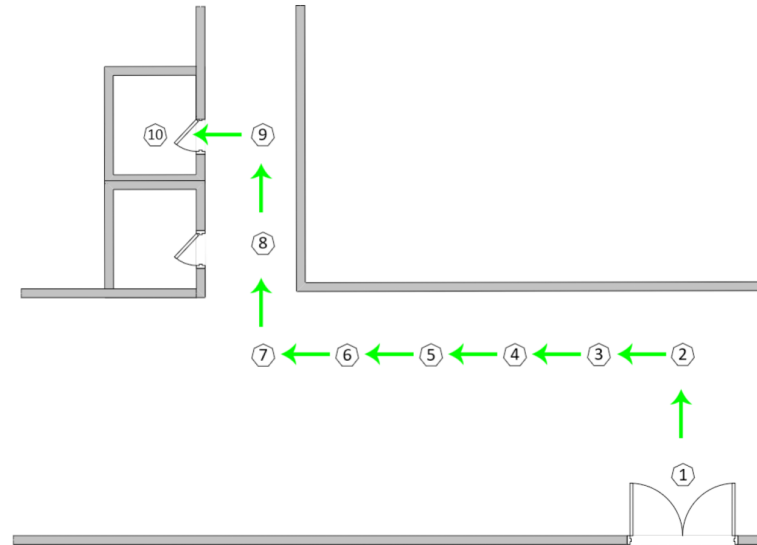| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 42

Route used for test case 42

Test Execution Date: 1/8/2018	
Test Duration: 2 minutes 17 seconds	
Pre-Conditions: User is not blindfolded. User to wait for instructions to be read finished before moving again.	
Specifications: Beacon Distance: 3 **meters** Distance between beacon & ground: **0cm** Compass Bearing: **+- 20** Avg Moving Speed: 34 **cm/s**	
Description: Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.	

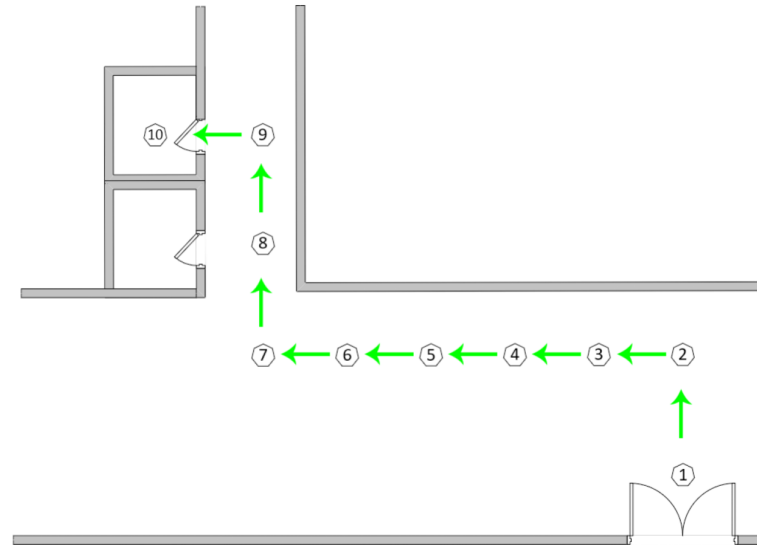| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

			Expected Results	Actual Results	
6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 but the application did not detect it and thus, did not notify the user that he is at beacon 4.	Fail
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 but the application did not detect it and thus, did not notify the user that he is at beacon 5.	Fail
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.		Pass

Test Case 43

Route used for test case 43

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 6 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 33 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

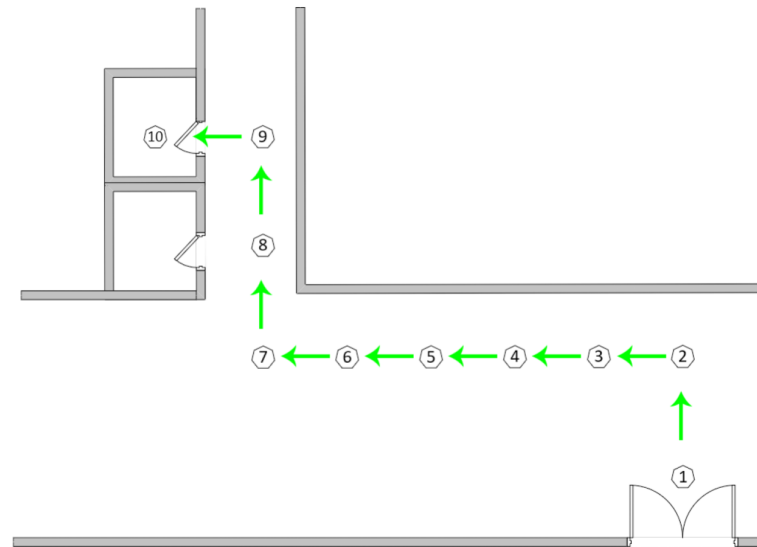| #	Action	Expected Result	Actual Result	Status
1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 2 and prompted for a destination.	Fail
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the wrong direction when he is actually facing the right direction.	Fail
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message read out the wrong instructions as the application detected the user as being at beacon 2 already.	Fail
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 but the application did not detect it and thus, did not notify the user that he is at beacon 4.	Fail	
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 but the application did not detect it and thus, did not notify the user that he is at beacon 5.	Fail	
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass	

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 but the application did not detect it and thus, did not notify the user that he is at beacon 8.	Fail
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 44

Route used for test case 44

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 14 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 31 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.
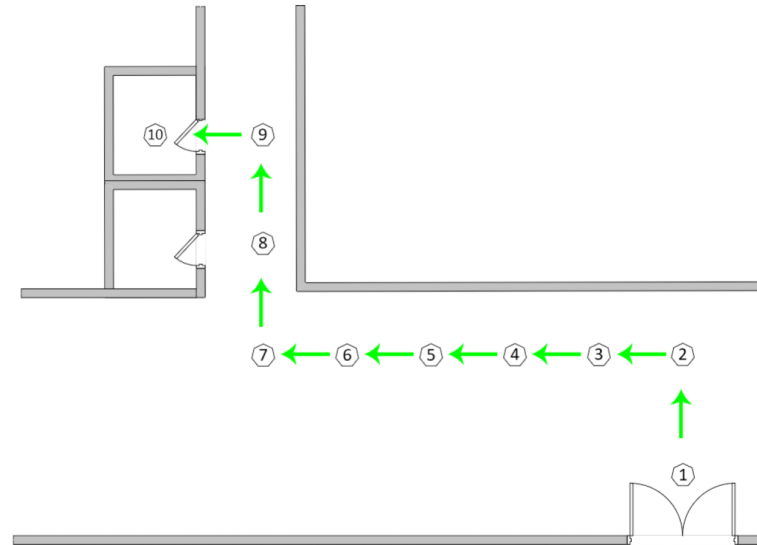
Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the wrong direction when he is actually facing the right direction.	Fail
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	No instructions containing the step to go from beacon 1 to 2 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction. With no instructions, the user did not reach beacon 2.	Fail
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	No instructions containing the step to go from beacon 2 to 3 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction. With no instructions, the user did not reach beacon 3.	Fail

| 6 | User navigates from beacon 3 to beacon 4. | A voice message will tell the user to walk straight from beacon 3 to beacon 4.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 4 successfully and the application will inform that he has reached beacon 4. | No instructions containing the step to go from beacon 3 to 4 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction.

With no instructions, the user did not reach beacon 4. | Fail |
|---|---|---|---|---|
| 7 | User navigates from beacon 4 to beacon 5. | A voice message will tell the user to walk straight from beacon 4 to beacon 5.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 6 successfully and the application will inform that he has reached beacon 6. | No instructions containing the step to go from beacon 4 to 5 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction.

With no instructions, the user did not reach beacon 5. | Fail |
| 8 | User navigates from beacon 5 to beacon 6. | A voice message will tell the user to walk straight from beacon 5 to beacon 6.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 6 successfully and the application will inform that he has reached beacon 6. | No instructions containing the step to go from beacon 5 to 6 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction.

With no instructions, the user did not reach beacon 6. | Fail |
| 9 | User navigates from beacon 6 to beacon 7. | A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7. | No instructions containing the step to go from beacon 6 to 7 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction.

