

Test Plan

VR Medical Training Tool



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# Introduction and Purpose

This document is intended to outline the exact steps that will be used for application testing and verification of working state for all functionalities. It ensures the integrity of the application and helps eliminate any issues prior to finalizing the application.

Due to the nature of application, some test cases will have many-to-one relationship to use cases specified in Design Specification document.

## Approach

Application testing will be performed by the development team members. Prior to testing, same application build should be provided to team members for functional test cases. Non-functional test cases, such as metrics, should be tested in Unity Editor if it is impossible to collect metrics in built application. Entire application should be tested from the end user perspective.

## Pass/Fail Criteria

Test case is only considered successful when all steps outlined in it can be completed without any issues and/or workarounds.

## Suspension/Resumption/Risks

Despite applications running only on specific platforms, there can be unforeseen circumstances that cannot be reproduced on test devices owned by the development team. All tests are being completed on fully functional devices with default settings and no modifications, neither on hardware or software side. It is caused by varying actions/modifications that users can attempt on their personal devices.

## Entry/Exit Criteria

For the entry criteria, testers will be provided with test build of the application that can be deployed to their devices. This way we can ensure that everybody has the same starting point and application is the same for the duration of testing.

For the exit criteria, all assigned test cases should receive a passing mark.

# Unit Test Cases

|  |  |
| --- | --- |
| Test ID | FT1 |
| Items to Test | Main Menu Scene Selection |
| Pre-Conditions | Application is open and scene is set to main menu |
| Test Steps | 1. Select the “Bandage Scene” button from the UI menu 2. Once the scene loads, use a grab interaction on the door handle to navigate back to main menu 3. Select the “CPR Scene” button from the UI menu 4. Once the scene loads, use a grab interaction on the door handle to navigate back to the main menu 5. Select the “Head Trauma” button from the UI menu 6. Once the scene loads, use a grab interaction on the door handle to navigate back to the main menu 7. Select the “Heimlich Scene” button from the UI menu |
| Expected Results | All scenes (bandage scene, CPR scene, head trauma scene, and Heimlich scene) should load properly, and all door handle interactions should return the user to the main menu. |
| Priority | High |
| Pass Criteria | 1. Main Menu scene is changed to corresponding selected scene 2. Main menu is loaded after interaction with door handle |
| Fail Criteria | 1. Main Menu scene is not changed to corresponding selected scene 2. Main menu is not loaded after interaction with door handle |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT2 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes training mode selection |
| Pre-Conditions | Bandage scene should have been selected from the main menu, bandage sub-scenario selection menu should be visible to the user. |
| Test Steps | 1. Select the “Small Cuts and Scrapes” button from the sub-scenario selection menu 2. Select the training mode option from the menu |
| Expected Results | 1. Patient should appear lying down on the bed 2. Doctor helper should be playing dialogue instructing the user to wash their hands 3. UI should appear over sink telling user to wash their hands   If all of these occur, the training mode loaded successfully. |
| Priority | High |
| Pass Criteria | 1. Menu disappears 2. Models are loaded 3. Audio is playing |
| Fail Criteria | 1. Menu does not disappear 2. Models are not loaded 3. Audio is not playing |
| Pass/Fail | Pass |

|  |  |
| --- | --- |
| Test ID | FT3 |
| Items to Test | Bandage Scene – Large Wounds training mode selection |
| Pre-Conditions | Bandage scene should have been selected from the main menu, bandage sub-scenario selection menu should be visible to the user. |
| Test Steps | 1. Select the “Large Wounds with Heavy Bleeding” button from the sub-scenario selection menu 2. Select the training mode option from the menu |
| Expected Results | 1. Patient should appear sitting up on the bed 2. Doctor helper should be playing dialogue instructing the user to use the phone to call for help 3. UI should appear near phone telling the user to interact with the phone. |
| Priority | High |
| Pass Criteria | 1. Menu disappears 2. Models are loaded 3. Audio is playing |
| Fail Criteria | 1. Menu does not disappear 2. Models are not loaded 3. Audio is not playing |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT4 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes testing mode locked |
| Pre-Conditions | 1. Bandage scene should have been selected from the main menu 2. Bandage sub-scenario selection menu should be visible to the user 3. Training mode has not been completed |
| Test Steps | 1. Select the “Small Cuts and Scrapes” button from the sub-scenario selection menu |
| Expected Results | Testing mode button is greyed out and not clickable |
| Priority | High |
| Pass Criteria | Testing mode button is greyed out and not clickable |
| Fail Criteria | Testing mode button is not greyed out or is clickable |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT5 |
| Items to Test | Bandage Scene – Large Wounds testing mode locked |
| Pre-Conditions | 1. Bandage scene should have been selected from the main menu 2. Bandage sub-scenario selection menu should be visible to the user 3. Training mode has not been completed |
| Test Steps | 1. Select the “Large Wounds with Heavy Bleeding” button from the sub-scenario selection menu |
| Expected Results | Testing mode button is greyed out and not clickable |
| Pass Criteria | Testing mode button is greyed out and not clickable |
| Fail Criteria | Testing mode button is not greyed out or is clickable |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT6 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes training mode sink interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Small Cuts and Scrapes should have been selected |
| Test Steps | 1. Interact with the phone on the wall by the door 2. Interact with the sink door handle 3. Grab bandage from under sink 4. Drop bandage 5. Interact with tourniquet on the floor near the doctor’s feet 6. Drop tourniquet 7. Interact with the sink handle |
| Expected Results | 1. Doctor should inform the user that they are performing incorrect actions after all steps 1-6. 2. Training should continue after step 7 is completed; UI should appear near door under sink. |
| Priority | High |
| Pass Criteria | 1. Doctor informs the user that they are performing incorrect actions 2. Training continues after interaction with sink handle |
| Fail Criteria | 1. Doctor does not inform user that they are performing incorrect actions 2. Training does not continue after interaction with sink handle |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT7 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes training mode bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Small Cuts and Scrapes should have been selected, user should have interacted with sink to progress to “grab bandage” step |
| Test Steps | 1. Interact with the phone on the wall by the door 2. Interact with tourniquet on the floor near the doctor’s feet 3. Drop tourniquet 4. Interact with the sink handle 5. Interact with the door handle under the sink 6. Grab bandage 7. Drop bandage 8. Repeat steps 1-4 9. Grab bandage again 10. Apply bandage to wound |
| Expected Results | 1. After steps 1-4, the doctor should inform the user that they are performing incorrect actions 2. After step 5, a UI should appear near the bandage telling the user to grab the bandage 3. After step 6, a UI should appear near the patient telling the user to drop the bandage near the wound to simulate applying pressure 4. After step 10, training should continue to the next step and the doctor should tell the user what to do next. |
| Priority | High |
| Pass Criteria | 1. After performing steps 1-4, user should be informed that incorrect actions are being performed 2. After step 5, a UI appears near the bandage telling the user to grab the bandage 3. After step 6, a UI appears near the patient telling the user to drop the bandage in that location 4. After step 10, training should continue to the next step and the doctor should tell the user what to do next |
| Fail Criteria | 1. The user is not informed of their incorrect actions 2. UI near the bandage does not appear 3. UI near the location for the bandage to be placed does not appear 4. Training does not continue after step 10 |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT8 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes training mode antibiotic interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Small Cuts and Scrapes should have been selected, user should have progressed to “apply antibiotic” step |
| Test Steps | 1. Interact with the phone on the wall by the door 2. Interact with tourniquet on the floor near the doctor’s feet 3. Drop tourniquet 4. Interact with the sink handle 5. Remove the bandage from the wound 6. Interact with the antibiotic bottle next to the sink 7. Drop antibiotic 8. Repeat steps 1-4 9. Grab antibiotic bottle again 10. Apply antibiotic to wound |
| Expected Results | 1. After steps 1-5, the doctor should inform the user that they are performing incorrect actions 2. After step 6, a UI should appear near the patient telling the user to apply the antibiotic to the wound 3. After step 10, training should continue to the next step and the doctor should tell the user what to do next. |
| Pass Criteria | 1. After performing steps 1-5 the user is informed that they are performing incorrect actions 2. After step 6 UI appears near the patient telling the user to apply antibiotic to the wound 3. After step 10, training continues to the next step |
| Fail Criteria | 1. User is not informed that they are performing incorrect actions for steps 1-5 2. UI does not appear near the patient telling the user to apply antibiotic to the wound 3. Training does not continue after step 10 |
| Priority | High |
| Pass/Fail | Pass |

