Test Cases 1.2

Test Case 1.2A (same as 2.1B)

Objective: Verify that the device can start, pause and continue reading text upon receiving specific voice commands (Successful)

Test Type: Functional Execution Type: Manual

Setup: 🔗

- Ensure that the NAO robot is powered on and connected.
- The robot's camera is functional, and the environment is well-lit for image capture

Pre-Conditions: 🔗

- The NAO robot/ laptop should be in a state ready to listen for voice commands.
- The user is within the range of the robot's microphone.
- The text to be recognized and read aloud should be clear and legible.

Robot (KIV)	Laptop (Success)	
	Test Steps: ⊘	
	Type "hi, readmate" and place the text in front of the laptop camera to initialize the robot and begin text recognition.	
	2. Type "readmate, start read" to initiate reading	
	3. Type "readmate, pause reading" , ensure that the laptop replies with "pausing" and stops reading the text.	
	4. Type "readmate, continue reading", ensure that the laptop replies with "Continuing" and the laptop continues to read the text from where it left off.	

Expected Result: 🔗

The robot should stop reading when the pause command is given and begin reading from the position where it last stopped when the continue command is given.

Time Constraint:

Minimum: 2 minutes

Maximmum: 5 minutes

Test Case 1.2B - Invalid

Objective:

Verify that the NAO robot correctly handles invalid or unrecognized voice commands related to starting, pausing, and continuing reading without performing unintended actions. (Successful)

Test Type: Negative/Functional Execution Type: Manual

Setup: 🔗

- Ensure that the NAO robot is powered on and connected.
- The robot has access to text content, either through a scanned image using its camera or a preloaded text.

Pre-Conditions: 🔗

- The user is within the range of the robot's microphone.
- The text to be recognized and read aloud should be clear and legible.

Laptop (KIV)	Robot (Success)
	Test Steps: ⊘
	 Type "hi, readmate" and place the text in front of the laptop camera to initialize the robot and begin text recognition.
	2. Type "readmate, start read" to initiate reading.
	3. Use invalid commands to pause the reading: type "readmate, pause now"/ "pause" / "enough" or any other unrecognizable commands to try to pause the reading. Ensure that reading does not continues and the robot returns "Unknown command, please try again"
	4. Type "readmate, pause reading ", ensure that
	the laptop replies with "pausing" and stops reading the text.
	5. Use invalid commands to continue the reading: type "readmate, go on" / "continue" / "proceed with the reading" or any other unrecognizable commands to try to continue the reading. Ensure that reading does not continues and the robot returns "Unknown command, please try again"
	6. Type "readmate, continue reading", ensure that the laptop replies with "Continuing" and the laptop continues to read the text from where it left off.
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Expected Results: 🔗

• The NAO robot does not perform any unintended actions when invalid or unrecognized commands are given.

Time Constraint:

Minimum: 5 minutes

Maximmum: 10 minutes

Test Case 1.2B (same as 2.1c)

Objective: Verify that the device can adjust the reading speed and volume based on the user's voice commands. (Successful)

Test Type: Functional Execution Type: Manual

Setup: 🔗

- 1. Ensure that the NAO robot/laptop is powered on and connected.
- 2. The speech recognition module is active and ready to process voice commands.
- 3. The robot is set up to read a passage of text and play music.

Pre-Conditions: 🔗

- 1. The NAO robot/ laptop is in an active state and responsive to voice commands.
- 2. The text-to-speech and audio output functionalities are operational.

3. The environment is quiet enough for accurate voice recognition.				
Robot (KIV)	Laptop (Success)			
	Test Steps: ⊘			
	 Type "hi, readmate" and place the text in front of the laptop camera to initialize the robot and begin text recognition. 			
	2. Type "readmate, start read" to initiate reading.			
	3. While the robot is reading, type "readmate, increase the volume" and check if the robot replies with "volume increased" the volume increases			
	4. While the robot is reading, type "readmate, increase the rate" the robot should reply with "Rate increased" and listen for the speed increase.			
	5. While the robot is reading, type "readmate, decrease the rate" the robot should reply with "Rate decreased" and listen for the speed increase.			
	6. While the robot is reading, type "readmate, decrease the volume" and check if the robot replies with "volume decreased" the volume decreases.			





readmate speed control



readmate volume control

Expected Results: 🔗

• The NAO robot adjusts its volume and potentially speed according to the voice commands.

Time Constraint:

Minimum: 1 minutes

Maximmum: 5 minutes

Test Case 1.2B - Invalid

Objective:

Verify that the NAO robot correctly handles invalid or unrecognized voice commands related to adjusting reading speed and volume without performing unintended actions . (Successful)

Test type: Negative/Functional Execution Type: Manual

Setup: 🔗

- Ensure that the NAO robot/laptop is powered on and connected.
- The speech recognition module is active.
- The robot is ready to read text and play audio.

Pre-Conditions: ⊘

- 1. The NAO robot/laptop is in an active state and responsive to voice commands.
- 2. The text-to-speech and audio output functionalities are operational.
- 3. The environment is quiet enough for accurate voice recognition.

Robot (KIV)	Laptop (Success)
	Test Steps: ⊘
	1. Type "hi, readmate" and place the text in front of
	the laptop camera to initialize the robot and begin
	text recognition.
	2. Type "readmate, start read" to initiate reading.
	3. Use invalid commands: While the robot is
	reading, type "readmate, volume up to

maximum"/ "readmate, make it faster" and verify that the robot respond with "Unknown command, please try again"

4. Use unrelated commands: type "readmate, bananas" or any other unrelated command and confirm the robot respond with "Unknown command, please try again"



Invalid commands for volume and speed

Expected Results: 🔗

• The NAO robot does not perform any unintended actions when invalid or unrecognized commands are given and responds with "Unknown command, please try again"

Time Constraint:

Minimum: 5 minutes

Maximmum: 10 minutes

Test Case 1.2C (NOT IMPLEMENTED)

Objective:

Verify that the NAO robot can repeat the previous sentence or paragraph when the user issues "Repeat last sentence", helping the user better understand and digest the information. (Ongoing)

Test Type: Functional Execution Type: Manual

Setup: 🔗

- Ensure that the NAO robot/laptop is powered on and connected.
- The robot has started reading a passage of text using its text-to-speech function.
- The speech recognition system is active and ready to accept voice commands.

Pre-Conditions: 🔗

- The NAO robot/laptop is connected and responsive.
- The robot is currently reading a text passage aloud.
- The user is within the range of the robot's microphone.

Test Steps: 🔗

Expected Result: 🔗

Time Constraint:

Minimum: 5 minutes

Maximmum: 10 minutes