With no instructions, the user did not reach beacon 7. | Fail |

		A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	No instructions containing the step to go from beacon 7 to 8 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction. With no instructions, the user did not reach beacon 8.	
10	User navigates from beacon 7 to beacon 8.			Fail
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	No instructions containing the step to go from beacon 8 to 9 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction. With no instructions, the user did not reach beacon 9.	Fail
12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	No instructions containing the step to go from beacon 9 to 10 was read out as the voice message repeatedly tries to guide the user to face the correct direction even when he is already facing the correct direction. With no instructions, the user did not reach beacon 10.	Fail

Test Case 45

Route used for test case 45

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 6 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 33 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

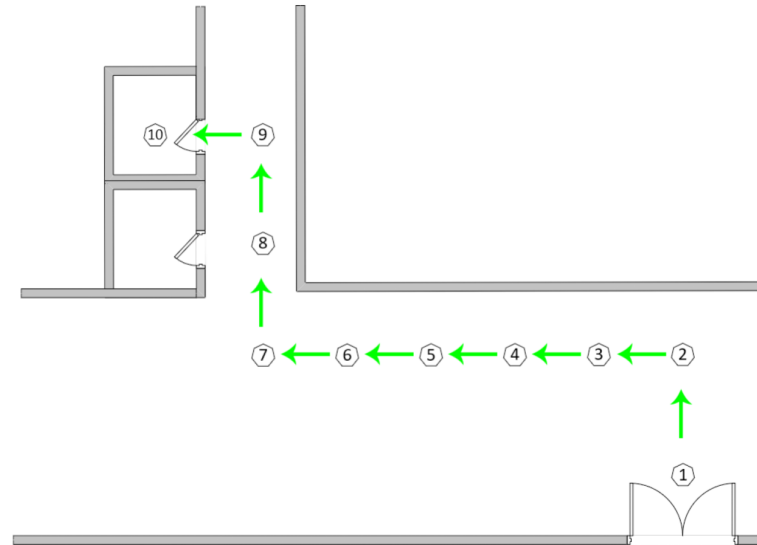| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 but the application did not detect it and thus, did not notify the user that he is at beacon 3.	Fail

			Expected Result	Actual Result	
6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 but the application did not detect it and thus, did not notify the user that he is at beacon 4.	Fail
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.		Pass

Test Case 46

Route used for test case 46

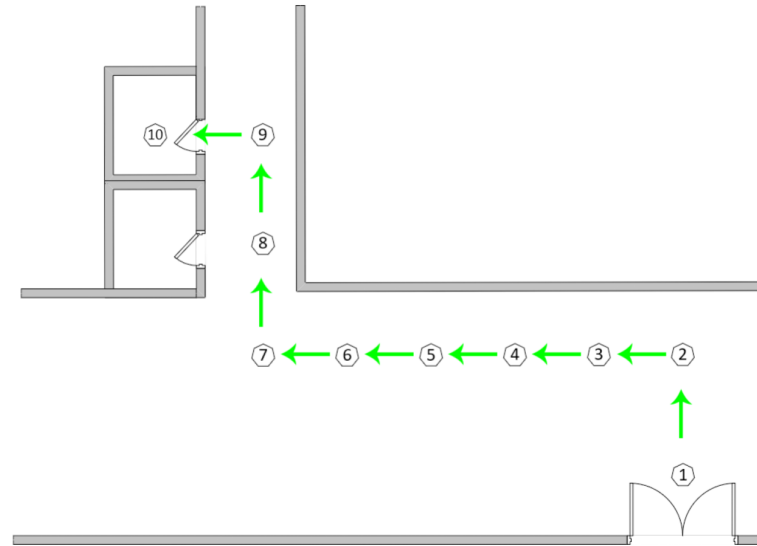| Test Execution Date: 1/8/2018				
Test Duration: 2 minutes 11 seconds				
Pre-Conditions: User is not blindfolded. User to wait for instructions to be read finished before moving again.				
Specifications: Beacon Distance: 3 **meters** Distance between beacon & ground: **0cm** Compass Bearing: **+- 20** Avg Moving Speed: 36 **cm/s**				
Description: Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.				
Steps	**Test Steps**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 but the application did not detect it and thus, did not notify the user that he is at beacon 3.	Fail

			Expected Result	Actual Result	
6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 but the application did not detect it and thus, did not notify the user that he is at beacon 4.	Fail
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 but the application did not detect it and thus, did not notify the user that he is at beacon 7.	
9	User navigates from beacon 6 to beacon 7.			Fail
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 47

Route used for test case 47

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 14 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 33 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

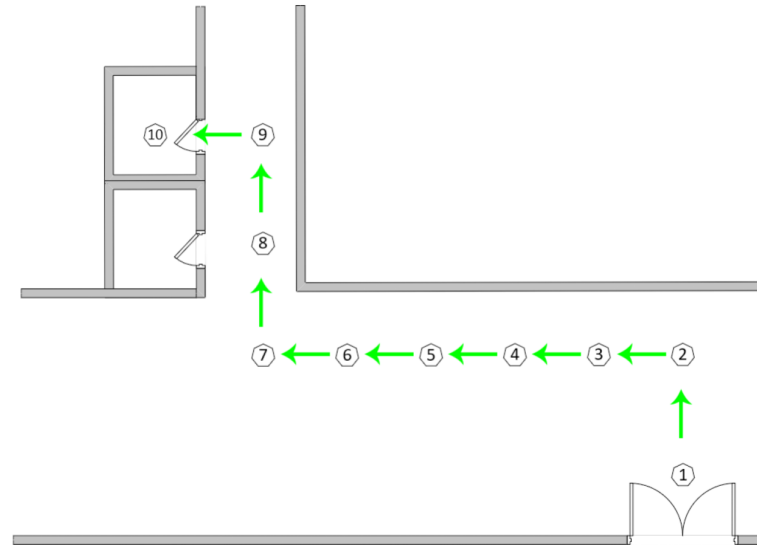| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 but the application did not detect it and thus, did not notify the user that he is at beacon 3.	Fail

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 but the application did not detect it and thus, did not notify the user that he is at beacon 4.	Fail	
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass	
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass	

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 but the application did not detect it and thus, did not notify the user that he is at beacon 7.	Fail
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 but the application did not detect it and thus, did not notify the user that he is at beacon 8.	Fail
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

			A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.	
			The voice message guiding the user to face the correct direction should be in sync with the one being displayed.	Message read out was in sync with the instrcutions that is displayed.	
12		User navigates from beacon 9 to beacon 10.	User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 48

Route used for test case 48

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 19 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 33 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

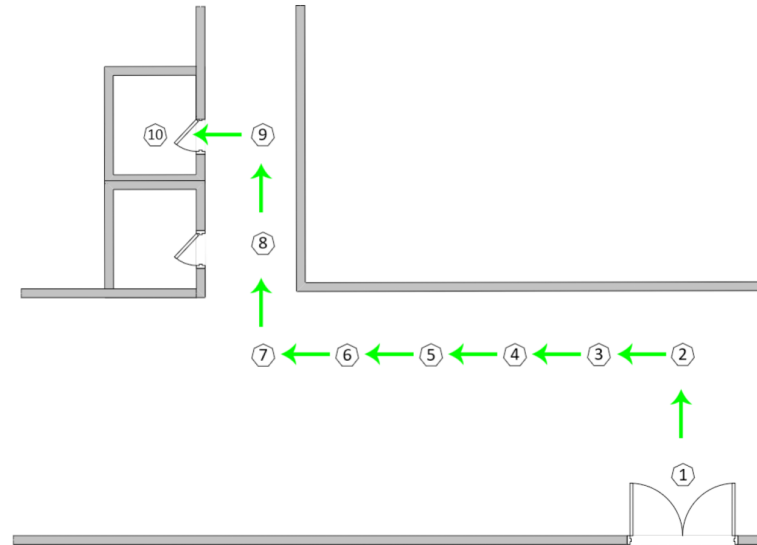| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 49

Route used for test case 49

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 2 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 35 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

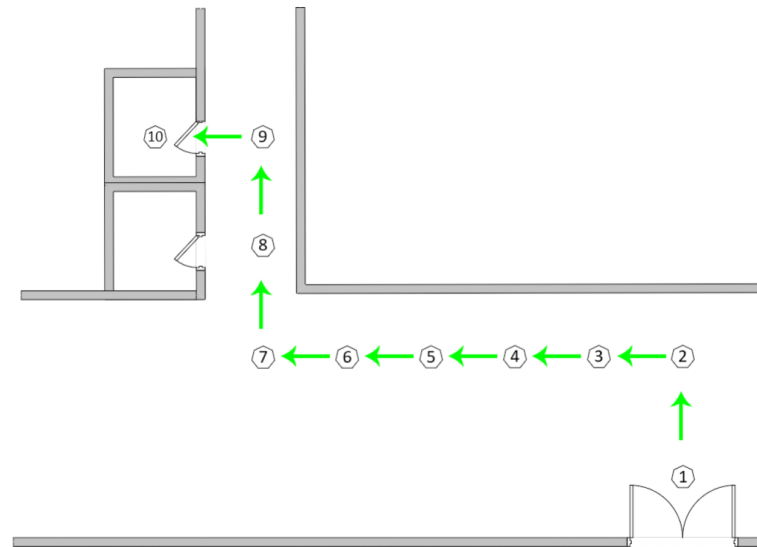| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	
9	User navigates from beacon 6 to beacon 7.			Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 50