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| Test ID | FT9 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes training mode new bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Small Cuts and Scrapes should have been selected, user should have progressed to “apply new bandage” step |
| Test Steps | 1. Interact with the phone on the wall by the door 2. Interact with tourniquet on the floor near the doctor’s feet 3. Drop tourniquet 4. Interact with the sink handle 5. Remove the antibiotic from the wound 6. Remove the first bandage from the wound 7. Interact with the new bandage next to the patient 8. Drop bandage 9. Repeat steps 1-4 10. Grab bandage again 11. Apply bandage |
| Expected Results | 1. After steps 1-6, the doctor should inform the user that they are performing incorrect actions 2. After step 7, a UI should appear near the patient telling the user to apply the new bandage to the wound 3. After step 11, training should continue to the next step and the doctor should tell the user what to do next. |
| Pass Criteria | 1. After steps 1-6 the doctor informs the user that they are performing incorrect actions. 2. After step 7 a UI appears near the patient telling the user to apply a new bandage 3. After step 11, training continues to the next step |
| Fail Criteria | 1. After steps 1-6 the user is not informed that they are performing incorrect actions 2. UI does not appear telling the user to apply new bandage 3. Training does not continue |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT10 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training phone interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the sink handle 2. Interact with the door under the sink 3. Grab bandage from under sink, and then drop the bandage 4. Interact with the tourniquet on the ground near the doctor’s feet, then drop the tourniquet 5. Interact with the patient’s right upper leg 6. Interact with the phone near the door on the wall |
| Expected Results | 1. After steps 1-5, the doctor should inform the user that they are performing incorrect actions 2. After step 6, a UI should appear near the patient telling the user to remove debris from around the wound and the doctor should tell the user what to do next |
| Pass Criteria | 1. After steps 1-5 the user is informed that they are performing incorrect actions 2. After step 6 UI appears near patient telling the user to remove debris from around the wound, and doctor tells user what to do next |
| Fail Criteria | 1. After steps 1-5 the user is not informed that they are doing incorrect actions 2. UI does not appear after step 6 3. Doctor does not tell user what to do next |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT11 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training debris interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected, user should have progressed to “remove debris” step |
| Test Steps | 1. Interact with the sink handle 2. Interact with the door under the sink 3. Grab bandage from under sink, and then drop the bandage 4. Interact with the tourniquet on the ground near the doctor’s feet, then drop the tourniquet 5. Interact with the phone near the door on the wall 6. Interact with the patient’s right upper leg |
| Expected Results | 1. After steps 1-5, the doctor should inform the user that they are performing incorrect actions 2. After step 6, a UI should appear near the patient telling the user to apply a bandage to the wound and the doctor should tell the user what to do next |
| Pass Criteria | 1. After performing steps 1-5 the user is informed that they are performing incorrect actions 2. After step 6 UI appears telling the user to apply bandage 3. Doctor tells the user what to do next |
| Fail Criteria | 1. User is not informed that they are performing incorrect actions after steps 1-5 2. UI does not appear after step 6 3. Doctor does not tell user what to do next |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT12 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected, user should have progressed to “apply pressure” step |
| Test Steps | 1. Interact with the sink handle 2. Interact with the tourniquet on the ground near the doctor’s feet, then drop the tourniquet 3. Interact with the phone near the door on the wall 4. Interact with the patient’s right upper leg 5. Interact with the door under the sink 6. Grab bandage from under sink, and then drop the bandage 7. Repeat steps 1-5 8. Grab bandage again and apply it to wound. |
| Expected Results | 1. After steps 1-5, the doctor should inform the user that they are performing incorrect actions 2. After step 8, a UI should appear near the patient telling the user to help the patient lie down and the doctor should tell the user what to do next |
| Pass Criteria | 1. After performing steps 1-5, the doctor informs the user that incorrect steps are being performed. 2. After step 8, a UI appears near the patient telling the user what to do. 3. Doctor tells user what to do next |
| Fail Criteria | 1. After steps 1-5, user is not informed that they performed incorrect actions 2. After step 8, UI does not appear 3. Doctor does not say what to do next |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT13 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training lie down interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected, user should have progressed to “help patient lie down” step |
| Test Steps | 1. Interact with the sink handle 2. Interact with the tourniquet on the ground near the doctor’s feet, then drop the tourniquet 3. Interact with the phone near the door on the wall 4. Interact with the patient’s right upper leg 5. Interact with the door under the sink 6. Grab bandage from under sink, and then drop the bandage 7. Interact with the patient’s upper body to help them lie down |
| Expected Results | 1. After steps 1-6, the doctor should inform the user that they are performing incorrect actions 2. After step 7, a UI should appear near the patient telling the user to apply a new bandage and the doctor should tell the user what to do next |
| Pass Criteria | 1. After performing steps 1-6, the user was informed that their actions were incorrect 2. After step 7, a UI appeared near the patient telling the user to apply new bandage 3. Doctor tells the user what to do next |
| Fail Criteria | 1. After steps 1-6, the user was not told that their actions are incorrect 2. After step 7, the UI did not appear 3. Doctor did not tell user what to do next |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT14 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training new bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected, user should have progressed to “apply a new bandage” step |
| Test Steps | 1. Interact with the sink handle 2. Interact with the tourniquet on the ground near the doctor’s feet, then drop the tourniquet 3. Interact with the phone near the door on the wall 4. Interact with the patient’s right upper leg 5. Interact with the door under the sink 6. Remove old bandage from wound 7. Grab new bandage and drop it 8. Repeat steps 1-6 9. Grab new bandage again and apply it to the wound |
| Expected Results | 1. After steps 1-6, the doctor should inform the user that they are performing incorrect actions 2. After step 9, a UI should appear near the patient telling the user to apply a tourniquet and the doctor should tell the user what to do next |
| Pass Criteria | 1. After steps 1-6, the doctor informs the user that they performed incorrect actions 2. After step 9, UI appears near the patient telling the user to apply tourniquet. 3. Doctor tells the user what to do next |
| Fail Criteria | 1. After steps 1-6 the user was not informed of incorrect actions 2. UI does not appear after step 9 3. Doctor does not tell user what to do next |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT15 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training tourniquet interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected, user should have progressed to “apply a tourniquet” step |
| Test Steps | 1. Interact with the sink handle 2. Interact with the phone near the door on the wall 3. Interact with the patient’s right upper leg 4. Interact with the door under the sink 5. Remove bandage from wound 6. Grab tourniquet and drop it 7. Repeat steps 1-6 8. Grab tourniquet again and apply it to the wound |
| Expected Results | 1. After steps 1-6, the doctor should inform the user that they are performing incorrect actions 2. After step 9, a UI should appear near the patient telling the user to wash their hands and the doctor should tell the user what to do next |
| Pass Criteria | 1. After steps 1-6, the user is informed that they are performing incorrect actions 2. After step 9, UI appears near the patient telling them to wash their hands 3. Doctor tells user what to do next |
| Fail Criteria | 1. After steps 1-6 the user is not informed that their actions were incorrect 2. After step 9, UI does not appear next to the patient telling the user to wash their hands 3. Doctor does not tell user what to do next |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT16 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding training tourniquet interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, training mode for Large Wounds with Heavy Bleeding should have been selected, user should have progressed to “wash hands” step |
| Test Steps | 1. Interact with the phone near the door on the wall 2. Interact with the patient’s right upper leg 3. Interact with the door under the sink 4. Remove bandage from wound 5. Remove tourniquet from wound 6. Interact with an old bandage 7. Interact with sink handle |
| Expected Results | 1. After steps 1-6, the doctor should inform the user that they are performing incorrect actions 2. After step 7, a UI should show congratulating the user on completing training mode, and they should be able to select between returning to bandage scene or navigating to the main menu |
| Pass Criteria | 1. After steps 1-6, the user is informed that they are performing incorrect actions 2. After step 7, UI appears congratulating the user that they have completed training mode. 3. UI allows user to go to main menu or return to bandage scene |
| Fail Criteria | 1. User is not informed that they are performing incorrect actions 2. After step 7, UI does not appear 3. UI does not allow user to go to main menu or return to bandage scene |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT17 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes testing, incorrect sink interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Small Cuts and Scrapes should have been selected |
| Test Steps | 1. Interact with the phone near the door on the wall 2. Interact with the sink handle 3. Interact with the door under the sink 4. Grab the bandage and drop it near the wound 5. Grab the antibiotic and drop it near the wound 6. Grab the new bandage and drop it near the wound |
| Expected Results | After step 6, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing mode with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT18 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes testing, incorrect bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Small Cuts and Scrapes should have been selected |
| Test Steps | 1. Interact with the sink handle 2. Interact with the door under the sink 3. Interact with the sink handle again 4. Grab the bandage and drop it near the wound 5. Grab the antibiotic and drop it near the wound 6. Grab the new bandage and drop it near the wound |
| Expected Results | After step 6, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT19 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes testing, incorrect antibiotic interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Small Cuts and Scrapes should have been selected |
| Test Steps | 1. Interact with the sink handle 2. Interact with the door under the sink 3. Grab the bandage and drop it near the wound 4. Interact with the sink handle again 5. Grab the antibiotic and drop it near the wound 6. Grab the new bandage and drop it near the wound |
| Expected Results | After step 6, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

