Greenland Sagas
Description:
For my Capstone Project, I will be building an action adventure VR game based around the Viking Village that is established by Erik the Red in Greenland. For reference, here is the complete story:

You found yourself in the Viking Village established by Erik the Red in Greenland. Your goal is to find 3 magical glowing orbs that light up when you look at it directly. In order to find these 3 orbs you have to talk to the soldiers who are with Erik the Red and even the Earl himself to get clues on finding and obtaining the orbs.

In the process, you discover what it feels like to be a Viking for a day as you explore landscape and see first hand the Vikings at work. The RPG elements also exemplifies a story based approach to a VR game allowing the viewer to be immersed not only in the world, but with its characters.

To begin the experience, viewers will see a start menu with a description of the environment of the app along with seeing the village from a sky view. They will see to the right side of their screen they will see some menu UI showing game messages, the player's life count, orbs collected count, and an inventory screen. Around the player near the bottom are movement squares that when the player gazes or touches will move the user a certain direction.


When viewers interact with the menu, they will fall to the ground level of the village. They can then move around and start interacting with items and characters by gazing or touching them with their input viewer. The input viewer will change shape on hovering an interactable character or item.
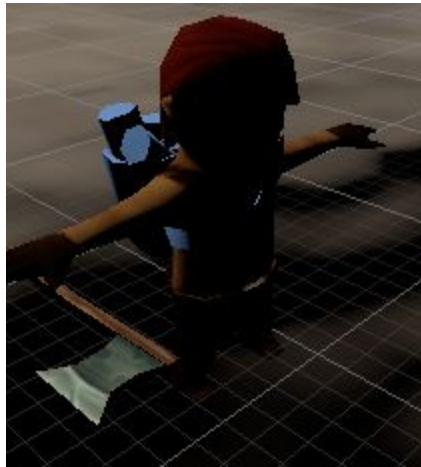
Features And Dependencies:
1. 3D Models + Animations (Reference Images)
    1. Orb model and animation
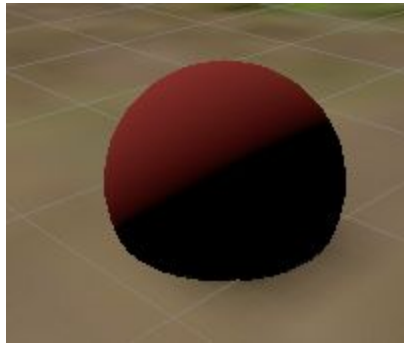
    2. Key Figure Characters

    3. Viking Warrior

    4. Viking Worker

5. Glaumur's Traitor Warriors

2. Game Loop
   1. Interaction for player with start menu will start the game, the player can then move around by gazing/touching on the squares on the floor.
   2. Procedurally talk to different characters to discover the locations of the 3 color orbs.
   3. In the process, the key figure characters will tell the player how to attain the orbs and what items are required to do it.
   4. As the player navigates the landscape, enemies may appear which will harm the player.
   5. If the player dies after being attacked, then the game will end transporting the player back to the start menu to restart.
   6. After all the orbs are found, then the player will be transported back to the start menu with a winning message and the chance to start the game again.
3. Other Effects
   1. Lighting to make the experience feel more of the Viking empathy is scattered throughout the buildings via torches.
   2. Spatial Sound effects for falling to the ground, men marching, and men chopping.
   3. Procedural navigation mesh to have characters walk around objects.

Capstone Scoping
Features And Dependencies:
1. 3D Models + Animations (Reference Images)
   1. Orb model and animation
      1. Sphere models with different colors for each orb
      2. Hovering over them will see each one up light up

2. Key Figure Characters
    1. All key figure characters duplicated from the same model, but with different names.
    2. They are important characters that provide clues or markers on the maps.
    3. They wear a blue backpack and interacting with them you will know who they are.
    4. They provide clues and info on where and how to find the orbs.
    5. They have idle animations.
3. Viking Warrior
    1. All warrior characters duplicated from the same model, but with different names.
    2. Followers of Erik the Red, you can talk to them, but they won't provide much help.
    3. They have normal walking patrol animations.
    4. Their AI is designed to roam around the village patrolling.
    5. Uses AI to move characters around the different areas of the landscape.
4. Viking Worker
    1. All worker characters duplicated from the same model, but with different names.
    2. Followers of Erik the Red, you can talk to them, but they won't provide much help.
    3. Their main role is to chop wood and perform lumbering animations.
    4. They are located primarily in the lumbering yard.
5. Glaumur's Traitor Warriors
    1. All traitor characters duplicated from the same model, but with different names.
    2. Followers of the traitor Glaumur and located in the forest.
    3. They actively patrol the forest area and can attack the player causing damage to the life count potentially causing the player to die and lose the game.
    4. Uses AI to switch between patrol, chase, and attack animations.
2. Game Loop
    1. Interaction for player with start menu will start the game, the player can then move around by gazing/touching on the squares on the floor.
        1. Applies locomotion by using the squares as waypoints to move the player along the landscape.
    2. Procedurally talk to different characters to discover the locations of the 3 color orbs.
        1. **Revised: Will eventually work on having message view appear more aligned in player's line of sight in VR version.**
    3. In the process, the key figure characters will tell the player how to attain the orbs and what items are required to do it.

4. As the player navigates the landscape, enemies may appear which will harm the player.
5. If the player dies after being attacked, then the game will end transporting the player back to the start menu to restart.
6. After all the orbs are found, then the player will be transported back to the start menu with a winning message and the chance to start the game again.

3. Other Effects
    1. Lighting to make the experience feel more of the Viking empathy is scattered throughout the buildings via torches.
        1. Various point lights including the main directional light acting as the sun.
    2. Spatial Sound effects for falling to the ground, men marching, and men chopping.
        1. Various GVRAudio used.