Route used for test case 50

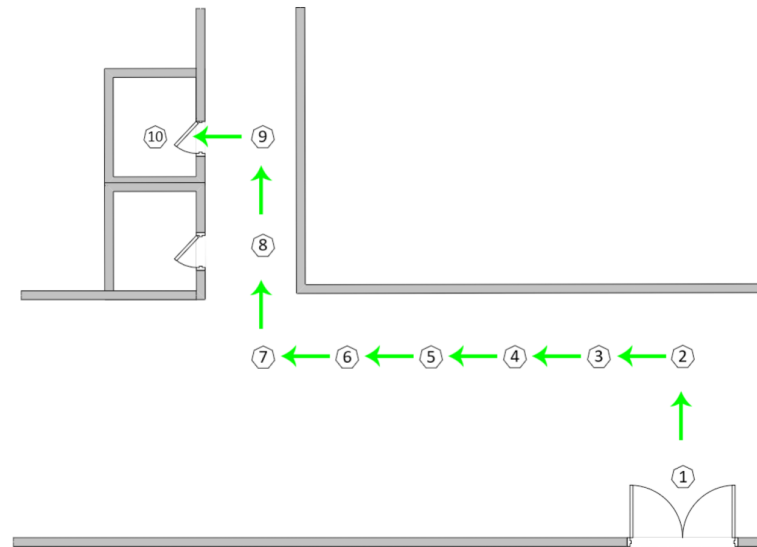| Test Execution Date: 1/8/2018				
Test Duration: 2 minutes 6 seconds				
Pre-Conditions: User is not blindfolded. User to wait for instructions to be read finished before moving again.				
Specifications: Beacon Distance: 3 **meters** Distance between beacon & ground: **0cm** Compass Bearing: **+- 20** Avg Moving Speed: 35 **cm/s**				
Description: Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.				
Steps	**Test Steps**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction.	
		The voice message guiding the user to face the correct direction should be in sync with the one being displayed.	Message read out was in sync with the instrcutions that is displayed.	
		User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	
9	User navigates from beacon 6 to beacon 7.			Pass
		A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction.	
		The voice message guiding the user to face the correct direction should be in sync with the one being displayed.	Message read out was in sync with the instrcutions that is displayed.	
		User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	
10	User navigates from beacon 7 to beacon 8.			Pass
		A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction.	
		The voice message guiding the user to face the correct direction should be in sync with the one being displayed.	Message read out was in sync with the instrcutions that is displayed.	
		User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	
11	User navigates from beacon 8 to beacon 9.			Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 51

Route used for test case 51

Test Execution Date: 1/8/2018

Test Duration: 2 minutes 6 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 35 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

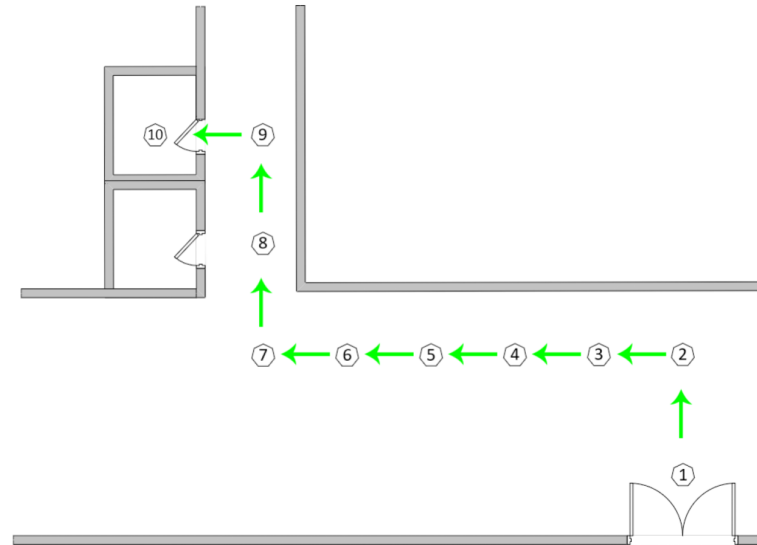| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

			A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	
12		User navigates from beacon 9 to beacon 10.			Pass

Test Case 52

Route used for test case 52

Test Execution Date: 1/8/2018

Test Duration: 4 minutes 58 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 31 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

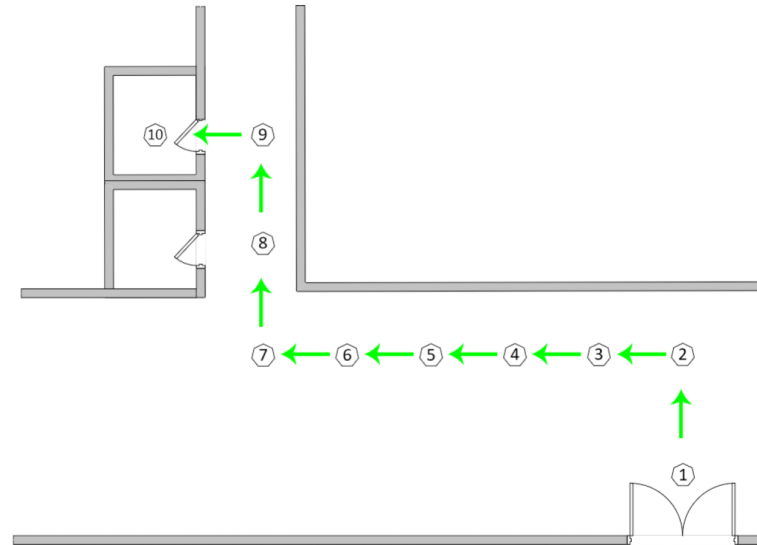| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 53

Route used for test case 53

Test Execution Date: 1/8/2018	
Test Duration: 5 minutes 11 seconds	

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 29 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

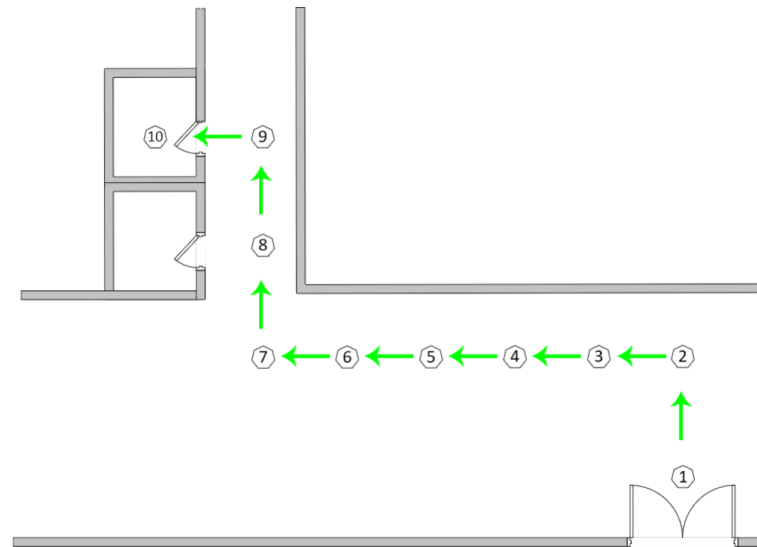| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The application detected that the user has reached beacon 2 when the user is not even halfway there.	Fail
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	
6	User navigates from beacon 3 to beacon 4.			Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

			Expected Result	Actual Result	
12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 54

Route used for test case 54

Test Execution Date: 1/8/2018

Test Duration: 5 minutes 4 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 33 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

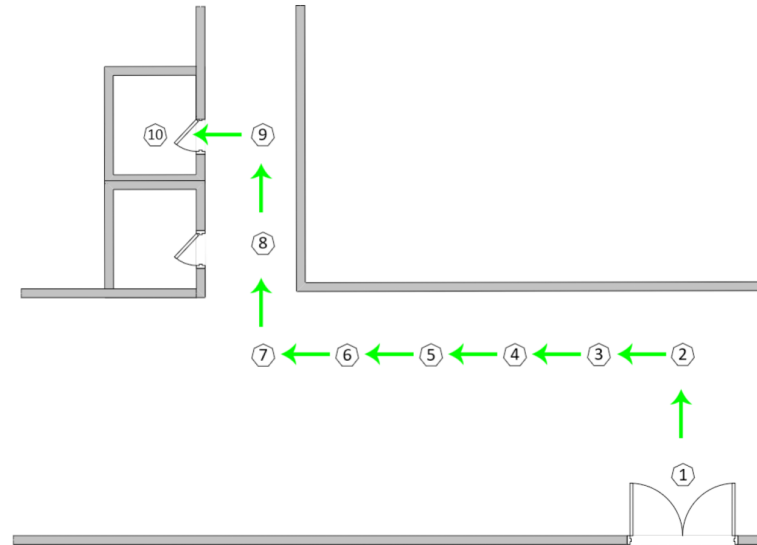| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

			Expected Result	Actual Result	
12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 55

Route used for test case 55

Test Execution Date: 1/8/2018	
Test Duration: 5 minutes 16 seconds	
Pre-Conditions: User is blindfolded. User to use a walking stick. User to wait for instructions to be read finished before moving again.	
Specifications: Beacon Distance: 3 **meters** Distance between beacon & ground: **0cm** Compass Bearing: **+- 20** Avg Moving Speed: 25 **cm/s**	
Description: Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.	