|  |  |
| --- | --- |
| Test ID | FT20 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes testing, incorrect new bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Small Cuts and Scrapes should have been selected |
| Test Steps | 1. Interact with the sink handle 2. Interact with the door under the sink 3. Grab the bandage and drop it near the wound 4. Grab the antibiotic and drop it near the wound 5. Interact with the sink handle again 6. Grab the new bandage and drop it near the wound |
| Expected Results | After step 6, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

|  |  |
| --- | --- |
| Test ID | FT21 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect phone interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the sink handle 2. Interact with the phone near the door 3. Interact with the patient’s right leg 4. Interact with the sink door handle 5. Grab bandage from under sink and apply it to the patient’s wound 6. Interact with patient’s upper body to help them lie down 7. Grab new bandage from bedside table and apply it to the wound 8. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 9. Interact with the sink handle again |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT22 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect debris interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the sink handle 3. Interact with the patient’s right leg 4. Interact with the sink door handle 5. Grab bandage from under sink and apply it to the patient’s wound 6. Interact with patient’s upper body to help them lie down 7. Grab new bandage from bedside table and apply it to the wound 8. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 9. Interact with the sink handle again |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT23 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the patient’s right leg 3. Interact with the sink handle 4. Interact with the sink door handle 5. Grab bandage from under sink and apply it to the patient’s wound 6. Interact with patient’s upper body to help them lie down 7. Grab new bandage from bedside table and apply it to the wound 8. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 9. Interact with the sink handle again |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT24 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect lie down interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the patient’s right leg 3. Interact with the sink door handle 4. Grab bandage from under sink and apply it to the patient’s wound 5. Interact with the sink handle 6. Interact with patient’s upper body to help them lie down 7. Grab new bandage from bedside table and apply it to the wound 8. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 9. Interact with the sink handle again |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT25 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect new bandage interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the patient’s right leg 3. Interact with the sink door handle 4. Grab bandage from under sink and apply it to the patient’s wound 5. Interact with patient’s upper body to help them lie down 6. Interact with the sink handle 7. Grab new bandage from bedside table and apply it to the wound 8. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 9. Interact with the sink handle again |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT26 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect tourniquet interaction |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the patient’s right leg 3. Interact with the sink door handle 4. Grab bandage from under sink and apply it to the patient’s wound 5. Interact with patient’s upper body to help them lie down 6. Grab new bandage from bedside table and apply it to the wound 7. Interact with the sink handle 8. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 9. Interact with the sink handle again |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT27 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, incorrect sink |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the patient’s right leg 3. Interact with the sink door handle 4. Grab bandage from under sink and apply it to the patient’s wound 5. Interact with patient’s upper body to help them lie down 6. Grab new bandage from bedside table and apply it to the wound 7. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 8. Remove the tourniquet from the wound 9. Interact with the sink handle |
| Expected Results | After step 9, a UI should appear near the patient that says testing has failed with one mistake. |
| Pass Criteria | UI appears near patient informing the user that they failed testing with one mistake |
| Fail Criteria | 1. UI does not appear 2. UI says patient passed 3. UI says patient failed with 2 or more mistakes= |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT28 |
| Items to Test | CPR Scene – training mode selection |
| Pre-Conditions | 1. CPR scene selected from the main menu |
| Test Steps | 1. Select the training mode option from the menu |
| Expected Results | 1. Phone should appear on the wall behind player 2. Dialogue should start playing instructing the user to grab the phone receiver 3. UI should appear over the phone telling user to grab the phone receiver 4. If all of these occur, the training mode loaded successfully. |
| Priority | High |
| Pass Criteria | 1. Menu disappeared 2. Phone appeared 3. Prompt appeared above phone 4. Patient appeared on bed 5. Audio started playing |
| Fail Criteria | 1. Menu did not disappear 2. Phone did not appear 3. Prompt did not appear above phone 4. Patient did not appear on bed 5. Audio did not start playing |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT29 |
| Items to Test | CPR Scene – testing mode locked |
| Pre-Conditions | Training mode has not been completed |
| Test Steps | Select CPR Scene from Main Menu |
| Expected Results | Testing button is greyed out and not clickable |
| Priority | High |
| Pass Criteria | Testing button is greyed out and not clickable |
| Fail Criteria | Testing button is not greyed out and not clickable |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT30 |
| Items to Test | CPR Scene – testing mode selection |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode is completed |
| Test Steps | 1. Select the testing mode option from the menu |
| Expected Results | 1. Phone should appear on the wall behind player 2. Patient should appear laying on the bed 3. Doctor helper should be playing dialogue instructing the user to grab the phone receiver 4. UI should appear over the phone telling user grab the phone receiver 5. If all of these occur, the training mode loaded successfully. |
| Priority | High |
| Pass Criteria | 1. Phone appeared on wall behind player 2. Patient model appeared on bed   Doctor helper played “correct action” audio |
| Fail Criteria | 1. Phone did not appear 2. Patient model did not appear on bed   Audio did not play |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT31 |
| Items to Test | CPR Scene – training mode – doctor NPC animation |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with patient 2. Grab phone receiver |
| Expected Results | 1. At step 1 incorrect action animation should play on doctor NPC 2. At step 2 thumbs up animation should play on doctor NPC |
| Priority | High |
| Pass Criteria | Correct animations played after corresponding actions |
| Fail Criteria | 1. “Correct action” animation played during patient interaction 2. “Incorrect action” animation played during phone interaction 3. No animation played |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT32 |
| Items to Test | CPR Scene – training mode - phone interaction |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with patient 2. Grab phone receiver |
| Expected Results | 1. Doctor should inform user about incorrect step at step 1 2. After step 2 action is completed, training should continue 3. Text prompt above phone should disappear 4. Text prompt should appear above patient 5. Doctor should inform user about next step |
| Priority | High |
| Pass Criteria | 1. Doctor informed user about incorrect step 2. Corresponding prompts appear and disappear 3. Next audio is played |
