Test Cases

for

Silent Screamer

Version 4.0

Prepared by

Dhrumil Sanjaykumar Parikh	**110072217**
Prince Patel	**110072773**
Hetansh Sharad Shah	**110074680**
Yash Navneetbhai Bhalala	**110085755**
Ahmed Abdullah	**110068897**
Vrushit Nileshkumar Bharucha	**110073524**
Ahmed Mustafa	**110078623**
Dola Sai Siva Bhaskar Thota	**110088374**

March 28, 2022

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1. Functional Testing

Title	Description	Precondition	Expected Result	Actual Result
User opens the Lobby	User opens the game and is displayed the first screen of the game, which is the game lobby	User should have a mouse and keyboard attached to the system for selecting options in the Lobby Menu	Game opens in full screen for the user and has the Menu options ready for them to select	Tested the functionality and it satisfies all the conditions
New Game selection	User selects the New Game option to play the game for the first time or to start a new game in the system	Game should be opened in full screen for the User	Users should be able to select the New Game option using a mouse click and they should be redirected to a new screen which is the game itself	Users can select the new game option and can start the game
Escape Option	User selects this option to exit the game	Game should be opened in full screen for the User	The game should be closed after clicking the Escape Option in the Lobby	The User Screen gets an exit from the game and the game is closed with the User being able to see the working screen of their equipped computer
Player Movements in the game	: The User clicks on the four buttons which are W, A, S, and D to roam and move in the game for exploring the environment	The User is equipped with a working keyboard and mouse. Also, the game should be on full screen for the user.	The User can roam around the initial map of the environment using the W, A, S, and D keys and mouse for looking around.	The functionality works as expected and the User can explore the Environment which includes Mansion and Graveyard.
Weapons and Object Pickup	User picks up the objects and weapons to be used in the game when interacting with ghosts in the environment	User has access to a working keyboard and mouse which are used to control the player's movements. Also, the Player screen should be fullscreen	The User should be able to pick up the objects and weapons using the "E" key.	The User can pick up the object and weapons in the hand by pressing the "E" key.

Night Vision in the environment	Player uses Night vision to explore the environment as the maps are designed in the horror scenario	The User is equipped with a working Keyboard and Mouse in the game so that they can press the required key to use the night vision	The User presses "N" on the keyboard and the Night Vision appears in the Scene	Yes, the User can enable the Night Vision in the system by pressing the "N" key on the keyboard
Flashlight in the environment	Player uses a flashlight to explore the environment as the maps are in the night theme	The User is equipped with a working Keyboard and Mouse in the game so that they can press the required key to use the night vision	The Flashlight appears in the playing environment when the user presses the "F" key on the keyboard	The Functionality works as expected by showing the flashlight working in the system of the game when the user presses the "F" key
Inventory	The Player uses the inventory by pressing a specific key on the keyboard and selecting the required weapon and using the increased health objects	The user is equipped with a working mouse and keyboard so that they can select the desired options present in the Inventory	The User can select a weapon and can even change the weapon by going into the inventory and selecting another Weapon. They can even use the objects to increase their health	The functionality works as expected in the gaming environment
Player Attacks the ghosts	The user can kill any ghosts present in the game in the mansion and graveyard maps by selecting a weapon from the inventory	The User is equipped with a working keyboard and mouse so that they can use the movement controls to kill the ghost in the game. Also, they must have a weapon in hand to kill the ghost	The User decreases the health of the ghost by striking them using the weapon in hand by clicking the first mouse button click. The Ghost dies after some hits and disappears from the game	The User can kill ghosts using the mouse click and approaching them
Ghost Attacks players and it decreases	The Ghost senses the Player in the surrounding	The player should be present in the surroundings of the ghost so that	The Ghosts detect the player and approach them to attack	The functionality fails in some scenarios when the ghosts are not