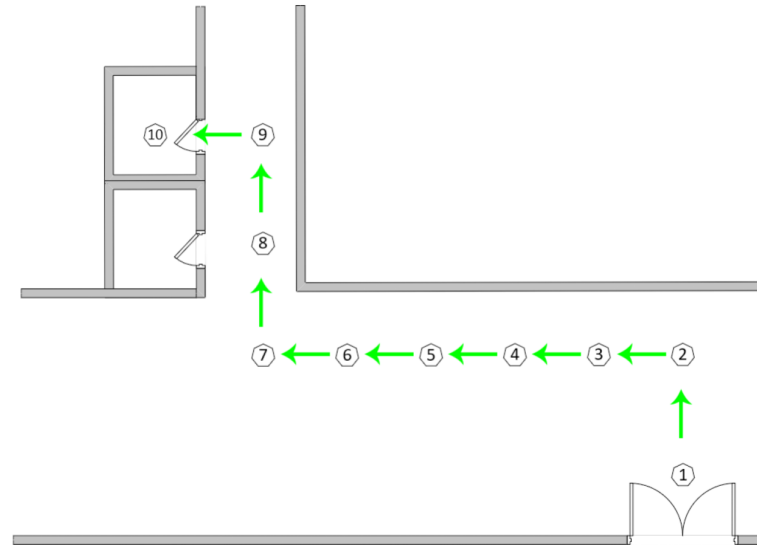| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	
6	User navigates from beacon 3 to beacon 4.			Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

| 12 | User navigates from beacon 9 to beacon 10. | A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 10 successfully and the application will inform that he has reached his/her destination. | The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly. | Pass |

Test Case 56

Route used for test case 56

Test Execution Date: 1/8/2018	
Test Duration: 5 minutes 29 seconds	

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 23 **cm/s**

Description:
Navigation from beacon 1 which is the entrance of T1942 to beacon 10 which is the handicap washroom.

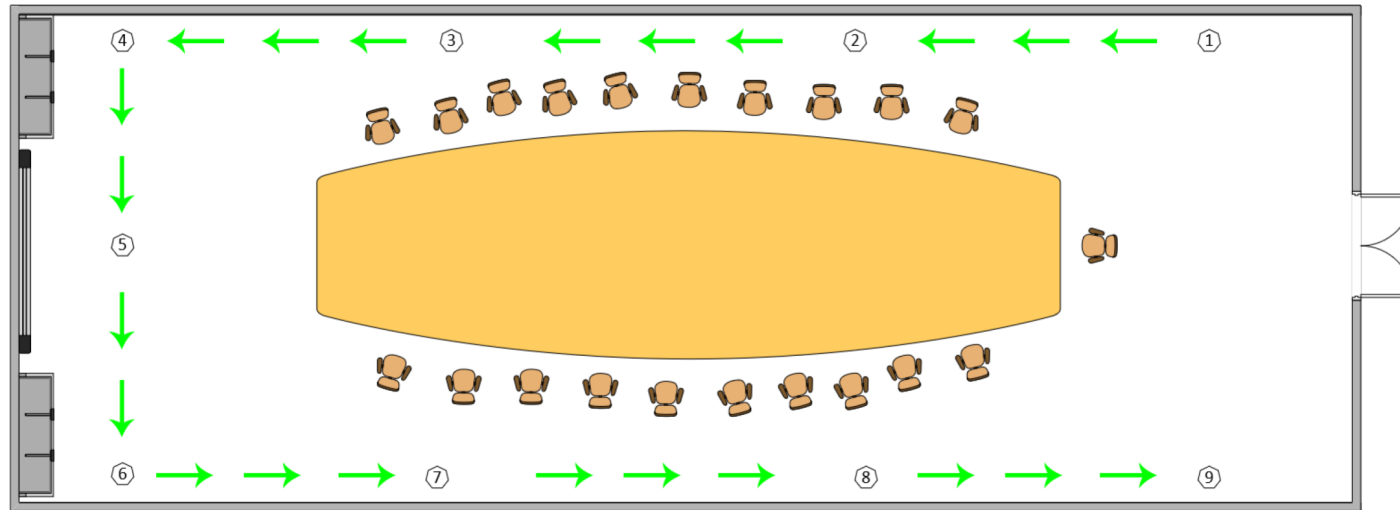| Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 10	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2 and also inform the user that beacon 2 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to turn left and walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

			A voice message will tell the user to walk straight from beacon 3 to beacon 4. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	
6		User navigates from beacon 3 to beacon 4.			Pass
			A voice message will tell the user to walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	
7		User navigates from beacon 4 to beacon 5.			Pass
			A voice message will tell the user to walk straight from beacon 5 to beacon 6. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	
8		User navigates from beacon 5 to beacon 6.			Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to walk straight from beacon 6 to 7 and also inform the user that beacon 7 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to turn right and walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to 9 and also inform the user that beacon 9 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 9 successfully and the application will inform that he has reached beacon 9.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user of it promptly.	Pass

			Expected Result	Actual Result	Status
12	User navigates from beacon 9 to beacon 10.	A voice message will tell the user to turn left and walk straight from beacon 9 to beacon 10. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 10 successfully and the application will inform that he has reached his/her destination.	The voice message containing the step to go from beacon 9 to 10 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 10 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 57

Route used for test case 57

Test Execution Date: 2/8/2018	

Test Duration: 1 minutes 54 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 34 **cm/s**
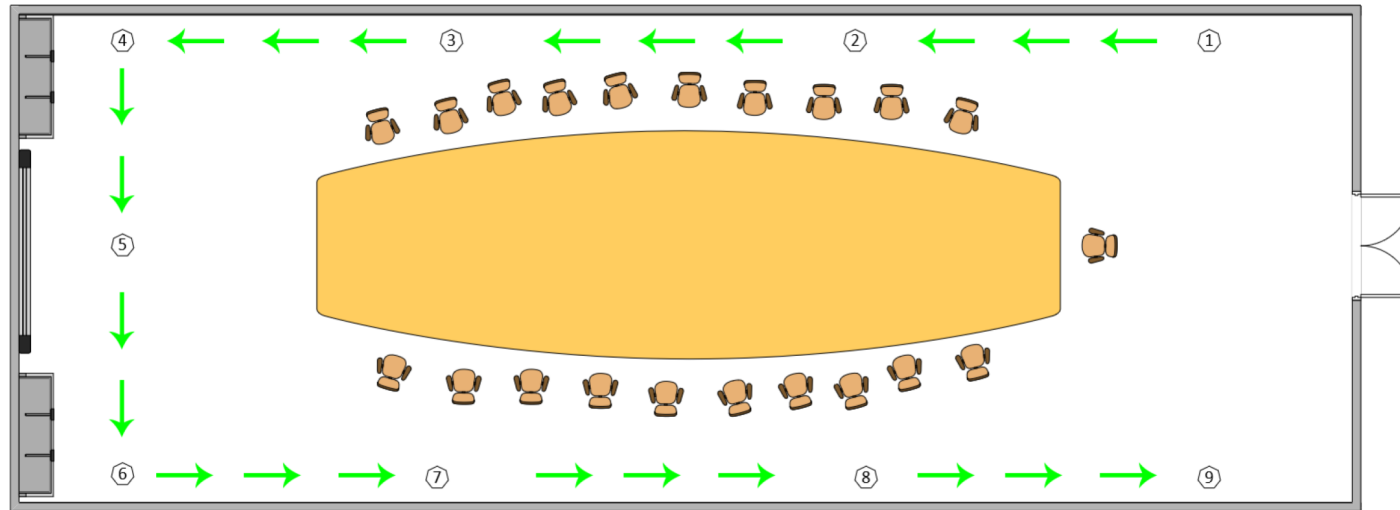
Description:
Navigation from beacon 1 to beacon 9.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 9	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn left and walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn left and walk straight from beacon 6 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to beacon 9. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 9 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 58

Route used for test case 58

Test Execution Date: 2/8/2018	

Test Duration: 2 minutes 2 seconds	

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 32 **cm/s**

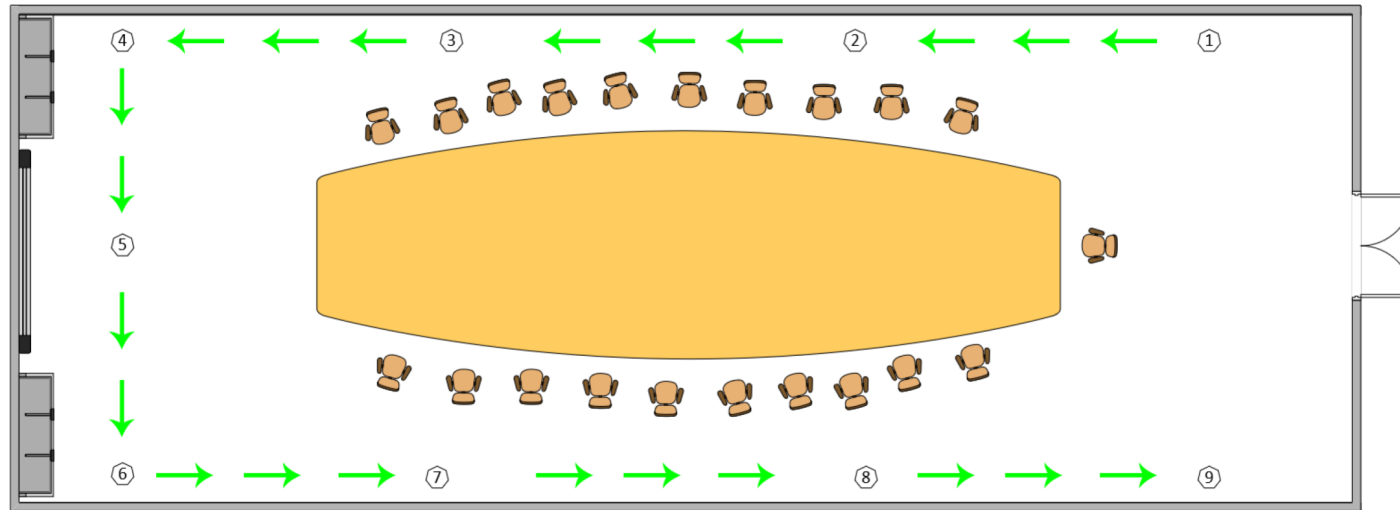**Description:**
Navigation from beacon 1 to beacon 9.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 9	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to walk straight from beacon 3 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	
6	User navigates from beacon 3 to beacon 4.			Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn left and walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to turn left and walk straight from beacon 6 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	
9	User navigates from beacon 6 to beacon 7.			Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to beacon 9. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 9 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 59