| Fail Criteria | 1. Correct audio did not play 2. Incorrect action audio did not play 3. Correct audio played on incorrect action 4. Prompts did not appear/disappear |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT33 |
| Items to Test | CPR Scene – training mode - move patient to the hard surface |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with phone 2. Interact with phone again 3. Interact with patient |
| Expected Results | 1. After step 1, text prompt above phone should disappear 2. At step 2, doctor should inform user that they are doing incorrect step 3. After step 3 is completed, text prompt above phone should disappear. 4. Patient’s body should be on the floor near the bed and text prompt should appear above patient’s body |
| Priority | High |
| Pass Criteria | 1. Prompts appeared/disappeared properly 2. Correct sequence audio played 3. Patient’s body appeared |
| Fail Criteria | 1. Prompts did not appear/disappear 2. Correct sequence audio did not play 3. Patient’s body did not appear |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT34 |
| Items to Test | CPR Scene – training mode - place hands on patient’s chest |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with phone 2. Interact with patient 3. Interact with patient again 4. Place hands on patient chest |
| Expected Results | 1. After step 1 and 2, text prompts should disappear above corresponding objects 2. At step 3, doctor should inform user about incorrect action 3. After step 4 is completed, training should continue 4. Prompt should be replaced with new prompt informing user to begin CPR procedure |
| Priority | High |
| Pass Criteria | 1. Prompts appear and disappear properly 2. Correct and incorrect sequence audio plays |
| Fail Criteria | 1. Next step does not activate after placing hands 2. Prompts do not appear and disappear properly 3. Correct and incorrect sequence audio does not play |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT35 |
| Items to Test | CPR Scene – training mode – CPR bars appear |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with phone 2. Interact with patient 3. Place hands on patient’s chest |
| Expected Results | 1. After step 3, 2 bars should appear on the right side of user’s headset screen 2. Left bar should have a name “Progress Bar” 3. Right bar should have a name “Pressure Bar” |
| Priority | High |
| Pass Criteria | 1. Progress bars appear 2. Progress bars are named correctly |
| Fail Criteria | 1. Progress bars do not appear 2. Progress bars names do not appear |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT36 |
| Items to Test | CPR Scene – training mode – CPR progress bar depletes after inactivity |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with phone 2. Interact with patient 3. Place hands on patient’s chest 4. Move controllers few inches up and down few times, so left bar is not completely filled 5. Wait few seconds |
| Expected Results | 1. After step 4 when user stops moving controllers, left bar with blue color should start depleting |
| Priority | High |
| Pass Criteria | Progress bar depletes |
| Fail Criteria | Progress bar does not deplete |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT37 |
| Items to Test | CPR Scene – training mode – CPR progress bar stays filled after CPR is completed |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode selected |
| Test Steps | 1. Interact with phone 2. Interact with patient 3. Place hands on patient’s chest 4. Move controllers few inches up and down until left progress bar is completely filled |
| Expected Results | 1. After step 4 is completed, left progress bar should stay filled 2. Scenario completion window should appear |
| Priority | High |
| Pass Criteria | Progress bar does not deplete after being completely filled |
| Fail Criteria | Progress bar depletes after being completely filled |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT38 |
| Items to Test | CPR Scene – testing mode - phone interaction incorrect action |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Interact with patient 2. Place hands on patient’s chest 3. Interact with phone 4. Interact with patient 5. Place hand on patient’s chest 6. Complete CPR procedure |
| Expected Results | 1. After step 6 is completed, UI should appear to inform user that they failed testing with 2 mistakes |
| Priority | High |
| Pass Criteria | Message appears with correct number of mistakes shown |
| Fail Criteria | 1. Message appears with wrong number of mistakes shown 2. Message appears saying that user testing without any mistakes |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT39 |
| Items to Test | CPR Scene – testing mode – patient interaction incorrect action |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Interact with patient 2. Place hands on patient’s chest 3. Interact with phone 4. Interact with patient 5. Place hand on patient’s chest 6. Complete CPR procedure |
| Expected Results | After step 6 is completed, UI should appear to inform user that they failed testing with 2 mistakes |
| Priority | High |
| Pass Criteria | Message appears with correct number of mistakes shown |
| Fail Criteria | 1. Message appears with wrong number of mistakes shown 2. Message appears saying that user testing without any mistakes |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT40 |
| Items to Test | CPR Scene – testing mode – patient interaction incorrect action |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Interact with patient 2. Place hands on patient’s chest 3. Interact with phone 4. Interact with phone again 5. Interact with patient 6. Place hand on patient’s chest 7. Complete CPR procedure |
| Expected Results | 1. After step 6 is completed, UI should appear to inform user that they failed testing with 3 mistakes |
| Priority | High |
| Pass Criteria | Message appears with correct number of mistakes shown |
| Fail Criteria | 1. Message appears with wrong number of mistakes shown 2. Message appears saying that user testing without any mistakes |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT41 |
| Items to Test | CPR Scene – testing mode – place hands on patient’s chest incorrect action |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Interact with patient 2. Place hands on patient’s chest 3. Interact with phone 4. Interact with phone again 5. Interact with patient 6. Place hand on patient’s chest 7. Complete CPR procedure |
| Expected Results | After step 6 is completed, UI should appear to inform user that they failed testing with 3 mistakes |
| Priority | High |
| Pass Criteria | Message appears with correct number of mistakes shown |
| Fail Criteria | 1. Message appears with wrong number of mistakes shown 2. Message appears saying that user testing without any mistakes |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT42 |
| Items to Test | CPR Scene – testing mode – CPR procedure incorrect action |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Interact with phone 2. Interact with patient 3. Place hand on patient’s chest 4. Interact with phone 5. Complete CPR procedure |
| Expected Results | 1. After step 5 is completed, UI should appear to inform user that they failed testing with 1 mistake |
| Priority | High |
| Pass Criteria | Message appears with correct number of mistakes shown |
| Fail Criteria | 1. Message appears with wrong number of mistakes shown 2. Message appears saying that user testing without any mistakes |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT43 |
| Items to Test | CPR Scene – testing mode – timer appears |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Wait for NPC to finish audio queue 2. Wait for timer appear in the upper right corner |
| Expected Results | After audio queue is finished, timer should appear in the upper right corner |
| Priority | High |
| Pass Criteria | Timer appears after audio is finished |
| Fail Criteria | Timer does not appear when audio is finished |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT44 |
| Items to Test | CPR Scene – testing mode – timer timeout |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. After starting testing mode, wait for NPC to finish audio queue 2. Wait for timer countdown to reach 0 |