the player's health	environment and attacks the Player. The Player's Health gets decreased in the hits	they can sense the player's presence and approach to hit the player	them with a strike and the player's health gets decreased	able to detect the player and they attack in the open air with any objects present in front of them. But in a general scenario, the Ghost can attack the player and their health gets affected
Player is redirected to the lobby when their health becomes completely zero	When the ghost attacks player and their health become zero in the last, the user is redirected to the home screen to start the game again from the beginning	The Ghosts can sense the presence of the player and they approach them to attack them	When the player faces too many attacks from the ghosts in the mansion or graveyard, their health gradually starts to decrease and at a point, it becomes zero, and the player is redirected to the home screen or the lobby	The functionality works as expected and the player is redirected to the lobby to select the option again or to exit the game
Reward System in the game	The Player's rewards get increased whenever they kill a ghost in the game	The player is equipped with a weapon and can kill any ghost present in the system	The rewards keep on increasing throughout the game whenever the player kills any ghost in the game in the graveyard or the mansion site	The player can see the updated rewards every single time they kill any ghost. The updated rewards are seen in the top right corner of the player's gaming screen
Special Weapon access in the game	The player can access the special weapon in the game from the inventory after reaching a milestone in rewards and with one single shot, they can kill the ghost.	The player should reach specific reward points in the game by killing the ghost in the game	The player can see the special weapon which is a sword in the inventory when they reach the milestone in rewards and can equip it and kill the ghost.	The functionality works as expected and the user can access and equip the special sword after crossing a milestone in the game.

Voice Command in the Special Weapon	The player uses a keyword and says it to kill the ghost in the game using a special weapon	The user can access the special weapon in the game	Whenever the user says a specific word, the player kills the ghost with a strike of a sword and the ghost dies immediately	The player can kill the ghost in one shot by saying the specific keyword in front of the system and the system detects the keyword the player in the gaming environment strikes the nearby ghost with the sword and the ghost dies immediately

2. Integration Testing

We adapted the strategy of incremental testing for our modules whereby whenever we want to test a module X, we will test all modules that have been introduced before X. We did this to make sure that our game remains as robust as possible.

The following is the list of modules in the high-level design of our game. They were built in the same order as listed below.

Modules:

1) Maps Module:
   This module consisted of integrating maps into the scenes of Unity. We have two such designs, namely, graveyard and the mansion and they both were tested by running the game on Unity Engine.

2) First Player Controller Module:
   This module is with regards to the player in the game. It has a 3D camera attached on it and hence it is the eyes in the game. After the introduction of this module, we tested it by first making sure the FPS controller works fine and according to the design specifications and then we tested that our maps are functional as well.

3) Ghost Controller Module:
   This module controls all of our ghost's lifecycles, from their spawning to their ability to kill and as well as their deaths. We integrated it into our system after FPS controller was successfully tested. Ghost controller's module testing was a bit tricky since it had a lot of dependencies such as player's health, ghost's health etc. Hence, we performed the functional testing for this module after its integration and then we ran a happy flow of all of our previous modules as well.

4) Accessories Module:
   This module consists of extra accessories in the game like the flashlight and the night vision mode. We performed the functional testing for this module after its integration and then we ran a happy flow of all our previous modules as well.

5) Inventory Module:
   This module consists of an additional screen that pops up as an interactive inventory on pressing the button "I" on the keyboard. We tested this module by making sure that the transitions between the change of screens is smooth, user can transition between the game screen and inventory screen whenever he wants to. Again, we also tested if our previous modules were functioning after its integration.

6) Weapons Module:
   This module consists of all the weapons present in the game and also our user's ability to pick them from the ground, select them from inventory and eventually use them against ghosts. We tested this module by different use cases such as hitting ghosts with weapons one by one and checking whether they were accurately damaging the ghosts.

7) Rewards Module:
   This module is important since it gives rewards and also enables the use of the main weapon of our game i.e. the sword. We tested it by making sure that the points were being calculated accurately. After its integration, we tested all previous modules again as well.

8) Voice Command Module:
   This module was the last to be integrated. It enables the sword to be used in game using the voice command "Shoot". We tested it by shouting "Shoot" while having no weapon in hand, having sword in hand, and having other weapons in hand. At the end, we tested the entire previous modules again and also ran a happy flow before we concluded our game.