Route used for test case 59

Test Execution Date: 2/8/2018

Test Duration: 4 minutes 9 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 26 **cm/s**

Description:
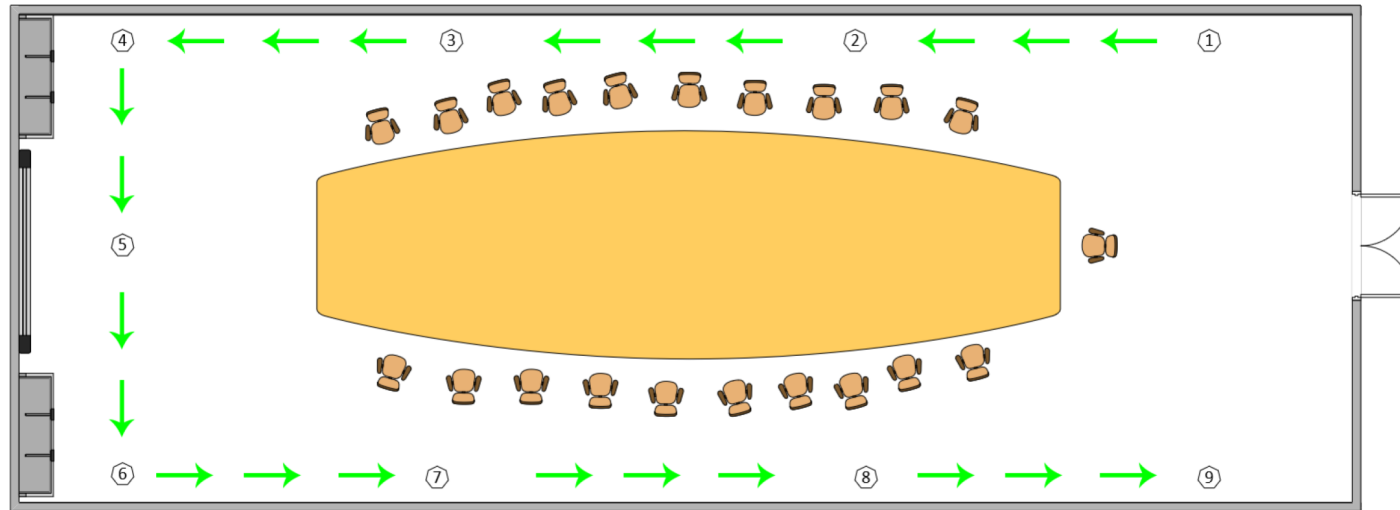Navigation from beacon 1 to beacon 9.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 9	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. Even though the user has reached beacon 3, the beacon detected it late.	Fail

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn left and walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn left and walk straight from beacon 6 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. Application has detected earlier than expected that the user has reached beacon 7.	Fail
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to beacon 9. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 9 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 60

Route used for test case 60

Test Execution Date: 2/8/2018	

Test Duration: 3 minutes 57 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 28 **cm/s**

Description:
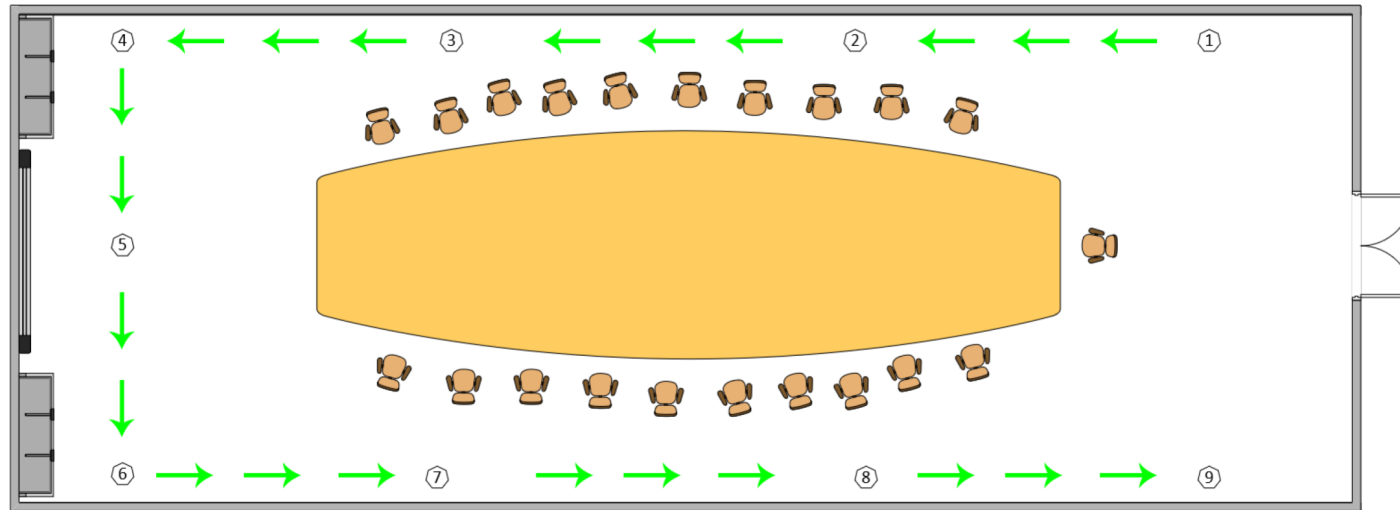Navigation from beacon 1 to beacon 9.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 9	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn left and walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn left and walk straight from beacon 6 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to beacon 9. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 9 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 61

Route used for test case 61

Test Execution Date: 2/8/2018

Test Duration: 4 minutes 12 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 25 **cm/s**

Description:
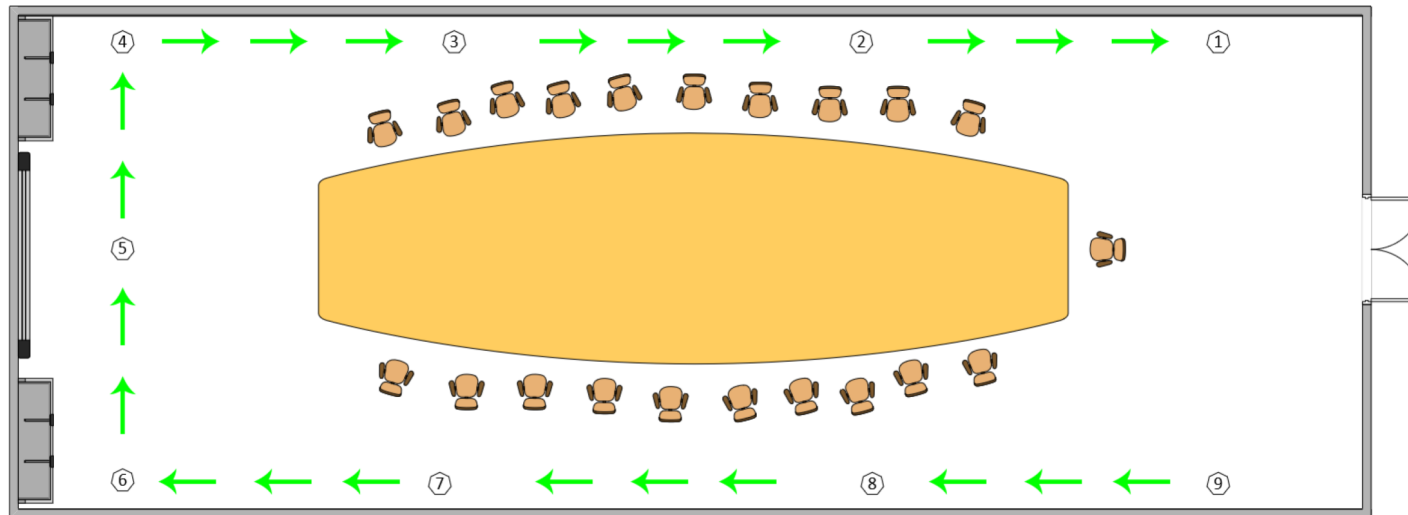Navigation from beacon 1 to beacon 9.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 1.	A voice message will inform the user of his/her current location to be Beacon 1 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 1 and prompted for a destination.	Pass
3	Enter the destination to be beacon 9	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 1 and wants to navigate to beacon 2.	A voice message will tell the user to walk straight from beacon 1 to 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 1 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 2 to beacon 3.	A voice message will tell the user to walk straight from beacon 2 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 2 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 3 to beacon 4.	A voice message will tell the user to walk straight from beacon 3 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 3 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn left and walk straight from beacon 4 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 4 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 5 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn left and walk straight from beacon 6 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 6 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 7 to beacon 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 7 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 8 to beacon 9. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 9 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 8 to 9 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 9 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 62