| Expected Results | 1. After timer reached 0, UI should appear to inform user that they ran out of time and failed testing 2. Timer stops at 0 |
| Priority | High |
| Pass Criteria | 1. Correct message appears after timer reaches 0 2. Timer stops at 0 |
| Fail Criteria | 1. Message does not appear after timer reaches 0 2. Timer does not stop at 0 |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT45 |
| Items to Test | Heimlich Scene – training mode selection |
| Pre-Conditions | Heimlich scene selected from the main menu, mode selection menu should be visible to the user, upon scene load |
| Test Steps | Select the training mode option from the menu |
| Expected Results | * Patient model appears in scene, playing idle animation and help prompt above model. * Audio explaining the next step need to be taken in scene, * UI that tells the user what the next step is. * If all of these occur, the training mode loaded successfully. |
| Pass Criteria | 1. All models load correctly 2. Audio instruction plays |
| Fail Criteria | 1. Any model fails to load 2. Audio does not play |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT46 |
| Items to Test | Heimlich Scene – testing mode locked |
| Pre-Conditions | Training mode has not been completed |
| Test Steps | Select Heimlich Scene from Main Menu |
| Expected Results | Testing button is greyed out and not clickable |
| Pass Criteria | 1. Testing button is greyed out 2. Testing button in unclickable |
| Fail Criteria | 1. Testing button is not greyed out 2. Testing button is clickable |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT47 |
| Items to Test | Heimlich Scene – testing mode selection |
| Pre-Conditions | The Heimlich scene selected from the main menu; mode selection menu should be visible to the user. |
| Test Steps | Select the testing mode option from the menu |
| Expected Results | * Patient model appears in scene, along with multiple interactable objects such as phone, seat etc.. * Audio should be played describing how to start training mode. * If all of these occur, the training mode loaded successfully. |
| Pass Criteria | 1. All models load correctly 2. Audio instructions play |
| Fail Criteria | 1. Any model fails to load properly 2. Audio instructions do not play |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT48 |
| Items to Test | Heimlich Scene – training mode - patient interaction trigger |
| Pre-Conditions | Heimlich scene should have been selected from the main menu, training mode should have been selected |
| Test Steps | 1. Give 5 back blows to patient. 2. Follow patient. |
| Expected Results | * Doctor should inform user about incorrect step at step 1. * After step 2 is completed, training should continue * Text prompt above patient should change   + Audio should inform user about next step, as well as UI helper on wrist gets updated. |
| Pass Criteria | Expected results shown |
| Fail Criteria | No change in UI, no incorrect action audio after step 1. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT49 |
| Items to Test | Heimlich Scene – training mode – follow patient trigger |
| Pre-Conditions | Heimlich scene should have been selected from the main menu, training mode should have been selected, user should have completed previous steps in scenario |
| Test Steps | 1. Interact with patient 2. Interact with patient again 3. Follow patient |
| Expected Results | * After step 1, text prompt above patient should change * At step 2, doctor should inform user that they are doing incorrect step * After step 3 is completed, the text prompt above patient should change, and audio plays. * Patient’s body should be playing walking animation and stop after a few seconds. |
| Pass Criteria | All expected results are shown in scene |
| Fail Criteria | No change in UI above patient, no audio playing, no animation plays |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT50 |
| Items to Test | Heimlich Scene – training mode – give 5 back blows trigger |
| Pre-Conditions | Heimlich scene selected from the main menu; training mode should have been selected |
| Test Steps | 1. Interact with patient. 2. Follow patient. 3. Give 5 back blows on designated area, by placing one hand and pressing down above designated area. |
| Expected Results | * After step 1 and 2, text prompts should disappear above corresponding objects. * At step 2, audio playing should inform user about next step, and UI helper updates. * After each blow in step 3, prompt should be replaced with new counter informing user the number of blows made |
| Pass Criteria | All the expected results are shown |
| Fail Criteria | No change in UI above patient, no audio playing, no increase in counter of blows |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT51 |
| Items to Test | Heimlich Scene – training mode – Heimlich bars appear |
| Pre-Conditions | Heimlich scene selected from the main menu, training mode selected, |
| Test Steps | * 1. Interact with patient.   2. Follow patient.   3. Give 5 back blows.   4. Place both hands on the patient’s stomach. |
| Expected Results | * After step 4. bars should appear on the right side of user’s headset screen, and camera view switches, corresponding audio to that step will also play. |
| Pass Criteria | The expected result conditions appear, and bars appears in upper right corner of user’s view |
| Fail Criteria | No bars appear |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT52 |
| Items to Test | Heimlich Scene – training mode – Heimlich progress bar stays filled after Heimlich is completed |
| Pre-Conditions | Heimlich scene selected from the main menu, training mode selected |
| Test Steps | * 1. Interact with patient.   2. Follow patient.   3. Give 5 back blows.   4. Place both hands on the patient’s stomach.   5. Move controllers few inches in and out until progress bar is filled |
| Expected Results | * After step 5 is completed, the progress bar should stay filled. * Scenario completion window should appear |
| Pass Criteria | Progress bar stays filled for a couple of seconds |
| Fail Criteria | Progress bar does not stay filled and disappears |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT53 |
| Items to Test | Heimlich Scene – testing mode – patient interaction incorrect action |
| Pre-Conditions | Heimlich scene selected from the main menu, testing mode selected |
| Test Steps | 1. Interact with patient 2. Place hands on patient’s stomach. 3. Interact with phone 4. Interact with patient 5. Place hands on patient’s stomach. 6. Complete Heimlich procedure |
| Expected Results | * After step 6 is completed, UI should appear to inform user that they failed testing with 2 mistakes |
| Pass Criteria | Ui appears informing user they failed testing with two mistakes |
| Fail Criteria | UI appears telling user they passed testing or UI appears telling user they failed testing with more than two mistake, or no UI appears at all. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT54 |
| Items to Test | Heimlich Scene – testing mode – Back blows incorrect action |
| Pre-Conditions | Heimlich scene selected from the main menu, testing mode selected |
| Test Steps | 1. Interact with patient 2. Follow patient 3. Pick up phone. 4. Give 5 back blows. 5. Complete Heimlich procedure. |
| Expected Results | * After step 5 is completed, UI should appear to inform user that they failed testing with 1 mistake |
| Pass Criteria | Ui appears informing user they failed testing with one mistake |
| Fail Criteria | UI appears telling user they passed testing or UI appears telling user they failed testing with more than one mistake, or no UI appears at all. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT55 |
| Items to Test | Heimlich Scene – testing mode – timer appears |
| Pre-Conditions | Heimlich scene selected from the main menu; testing mode selected |
| Test Steps | 1. Interact with patient, after audio plays. 2. Wait for timer appear in the middle of screen |
| Expected Results | * After patient interaction is finished, a timer should appear in the middle of screen. |
| Pass Criteria | Timer appears and starts the countdown |
| Fail Criteria | No timer appears |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT56 |
