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CMSC388M
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VR Triwizard Tournament

Elevator Pitch

Our project is a VR game for the Triwizard Maze from *Harry Potter*. It consists of an extended maze environment that the user can teleport through to discover challenges and progress towards the center, where they will finish the game. Our game will be developed for the Google Daydream headset we've been utilizing throughout the semester.

Why VR?

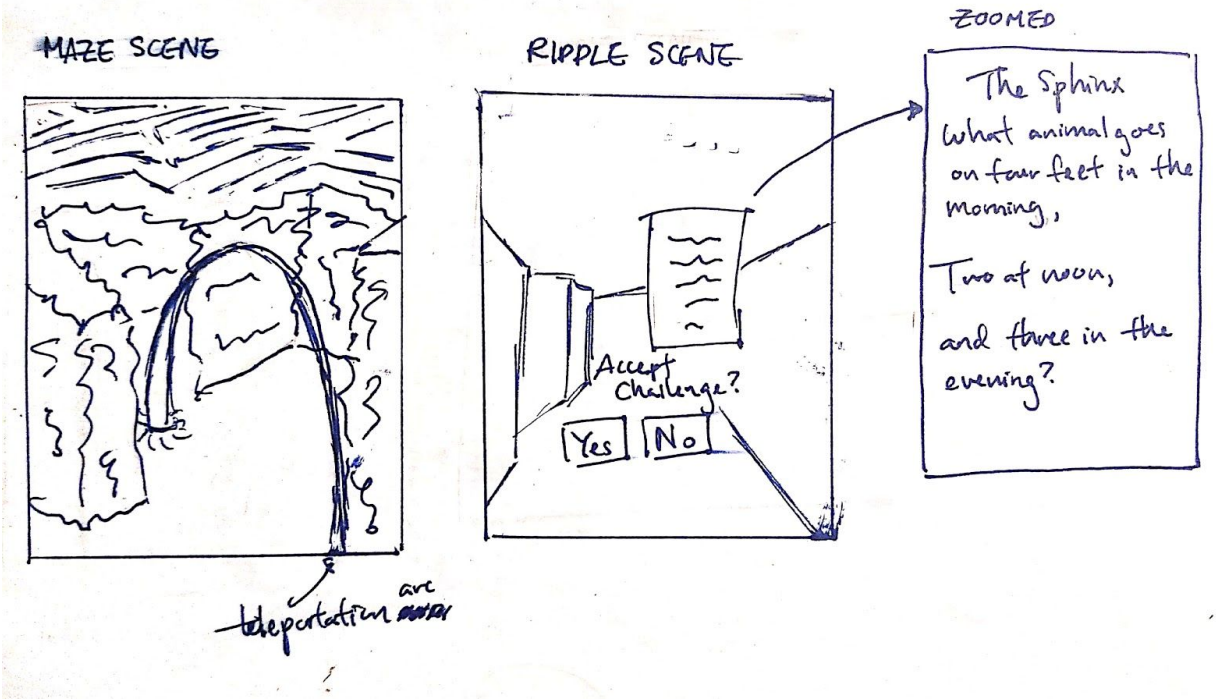
Our full project idea would ideally be a VR recreation of the Triwizard Tournament in *Harry Potter*. Our implementation for the course would be an imitation of just the Triwizard Maze portion of the tournament. The project would include a robust maze, supplemented with various riddles and mini-games themed around *Harry Potter* and the obstacles the characters in the novel faced.

Creating a VR version of the Triwizard Tournament would be an immersive experience meant to remove the user from the real world and place them in a completely different, fantasy-like world. If this were a traditional 2D PC game or mobile application, the game would not have nearly as much impact or immersive qualities as a VR game. Because the *Harry Potter* series falls into the category of fantasy novels, the appeal of the series is being able to escape from the real world. The same analogy could be made as to why visiting *Harry Potter World* is such a popular attraction, yet there doesn't seem to be any video game that has hit the market successfully.

Scenes

Our game will have 5 scenes - an intro scene, a play scene, riddle scenes, a fail scene, and a win scene. The intro scene will introduce the player to the game. The play scene will consist of the actual maze. As users move through the maze, they'll run into riddle scenes for the riddles that are stationed throughout the maze. The player will have three total guesses for the entirety of the maze - if they use all of the given guesses, they will fail the game and be taken to a fail scene. Likewise, if they reach the center of the maze, they win the game and will be taken to a win scene. The user will always have access to a pause menu.

Storyboard



UX Practices

Our app will incorporate the 12 heuristics of good VR in order to provide a good experience for our users. It will be physically and digitally safe, protecting the users from damaging themselves and others by utilizing the teleportation mechanism for movement, keeping them in a fixed position in the real world in order to prevent contact with physical objects in the real world. We'll also make it shapeable, changing based on the user's input and completion of challenges so that the virtual world feels malleable and custom to the player as their actions affect their gameplay. In order to avoid making the user frustrated or dizzy in trying to move on their own in 3DOF, we will be making use of Daydream's teleportation model from the Google Daydream VR SDK.

Development Tools

We'll be using Unity to develop our game for the Daydream VR headset, along the lines of our Barrel Bouncer VR project. This will utilize the Google Daydream SDK and its associated components to be compatible with the headsets. Other SDKs/APIs/tools will be added as needed, but we don't anticipate many other additions during development with the possible exception of plugins for terrains, assets, etc.

Development Timeline

Due Date	*Task*	*Assigned To*
11/21	Design of Riddle Scenes	Annie
11/21	Level Design of Maze Scene	Shruti/Cameron
11/21	Design of Intro, Fail, Win, and Pause Scenes	Tommy
11/22	Write up mid-development update & submit.	All
12/3	Code game & VR functionality	All
12/6	Test & Submit Final Project	All

1) Terrain - Annie 11/17
2) Movement functionality - Cameron 11/20
3) Riddles - Tommy + Annie 11/20 (progress update)
4) Play pause intro fail win scenes - Shruti 11/20 (progress update)