Route used for test case 62

Test Execution Date: 2/8/2018	

Test Duration: 2 minutes 27 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 36 **cm/s**
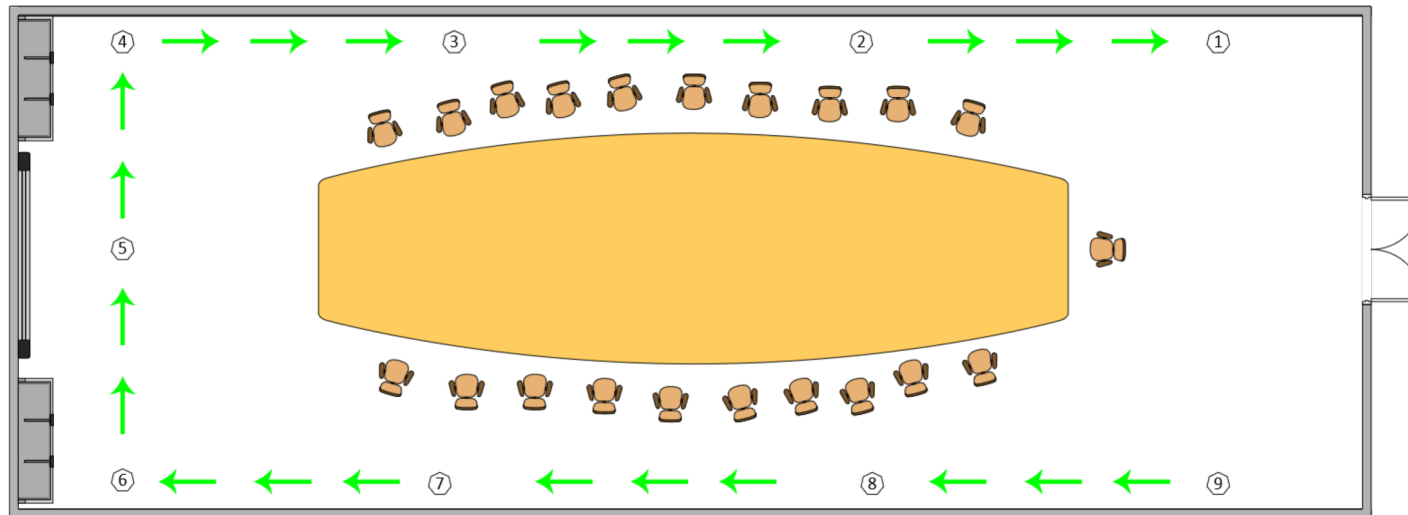
Description:
Navigation from beacon 9 to beacon 1.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 6 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 4.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was not read out and it detected that the user is at beacon 4 already. The user did not navigate to beacon 4 successfully.	Fail

9	User navigates from beacon 4 to beacon 3.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	As the application has detected the user is at beacon 4 early, the instruction to turn right was read out early as well. The user did not reach beacon 3 successfully as he turned right earlier than expected.	Fail
10	User navigates from beacon 3 to beacon 2.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 2 to beacon 1.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 63

Route used for test case 63

Test Execution Date: 2/8/2018

Test Duration: 2 minutes 14 seconds

Pre-Conditions: User is not blindfolded.   User to wait for instructions to be read finished before moving again.

Specifications: Beacon Distance: 3 **meters**   Distance between beacon & ground: **0cm**   Compass Bearing: **+- 20**   Avg Moving Speed: 33 **cm/s**

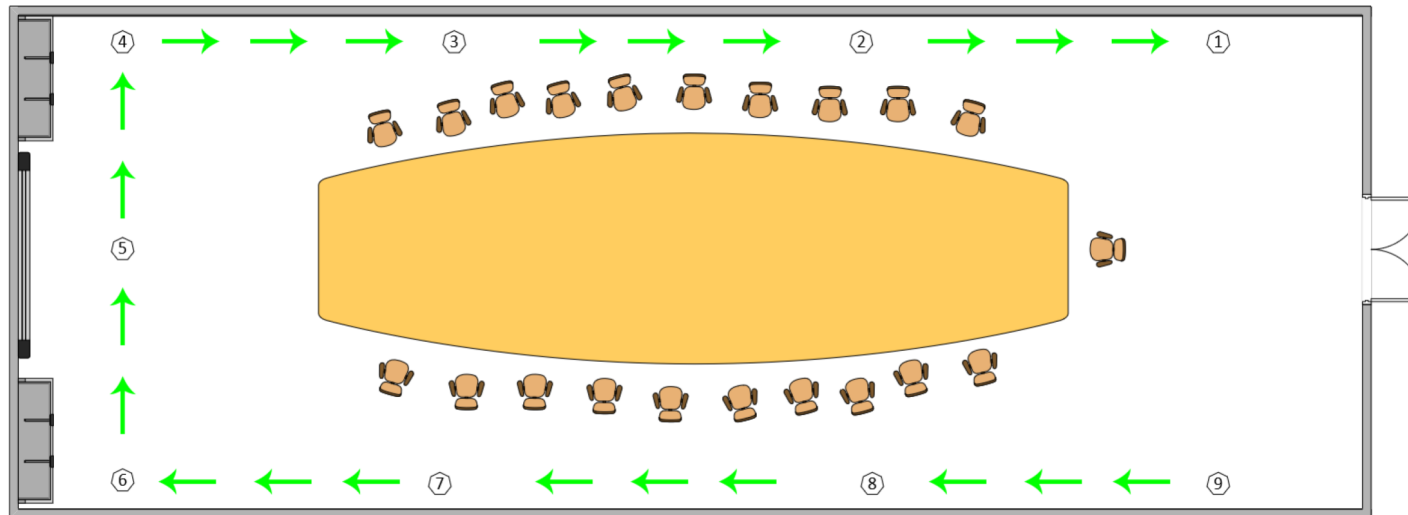| **Description:**
 Navigation from beacon 9 to beacon 1. |
|---|

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

| 6 | User navigates from beacon 7 to beacon 6. | A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 6 successfully and the application will inform that he has reached beacon 6. | The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 6 and the voice message has informed the user of it promptly. | Pass |
|---|---|---|---|---|
| 7 | User navigates from beacon 6 to beacon 5. | A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 5 successfully and the application will inform that he has reached beacon 5. | The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction.

Message read out was in sync with the instrcutions that is displayed.

The user has successfully reached beacon 5 and the voice message has informed the user of it promptly. | Pass |
| 8 | User navigates from beacon 5 to beacon 4. | A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point.

The voice message guiding the user to face the correct direction should be in sync with the one being displayed.

User will reach beacon 4 successfully and the application will inform that he has reached beacon 4. | The voice message containing the step to go from beacon 5 to 4 was not read out and it detected that the user is at beacon 4 already.

The user did not navigate to beacon 4 successfully. | Fail |

9	User navigates from beacon 4 to beacon 3.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	As the application has detected the user is at beacon 4 early, the instruction to turn right was read out early as well. The user did not reach beacon 3 successfully as he turned right earlier than expected.	Fail
10	User navigates from beacon 3 to beacon 2.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 2 to beacon 1.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 64

Route used for test case 64

Test Execution Date: 2/8/2018

Test Duration: 2 minutes 29 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 31 **cm/s**

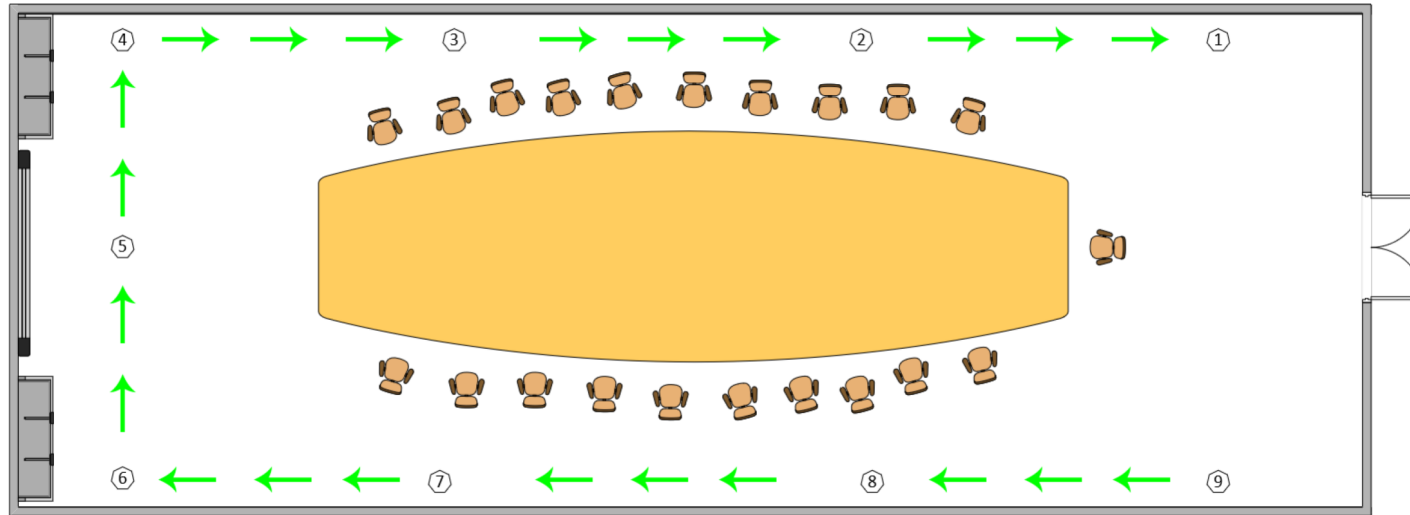**Description:**
Navigation from beacon 9 to beacon 1.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 6 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 4.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was not read out and it detected that the user is at beacon 4 already. The user did not navigate to beacon 4 successfully.	Fail