| Items to Test | Heimlich Scene – testing mode – correct actions without timeout |
| Pre-Conditions | Heimlich scene selected from the main menu; testing mode selected |
| Test Steps | 1. Interact with patient 2. Follow patient 3. Give 5 back blows 4. Complete Heimlich procedure |
| Expected Results | If timer has not reached 0 before step 4 is completed, UI appear to inform user that they passed testing with no mistakes |
| Pass Criteria | UI appears informing user they passed the test |
| Fail Criteria | No UI appears, or UI that user failed the test appears. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT57 |
| Items to Test | Heimlich Scene – testing mode – timer timeout |
| Pre-Conditions | Heimlich scene selected from the main menu, testing mode selected |
| Test Steps | 1. After starting testing mode, interact with patient 2. Wait for timer countdown to reach 0 |
| Expected Results | After the timer reached 0, the UI appears to inform the user that they ran out of time and failed testing, and animation of patient dying will also play. |
| Pass Criteria | Failed testing UI appears |
| Fail Criteria | Successful testing UI appears, or no UI appears |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT58 |
| Items to Test | Head Trauma Scene – training mode selection |
| Pre-Conditions | Head Trauma scene was selected at the main menu. |
| Test Steps | 1. After the scene loads, select training mode from the selection menu |
| Expected Results | * First step instructional audio should play * Whiteboard text with all the steps should be visible * Selection menu UI should disappear |
| Pass Criteria | All expected results happen after clicking training mode button |
| Fail Criteria | Button cannot be clicked, audio for step 1 does not play, whiteboard does not display anything, selection menu does not disappear. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT59 |
| Items to Test | Head Trauma Scene – testing mode locked |
| Pre-Conditions | 1. Training mode has not been completed |
| Test Steps | 1. Select Head Trauma Scene from Main Menu |
| Expected Results | Testing button is greyed out and not clickable |
| Pass Criteria | Testing mode button cannot be clicked |
| Fail Criteria | Testing mode button can be clicked or is not greyed out |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT60 |
| Items to Test | Head Trauma Scene – testing mode selection |
| Pre-Conditions | 1. Head Trauma scene was selected at the main menu. 2. Training mode has been completed |
| Test Steps | After the scene loads, select testing mode from the selection menu |
| Expected Results | * Selection menu UI should disappear * There should be no instructional audio & no instructional text |
| Pass Criteria | Selection mode UI disappears & there is no audio or instructional text |
| Fail Criteria | Audio plays, UI does not disapear, instructional text displays |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT61 |
| Items to Test | Head Trauma Scene – training mode step 1 |
| Pre-Conditions | 1. Head Trauma scene was selection from main menu 2. Training mode was selected from selection menu |
| Test Steps | Grab phone as instructed by audio |
| Expected Results | * Whiteboard updates to show step 1 has been completed * Text instruction for step 1 disappears * Audio instruction for step 2 plays * Text instruction for step 2 appears |
| Pass Criteria | Phone can be grabbed, and all expected results happen. |
| Fail Criteria | Phone is not able to be grabbed, or any of the expected results do not happen when the phone is grabbed. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT62 |
| Items to Test | Head Trauma Scene – training mode step 2 |
| Pre-Conditions | 1. Head Trauma scene was selected at main menu 2. Training mode was selected from selection menu 3. Step 1 was completed |
| Test Steps | Interact with the patient |
| Expected Results | * Whiteboard updates to show step 2 has been completed * Text instruction for step 2 disappears * Audio instruction for step 3 plays * Text instruction for step 3 appears |
| Pass Criteria | Patient can be interacted with, and all expected results happen after patient is interacted with |
| Fail Criteria | Patient cannot be interacted with, or any of the expected results do not happen after patient has been interacted with. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT63 |
| Items to Test | Head Trauma Scene – training mode step 3 |
| Pre-Conditions | 1. Head Trauma scene was selected at main menu 2. Training mode was selected from selection menu 3. Steps 1 & 2 have been completed |
| Test Steps | 1. Open the door under the sink 2. Grab bandage under the sink 3. Bring bandage to patient, and place on head |
| Expected Results | * After opening the sink, the text instruction for opening sink should disappear * After opening the sink, text instruction for grabbing bandage should appear * After grabbing bandage, audio instruction telling the player to bring the bandage to the patient and place it on their head should play * After grabbing the bandage, text instruction for grabbing bandage should disappear * After grabbing the bandage, text instruction for placing it on the patient’s head should appear. * After placing bandage, text instruction for placing it on the patient’s head should disappear * After placing bandage, audio for step 4 should play * After placing bandage, the patient should have a bandage wrapped around their head to indicate the step has been completed * After placing bandage, the whiteboard should update that step 3 is completed |
| Pass Criteria | All expected results happen when the specified action is done. |
| Fail Criteria | Any of the expected results do not happen when the specified action is done. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT64 |
| Items to Test | Head Trauma Scene – training mode step 4 |
| Pre-Conditions | 1. Head Trauma scene was selected at main menu 2. Training mode was selected from selection menu 3. Steps 1-3 have been completed |
| Test Steps | 1. Listen to audio that plays |
| Expected Results | * Audio instructions for monitoring the patient should play * After audio is finished, a menu should appear that says training mode has been completed, giving the player the option of trying testing mode or returning to main menu |
| Pass Criteria | Audio plays for step 4 and menu appears. |
| Fail Criteria | Audio does not play or menu does not appear. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT65 |
| Items to Test | Head Trauma Scene – testing mode pass |
| Pre-Conditions | 1. Head Trauma scene was selected from main menu 2. Training mode has been completed 3. Testing mode was selected |
| Test Steps | 1. Grab phone 2. Interact with patient 3. Open sink door 4. Grab bandage 5. Place bandage on patient |
| Expected Results | * UI should appear that tells the user they have passed testing mode |
| Pass Criteria | Menu appears telling user they have passed testing mode. |
| Fail Criteria | Menu does not appear, or menu appears saying they have failed even after doing all the right steps. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT66 |
| Items to Test | Head Trauma Scene – testing mode fail |
| Pre-Conditions | 1. Head Trauma scene was selected from main menu 2. Training mode has been completed 3. Testing mode was selected |
| Test Steps | 1. Interact with patient 2. Grab phone 3. Open sink door 4. Grab bandage 5. Place bandage on patient |
| Expected Results | * UI should appear that tells the user they have failed testing mode |
| Pass Criteria | Menu appears telling user they have failed testing mode. |
| Fail Criteria | Menu does not appear or tells the user they have passed despite doing the steps incorrectly. |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | FT67 |
| Items to Test | Head Trauma Scene – testing mode timeout |
| Pre-Conditions | 1. Head Trauma scene was selected from main menu 2. Training mode has been completed 3. Testing mode was selected |
| Test Steps | 1. Wait until the timer runs out |
| Expected Results | * UI should appear that tells the user they failed testing mode |
| Pass Criteria | Menu appears to tell the user they failed. |
| Fail Criteria | Menu doesn’t appear. |
| Priority | High |
| Pass/Fail | Pass |

