

**Team Submission:  
Individual Technology Proficiency  
Project MNPUL8R  
Team 34**

Keana Mowery  
Vincent Orłowski  
Fernando Flores  
Yeong-U Lee  
Alexandria Heston

## **Keana Mowery**

As the lead concept designer for this project, I will present a full suite of concept art for all elements of the game which are to be designed. This will include, but not be limited to: environment, interactive objects, loading screens, and menus.

In addition, as UX designer and modeler, a duty I share with Alexandria, I will demonstrate my capabilities in modeling in the program Blender with a sample low-poly environment, and interactive objects as well. In addition, I will demonstrate my capabilities with game-related UX concepts, such as gameplay and menu design, through creation of UX flows and sample interface designs.

## Vincent Orlowski

As one of the Unreal Engine and game functionality programmers, my focus will be to create the object classes for game functionality and to ensure that different object classes interact with each other and behave in a way that provides a fluid gaming experience. These classes will hold the data and contain the game's functional parts. That includes player interactions, tracking, object properties, and game environment objects.

Our game is going to require multiple types of player interaction, as well as the need to track the state of certain objects in order for other objects to allow some player interactions. In order to test some of this, I will create a basic sandbox demo focused upon this type of game functionality. It will likely include some basic functionality related to the actual gameplay, and like the end product itself should be in an open environment where the user may perform any of the interactions at any time. This will be key to the functionality of our game as it is a simulation with interactive puzzles. Fernando and I will be working together on a lot of this.

## **Fernando Flores**

As one of the Unreal Engine lead developers my focus remains on developing custom C++ classes to drive the functionality of our virtual reality game. These functions will provide the necessary feedback and events a user can expect from playing a game. The events will include timed sequences, proximity based event triggers, and toggles. This functionality is expected in most games in general.

The core of our game is driven by solving puzzles. These puzzles can only be solved through interaction within the world. My demo for the spring will allow the user to explore a basic “playground” level where various in game interactions will be available for the user to experience. This playground level will provide the user with the type of mechanics the final game will require for a user to solve puzzles and complete levels.

# Yeong-U Lee

As a programmer who is responsible for interaction between Orion's Leap Motion hand tracking device and VR system, I will demonstrate how Leap Motion acquires analog data from the user and translate the data into Unreal Engine to perform an action according to the user's move.

I would like to specifically demonstrate the followings:

- 1) Types of raw data we are acquiring from Leap Motion
- 2) How we analyze the data to create certain moves in Unreal Engine
- 3) Perform an interaction in the game

# Alexandria Heston

As the interaction designer for this project, I will be designing and assisting with the integration of interaction design flows for the game. I will be concerned the most with creating a set of IX flows for our game so as to set a solid foundation for the developers to begin the coding process without any disturbances, confusions, or discrepancies.

In addition, I will demonstrate my capabilities as a modeler by using modeling programs such as Maya, Mudbox, and Blender to create our low-poly environment and objects. As well, I will be working closely with Keana to assist in the creation of concept art in this game by communicating Interaction Design concepts and requirements to her, so as to create successful high-resolution mockups of menus, loading screens, and model/environment mockups.