9	User navigates from beacon 4 to beacon 3.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	As the application has detected the user is at beacon 4 early, the instruction to turn right was read out early as well. The user did not reach beacon 3 successfully as he turned right earlier than expected.	Fail
10	User navigates from beacon 3 to beacon 2.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 2 to beacon 1.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 65

Route used for test case 65

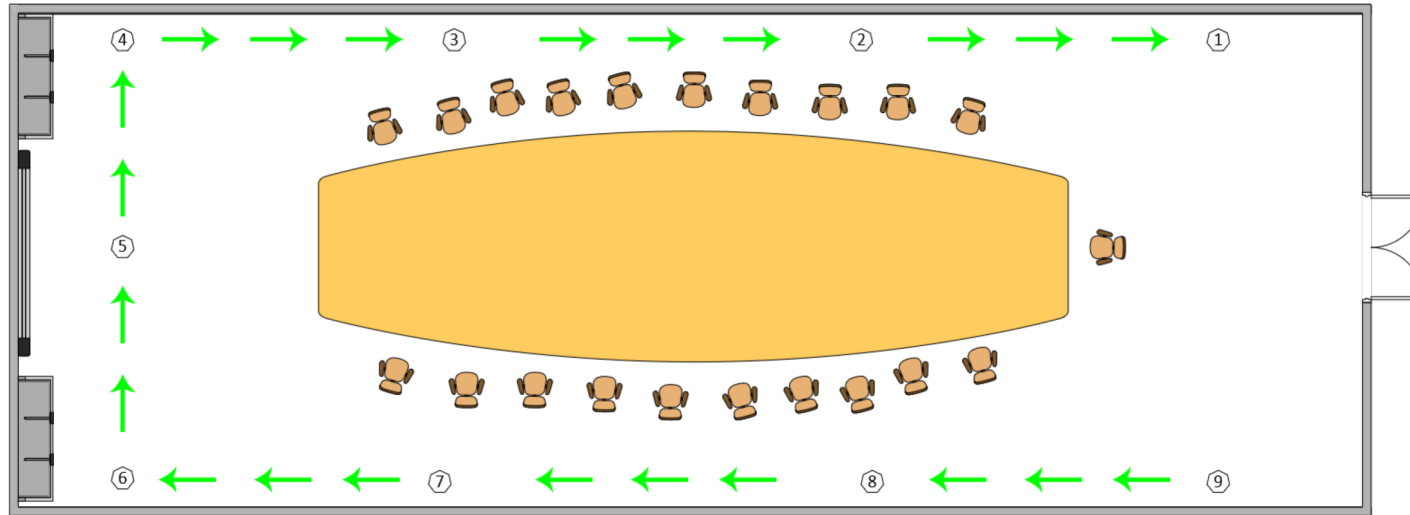| Test Execution Date: 2/8/2018				
Test Duration: 2 minutes 14 seconds				
Pre-Conditions: User is not blindfolded. User to wait for instructions to be read finished before moving again.				
Specifications: Beacon Distance: 3 **meters** Distance between beacon & ground: **0cm** Compass Bearing: **+- 20** Avg Moving Speed: 34 **cm/s**				
Description: Navigation from beacon 9 to beacon 1.				
Steps	**Test Steps**	**Expected Results**	**Actual Results**	**Status (Pass/Fail)**

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 4 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 66

Route used for test case 66

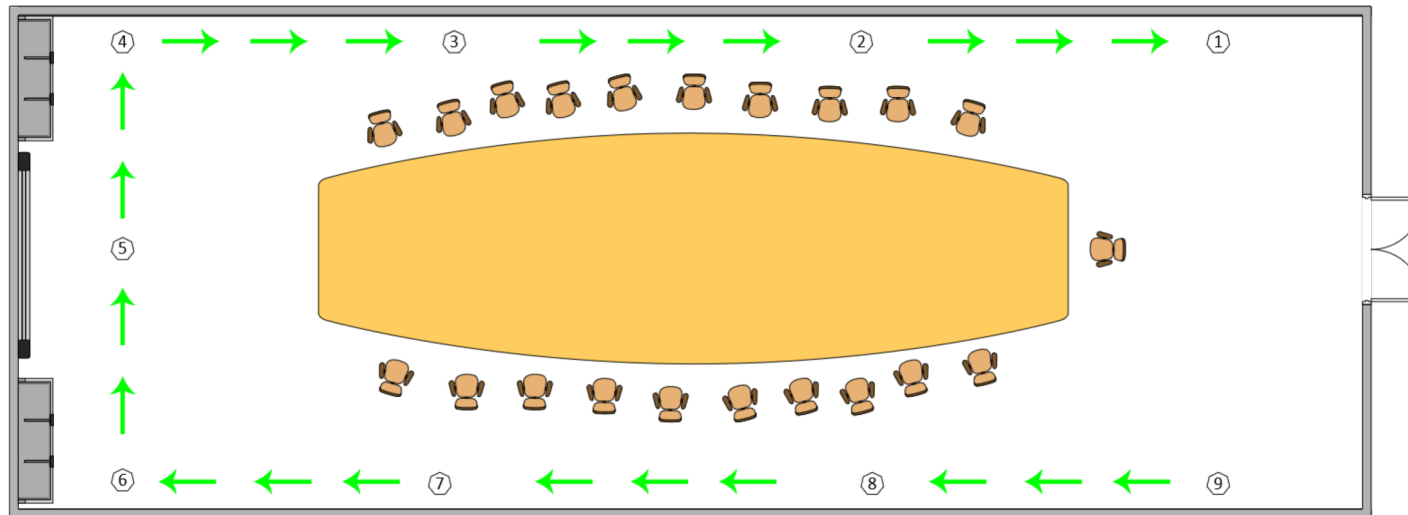|	
Test Execution Date: 2/8/2018	
Test Duration: 2 minutes 14 seconds	
Pre-Conditions: User is not blindfolded. User to wait for instructions to be read finished before moving again.	
Specifications: Beacon Distance: 3 **meters** Distance between beacon & ground: **0cm** Compass Bearing: **+- 20** Avg Moving Speed: 34 **cm/s**	
Description: Navigation from beacon 9 to beacon 1.	

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 4 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 67

Route used for test case 67

Test Execution Date: 2/8/2018

Test Duration: 2 minutes 14 seconds

Pre-Conditions:
User is not blindfolded.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 34 **cm/s**

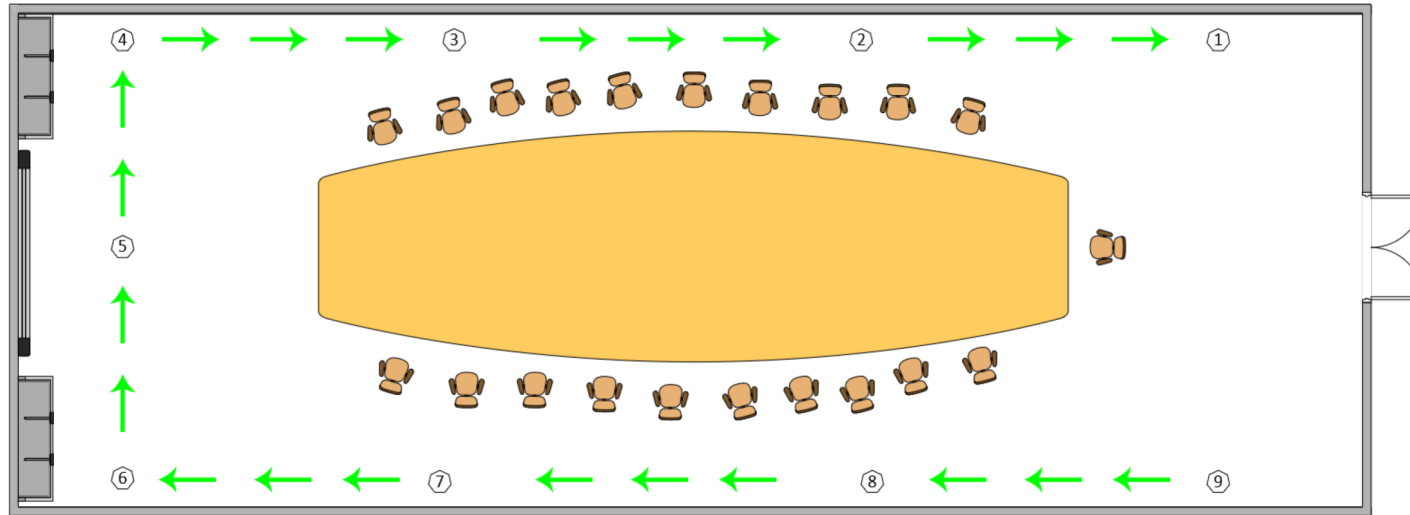**Description:**
Navigation from beacon 9 to beacon 1.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 4 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 68