# Integration Test Cases

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| --- | --- |
| Test ID | IT1 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes - Training mode saves progress |
| Pre-Conditions | In the bandage scene with the sub-scenario selection screen visible |
| Test Steps | 1. Select “Small Cuts and Scrapes” from sub-scenario selection 2. Select training mode 3. Interact with the sink handle 4. Interact with the door handle to return to the main menu. 5. Select the bandage scene 6. Re-select the “Small Cuts and Scrapes” sub-scenario, and select training mode 7. Interact with the sink door handle, grab the bandage, and drop it near the wound 8. Interact with the door handle to return to main menu 9. Re-select the bandage scene, re-select “Small cuts and scrapes,” and enter training mode 10. Grab the antibiotic bottle from near the sink and drop it near the wound 11. Interact with the door handle to exit the scene and return to main menu. 12. Re-select the bandage scene, re-select “Small cuts and scrapes,” and enter training mode 13. Grab the new bandage and drop it near the wound 14. End-of-training menu should display |
| Expected Results | 1. After step 6, the system should load the previous progress and the next step should be to open the sink door. UI should be near sink door, and doctor audio should tell user to grab bandage 2. After step 9, the system should load the previous progress and the next step should be to grab the antibiotic. UI should be near antibiotic bottle, and doctor audio should tell user to grab antibiotic 3. After step 12, the system should load the previous progress and the next step should be to grab the new bandage. UI should be near new bandage, and doctor audio should tell user to grab new bandage 4. After the new bandage is applied, the UI showing that training has been completed should be shown, and the audio should play congratulating the user on completing training. |
| Pass Criteria | All expected results happen. |
| Fail Criteria | 1. System does not load previous progress after step 6 2. UI does not appear near sink after step 6 3. Audio does not play after step 6 4. System does not load previous progress after step 9 5. UI does not appear near bottle after step 9 6. Audio does not play after step 9 7. System does not load previous progress after step 12 8. UI does not appear near bandage after step 12 9. Audio does not play after step 12 10. UI does not appear after training is completed 11. Audio does not play after training is completed |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | IT2 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding - Training mode saves progress |
| Pre-Conditions | In the bandage scene with the sub-scenario selection screen visible |
| Test Steps | 1. Select “Large Wounds with Heavy Bleeding” from sub-scenario selection 2. Select training mode 3. Interact with the emergency phone near the door 4. Interact with the door handle to return to the main menu. 5. Select the bandage scene 6. Re-select the “Large Wounds with Heavy Bleeding” sub-scenario, and select training mode 7. Interact with the patient’s right upper leg to simulate removing debris 8. Interact with the door handle to return to main menu 9. Re-select the bandage scene, re-select “Large Wounds with Heavy Bleeding,” and enter training mode 10. Interact with the sink door handle, grab the bandage, and drop it near the wound 11. Interact with the door handle to exit the scene and return to main menu. 12. Re-select the bandage scene, re-select “Large Wounds with Heavy Bleeding,” and enter training mode 13. Interact with the patient’s upper body to help them lie down 14. Interact with the door handle to exit the scene and return to main menu. 15. Re-select the bandage scene, re-select “Large Wounds with Heavy Bleeding,” and enter training mode 16. Grab the new bandage off of the table near the patient and drop it near the wound 17. Interact with the door handle to exit the scene and return to main menu. 18. Re-select the bandage scene, re-select “Large Wounds with Heavy Bleeding,” and enter training mode 19. Grab the tourniquet and drop it near the wound 20. Interact with the door handle to exit the scene and return to main menu. 21. Re-select the bandage scene, re-select “Large Wounds with Heavy Bleeding,” and enter training mode 22. Interact with the sink handle 23. The end-of-training menu should now appear, and the audio for scenario completion should play. |
| Expected Results | 1. After step 6, the system should load the previous progress and the next step should be to interact with the patient to remove debris. UI should be near patient, and doctor audio should tell user to remove debris from around the wound 2. After step 9, the system should load the previous progress and the next step should be to grab the bandage. UI should be near sink door, and doctor audio should tell user to interact with the sink door and apply bandage 3. After step 12, the system should load the previous progress and the next step should be to help the patient lie down. UI should be near patient, and doctor audio should tell user to help the patient lie down 4. After step 15, the system should load the previous progress and the next step should be to apply a new bandage. UI should be near the new bandage on the bedside table, and doctor audio should tell user to apply a new bandage 5. After step 18, the system should load the previous progress and the next step should be to apply a tourniquet. UI should be near the tourniquet, and doctor audio should tell user to apply a tourniquet 6. After step 21, the system should load the previous progress and the next step should be to wash hands. UI should be near the sink, and doctor audio should tell user to wash their hands 7. After the user washes their hands, the UI showing that training has been completed should be shown, and the audio should play congratulating the user on completing training. |
| Pass Criteria | All Expected results happen |
| Fail Criteria | 1. After step 6 previous progress fails to load 2. After step 6, UI does not show up or audio does not play 3. After step 9, Previous progress fails to load 4. After step 9, UI does not show up or audio does not play 5. After step 12, Previous progress fails to load 6. After step 12, UI does not show up or audio does not play 7. After step 15, Previous progress fails to load 8. After step 15, UI does not show up or audio does not play 9. After step 18, Previous progress fails to load 10. After step 18, UI does not show up or audio does not play 11. After step 21, Previous progress fails to load 12. After step 21, UI does not show up or audio does not play 13. After the user washes hands UI does not appear saying training has been completed, or audio does not play |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | IT3 |
| Items to Test | Bandage Scene – Small Cuts and Scrapes testing, correct sequence |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the sink handle 2. Interact with the sink door handle 3. Grab bandage from under sink and drop it near the wound 4. Grab antibiotic off sink counter and drop it near the wound 5. Grab new bandage off bedside table and drop it near the wound |
| Expected Results | After step 5, a UI should appear near the patient that says testing has been passed |
| Pass Criteria | After step 5 UI appears near patient saying testing has been passed |
| Fail Criteria | 1. After step 5, UI does not appear 2. UI appears but says failed |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | IT4 |
| Items to Test | Bandage Scene – Large Wounds with Heavy Bleeding testing, correct sequence |
| Pre-Conditions | Bandage scene should have been selected from the main menu, testing mode for Large Wounds with Heavy Bleeding should have been selected |
| Test Steps | 1. Interact with the phone near the door 2. Interact with the patient’s right leg 3. Interact with the sink door handle 4. Grab bandage from under sink and apply it to the patient’s wound 5. Interact with patient’s upper body to help them lie down 6. Grab new bandage from bedside table and apply it to the wound 7. Grab tourniquet off the floor near the doctor’s feet and apply it to the wound 8. Interact with the sink handle |
| Expected Results | After step 8, a UI should appear near the patient that says testing has been passed |
| Pass Criteria | After step 8 UI appears saying testing has been passed |
| Fail Criteria | 1. UI does not appear after step 8 2. UI appears but says failed |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | IT5 |
| Items to Test | CPR Scene – training mode saves progress |
| Pre-Conditions | CPR scene selected from the main menu |
| Test Steps | 1. Select Training mode from mode selection menu 2. Interact with the phone receiver 3. Interact with the door handle to return to the main menu. 4. Select the CPR scene 5. Select training mode 6. Interact with patient 7. Interact with the door handle to return to the main menu. 8. Select the CPR scene 9. Select training mode 10. Place hands on patient’s chest 11. Interact with the door handle to return to the main menu. 12. Select the CPR scene 13. Select training mode 14. Complete CPR procedure 15. After previous step, end-of-training menu should display |
| Expected Results | 1. After step 6, the system should load the previous progress and the next step should be to interact with patient. UI should be above patient 2. After step 10, the system should load the previous progress and the next step should be to place hands on patient’s chest. UI should be near patient and doctor audio should tell user to grab antibiotic 3. After step 14, the system should load the previous progress and the next step should be to grab the new bandage. UI should be near new bandage, and doctor audio should tell user to grab new bandage 4. After CPR procedure is completed, the UI menu should appear and notify user that training has been completed, and the audio should play congratulating the user on completing training. |
| Priority | High |
| Pass Criteria | Training resumes at step that user left |
| Fail Criteria | Training does not resume at correct step |
| Pass/Fail | Pass |

