**Game Name:** Window to your soul: A VR Horror show.

**Team:** BBD

**Members:** warl0ck, gtvgd03, virtuahost

**Achievements:**

The following goals of the project were achieved as listed:

1. A VR game working with oculus rift.
2. Character movement based on mouse and keyboard with head movement tracked by rift.
3. Simple puzzle mechanics (finding a key).
4. Different resource mechanics to motivate the player and make the gameplay challenging.
5. Wisp mechanics to guide the player.
6. Mechanics for player to look about an object in the game(map).
7. Mechanics to motivate player to look about in rift environment. E.g. pumpkin chasing the player in the first room. The player have to look around to dodge the pumpkins. Also the static fireball skeletons in the second enemy room ensures the player have to look around to dodge the fireballs from all the skeletons.
8. Environmental effects such as strobing lights, pulsating effects on GUI were implemented to motivate the player.
9. Implemented moving walls, which close in on the players to create a sensation of claustrophobia. The moving walls are affected by the amount of sanity of the player.
10. Directional audio was used to polish the game effects.
11. Introduced multiple enemy mechanics to improve the “Fun/Challenge” element of the game.
12. Player can mark walls with a red cross mark.

**Challenges Faced:** We faced the following challenges while working on this project.

1. Game idea was to motivate the player with subtle hints and mechanics to find clues and eventually beat the game. During the alpha build play testing we found that scare mechanics and subtle clues were not as apparent to all players. Reactions of different players were quite different to the scare mechanics and subtle clues. We realised that in the given amount of time for the project we would not be able to achieve the balancing required to fine tune the scare effects.
2. While designing the moving walls we faced a challenge where the character was able to walk through the walls on to the outside of the designed level. We were able to fix this with a group brainstorming. The issue happened to be due to collision detection not working when the player and the wall moved in the same frame and the player’s collider moved into the same space of the wall’s collider mesh. We fixed the issue by placing a trigger on the player and when OnTriggerStay is called on the wall we move the character back into the game space.
3. Combining ideas from different members of the team as the game grew and tying all the ideas into relevant game mechanics.
4. GUI synchronization inside oculus rift.

**Targets not achieved:**

1. Extended targets were not met.
2. Inspect objects mechanics was implemented but the game mechanic was not widely used. After alpha build we realised that a slow paced horror game would not be possible in the time available to us.
3. Slow paced puzzle solving horror game was abandoned in favour of a faster paced enemy based horror game. Mechanisms had been developed for the slow paced horror game but were modified later on to fit a faster paced game.

**Key Takeaways:**

1. Playtesting is of paramount importance. As developers we got tunnel vision in regards to the shortcoming of our game. Playtesting by other class members helped us a lot.
2. Environmental effects are quite difficult to balance.
3. Psychological effects may not play out in the sameway as envisioned as different players behave in very different ways to the same effect.
4. Developers come up with hacks. While initial testing difficulty of the game forced one of the team members to come up with a mechanic to break the dodge mechanics in the game.
5. Mini map implementation was done by using a render texture on a plane. The render texture was attached to a secondary orthographic camera. To stop lights from displaying in the minimap a script was used to disable all lights during OnPreCull. Relevant game objects were displayed on the minimap using a culling filter.

**Conclusion:**

The experience gathered by working on a new technology has been a very enriching experience to us. Moreover we learnt that human psychology and pure puzzle based mechanics in a video game requires a lot of playtesting to balance. We learned the use of nav meshes, bump mapping and deferred lighting. The biggest takeaway from the entire exercise was that we made the mistake of assuming that the audience had the same level of gaming experience as the developers had. This led to us making decisions which appeared to have a lot of meaning to us, but was not quite apparent to all the play testers.

In retrospect, if given another go at the same project with the same timeline we would like to start with the same game idea we used at the end from the beginning. Also we would have more people play test as much as possible as that would enrich our game. Of course as we would get more time to work on the game we would also like to design a bigger level with more variations of enemies and puzzles.

**Source Code Available Here**:

https://github.com/virtuahost/RiftHorrorShow/tree/recover-arindam-branch