Route used for test case 68

Test Execution Date: 2/8/2018

Test Duration: 4 minutes 49 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 24 **cm/s**

Description:
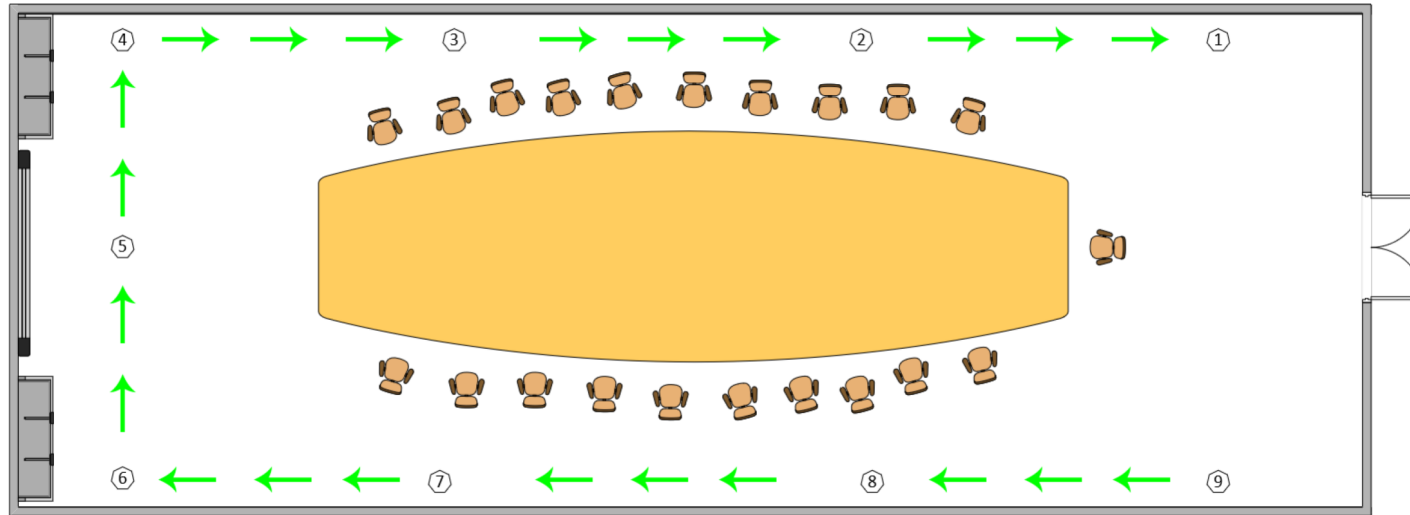Navigation from beacon 9 to beacon 1.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 4 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 69

Route used for test case 69

Test Execution Date: 2/8/2018

Test Duration: 5 minutes 7 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 26 **cm/s**

Description:
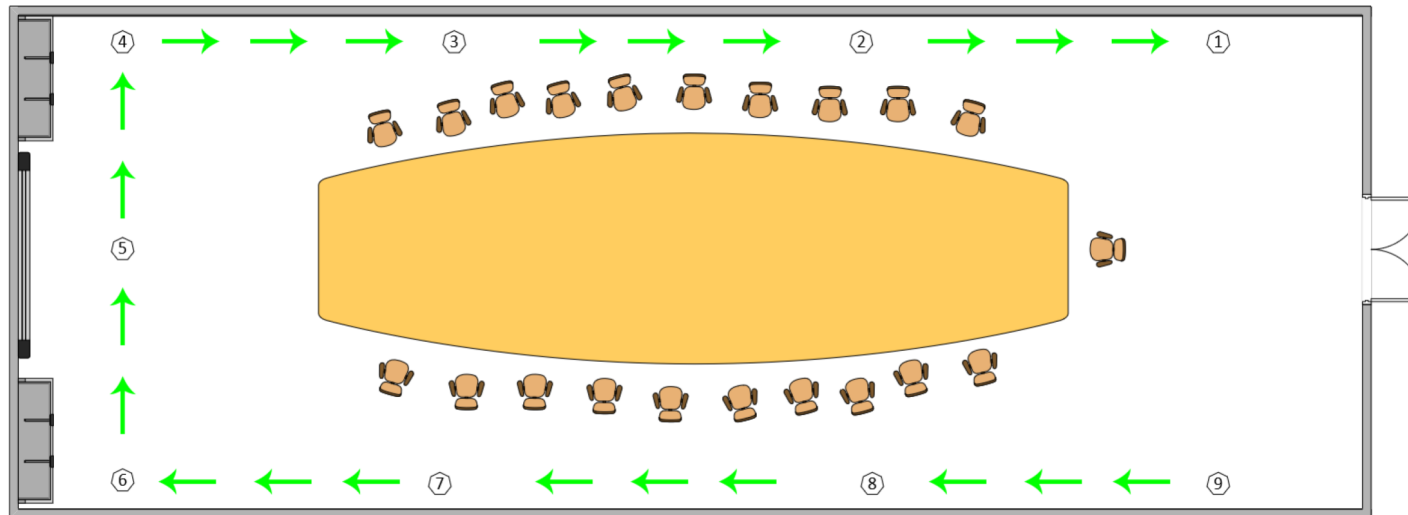Navigation from beacon 9 to beacon 1.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass

9	User navigates from beacon 6 to beacon 7.	A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 4 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass

Test Case 70

Route used for test case 70

Test Execution Date: 2/8/2018

Test Duration: 5 minutes 2 seconds

Pre-Conditions:
User is blindfolded.
User to use a walking stick.
User to wait for instructions to be read finished before moving again.

Specifications:
Beacon Distance: 3 **meters**
Distance between beacon & ground: **0cm**
Compass Bearing: **+- 20**
Avg Moving Speed: 23 **cm/s**

Description:
Navigation from beacon 9 to beacon 1.

Steps	Test Steps	Expected Results	Actual Results	Status (Pass/Fail)

1	User to launch the application.	The application will be launched successfully.	The application has been launched successfully.	Pass
2	Detect current location automatically as Beacon 9.	A voice message will inform the user of his/her current location to be Beacon 9 automatically. The destination will also be prompted.	The voice message informed the user of the current location as Beacon 9 and prompted for a destination.	Pass
3	Enter the destination to be beacon 1	After entering the destination and tapping on "Start", a voice message will inform the user if he/she is facing the correct direction towards the next beacon. If the user is not facing the correct direction, the voice message will guide the user to the correct position.	After entering the destination and tapping on "Start", the voice message informed that the user is facing the correct direction when he is indeed facing the right direction.	Pass
4	User starts from beacon 9 and wants to navigate to beacon 8.	A voice message will tell the user to walk straight from beacon 9 to 8. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will then reach beacon 8 successfully and the application will inform that he has reached beacon 8.	The voice message containing the step to go from beacon 9 to 8 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 8 and the voice message has informed the user of it promptly.	Pass
5	User navigates from beacon 8 to beacon 7.	A voice message will tell the user to walk straight from beacon 8 to beacon 7. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 7 successfully and the application will inform that he has reached beacon 7.	The voice message containing the step to go from beacon 8 to 7 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 7 and the voice message has informed the user of it promptly.	Pass

6	User navigates from beacon 7 to beacon 6.	A voice message will tell the user to walk straight from beacon 7 to 6 and also inform the user that beacon 6 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 6 successfully and the application will inform that he has reached beacon 6.	The voice message containing the step to go from beacon 7 to 6 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 6 and the voice message has informed the user of it promptly.	Pass
7	User navigates from beacon 4 to beacon 5.	A voice message will tell the user to turn right and walk straight from beacon 6 to beacon 5. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 5 successfully and the application will inform that he has reached beacon 5.	The voice message containing the step to go from beacon 6 to 5 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 5 and the voice message has informed the user of it promptly.	Pass
8	User navigates from beacon 5 to beacon 6.	A voice message will tell the user to walk straight from beacon 5 to 4 and also inform the user that beacon 4 is a turning point. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 4 successfully and the application will inform that he has reached beacon 4.	The voice message containing the step to go from beacon 5 to 4 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 4 and the voice message has informed the user of it promptly.	Pass

		A voice message will tell the user to turn right and walk straight from beacon 4 to beacon 3. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 3 successfully and the application will inform that he has reached beacon 3.	The voice message containing the step to go from beacon 4 to 3 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 3 and the voice message has informed the user of it promptly.	
9	User navigates from beacon 6 to beacon 7.			Pass
10	User navigates from beacon 7 to beacon 8.	A voice message will tell the user to walk straight from beacon 3 to beacon 2. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 2 successfully and the application will inform that he has reached beacon 2.	The voice message containing the step to go from beacon 3 to 2 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 2 and the voice message has informed the user of it promptly.	Pass
11	User navigates from beacon 8 to beacon 9.	A voice message will tell the user to walk straight from beacon 2 to beacon 1. The voice message guiding the user to face the correct direction should be in sync with the one being displayed. User will reach beacon 1 successfully and the application will inform that he has reached the destination.	The voice message containing the step to go from beacon 2 to 1 was read out while also guiding the user to walk in the correct direction. Message read out was in sync with the instrcutions that is displayed. The user has successfully reached beacon 1 and the voice message has informed the user that he has reached the destination promptly.	Pass