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| Test ID | IT6 |
| Items to Test | CPR Scene – training mode – doctor NPC correct audio and subtitles |
| Pre-Conditions | CPR scene should have been selected from the main menu |
| Test Steps | 1. Select training mode from UI 2. Interact with phone receiver 3. Interact with patient 4. Place hands on patient’s chest 5. Complete CPR procedure |
| Expected Results | At each step, corresponding audio should play and correct subtitles matching audio should show on the screen to inform user about next step |
| Priority | High |
| Pass Criteria | Audio is playing before and after each step |
| Fail Criteria | 1. Audio is cut 2. Audio is not playing on anyone of the steps |

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| Test ID | IT7 |
| Items to Test | CPR Scene – testing mode – correct actions without timeout |
| Pre-Conditions | 1. CPR scene selected from the main menu 2. Training mode completed 3. Testing mode selected |
| Test Steps | 1. Interact with phone 2. Interact with patient 3. Place hand on patient’s chest 4. Complete CPR procedure |
| Expected Results | If timer has not reached 0 before step 4 is completed, UI should appear to inform user that they passed testing with no mistakes |
| Priority | High |
| Pass Criteria | 1. UI appears after final step 2. Timer stops after final step 3. Message says that there were no mistakes made |
| Fail Criteria | 1. Timer does not stop after final step 2. Message says that there were mistakes made |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | IT8 |
| Items to Test | Heimlich Scene – training mode saves progress |
| Pre-Conditions | In the Heimlich scene with the mode selection menu visible |
| Test Steps | * 1. Select Training mode from mode selection menu.   2. Interact with patient   3. Interact with the door handle to return to the main menu.   4. Select the Heimlich scene   5. Select training mode   6. Give 5 back blows on designated area.   7. Interact with the door handle to return to the main menu.   8. Select the Heimlich scene   9. Select training mode   10. Place hands on patient’s stomach as instructed   11. Interact with the door handle to return to the main menu.   12. Select the Heimlich scene   13. Select training mode   14. Complete Heimlich procedure   15. After previous step, end-of-training menu should display, and animation plays |
| Expected Results | * After step 6, the system should load the previous progress and the next step should be to interact with patient. UI should be above patient * After step 10, the system should load the previous progress and the next step should be to place hands on patient’s stomach. UI should be near patient and audio should tell user what do. * After Heimlich procedure is completed, the UI menu should appear and notify user that training has been completed, and the audio should play congratulating the user on completing training. |
| Pass Criteria | All expected results happen |
| Fail Criteria | 1. After step 6, system fails to load progress 2. After step 10, system fails to load progress 3. After training is completed, UI fails to load or audio does not play |
| Priority | High |
| Pass/Fail | Pass |

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| --- | --- |
| Test ID | IT9 |
| Items to Test | Heimlich Scene – training mode –correct audio and subtitles |
| Pre-Conditions | Heimlich scene selected from the main menu |
| Test Steps | 1. Select training mode from UI 2. Interact with patient 3. Place hands on patient’s stomach 4. Complete Heimlich procedure |
| Expected Results | * At each step, corresponding audio should play and correct subtitles matching audio should show on the screen to inform user about next step |
| Pass Criteria | Expected results happen |
| Fail Criteria | If at any step, audio does not play, or subtitles do not match audio |
| Priority | High |
| Pass/Fail | Pass |

# Non-Functional Test Cases

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| --- | --- |
| Test ID | NFT1 |
| Items to Test | Average Frame Time of 16.6ms per frame |
| Pre-Conditions | 1. Application is running in editor on built on target device 2. Frame time calculation code is added to be printed to the screen |
| Test Steps | 1. Complete any of functional tests 2. Monitor frame time |
| Expected Results | * Displayed values should be equal to or above 16.6ms which match 60 frames per second (1 second = 1000ms; 1000ms/60 fps = 16.666ms per frame) |
| Priority | High |

# Testing Schedule (subject to change)

4-10-2023 – 4-14-2023

|  |  |
| --- | --- |
| **Test Case** | **Person Assigned** |
| FT1 - FT20 | Jeremy Cavallo |
| FT21 – FT40 | Robert Tedeschi |
| FT41 – FT60 | Luka Cvetko |
| FT61 – IT9 | Slav Ivaskiv |
| NFT1 | Luka Cvetko  Robert Tedeschi  Slav Ivaskiv |

4-15-2023 – 4-19-2023

|  |  |
| --- | --- |
| **Test Case** | **Person Assigned** |
| FT1 - FT20 | Luka Cvetko |
| FT21 – FT40 | Slav Ivaskiv |
| FT41 – FT60 | Jeremy Cavallo |
| FT61 – IT9 | Robert Tedeschi |
| NFT1 | Luka Cvetko  Robert Tedeschi  Slav Ivaskiv |

# Non-Functional Test Cases

* Controller response time will not be tested due to the nature of target platform and multiple factors that are out of developers’ control.