THE ANIMAL HUNT

INFO 5900: VIRTUAL REALITY AND ITS APPLICATIONS

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ABSTRACT

The Animal Hunt Game is a virtual reality game designed to provide an immersive hunting experience for the players. The game is designed to showcase a jungle environment, where players can hunt different animals with varying levels of difficulty. The target audience for this game is people who are interested in hunting cannot pursue these activities in real life due to various reasons. The objective of this game is to provide a realistic hunting experience to the players while promoting the conservation of animals.

INTRODUCTION

The Animal Hunt Game is designed to provide an immersive experience to the players, where we can hunt different animals in a jungle environment. This Game consists of two levels, first level has few animals where as, the difficulty level for the second scene is increased with adding more animals.

IMPLEMENTATION

The game environment is designed using 3D models created in 3ds Max and Google Sketchup

VISION:

Textures and 3D models are in the game environment. The jungle environment is designed with various textures such as grass, mud, and rocks that provide a realistic experience to the players.

SOUND:

Ambient sounds such as bird chirping, animal noises, and environmental sounds are used to provide an immersive experience to the players.

Instructions

Close

|	
Scope	Mouse Right Click
Walk	W,A,S,D or Arrow keys
Shoot	Mouse Right Click
1 kill	bear - 400(points) deer - 300(points) wolf - 200(points) goat - 100(points)
Pause	Escape

CHARACTERS/AVATARS:

The player can interact with the environment using the keyboard and perform actions such as giving a command to follow or stay.

PLAYER:

A First Person Controller is added to the game environment that allows the player to move around in the environment and interact with different objects.
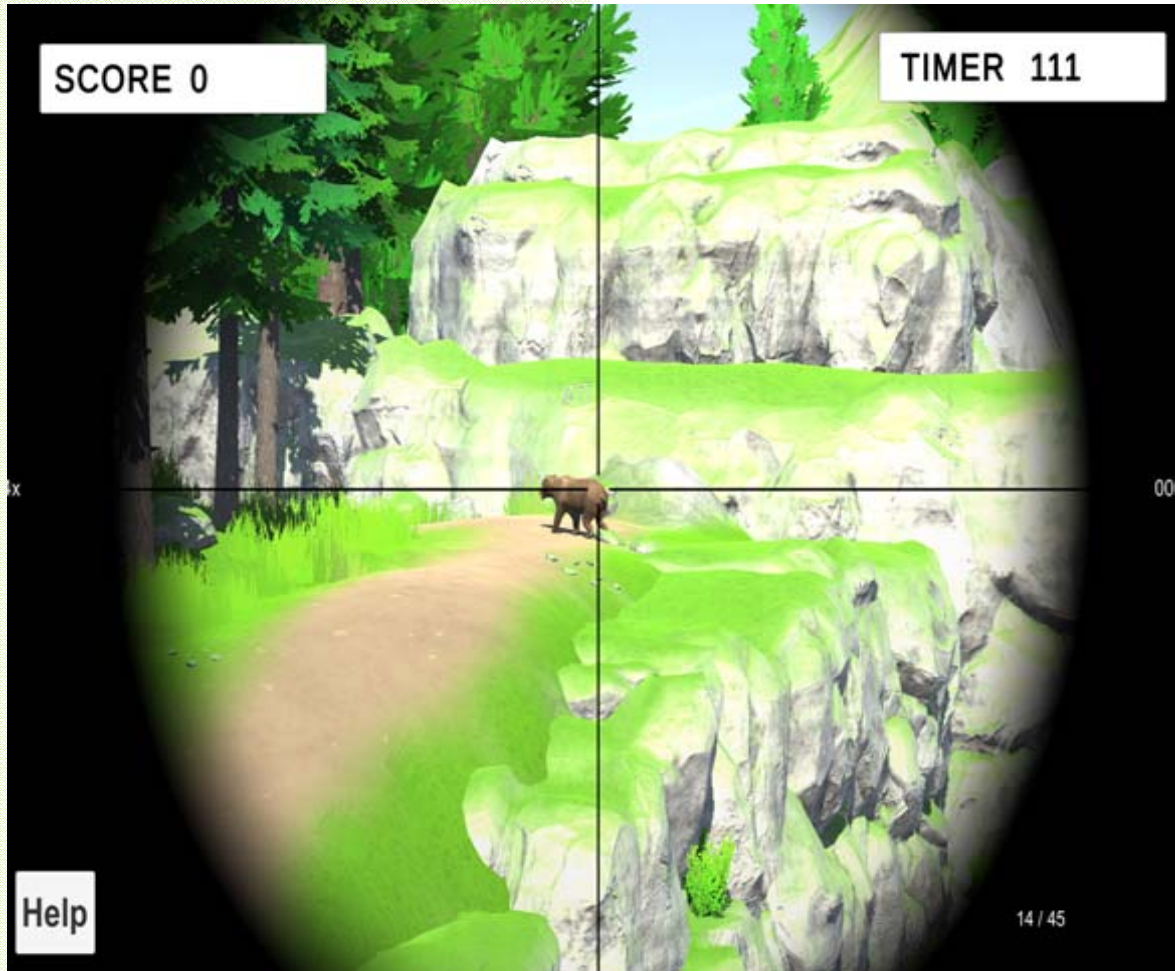
SENSORS:

Three different types of sensors, i.e., Score, Time are implemented in the game environment. These sensors are used to detect the player's actions and provide a realistic experience to the players.

INTERFACE ELEMENTS

START HUNTING

Start

Levels

level1   level2

Level Finished

Next

SCORE : 1800

GAME OVER

HOME

Help

The game interface is designed with menu items such as buttons that allow the player to perform different actions such as, Starting, pausing the game and Return Home, Also opening two levels and reloading.

ANIMATIONS

The animated animals **Goat**, **Wolf, Deer, Bear,** Movement of the **Leaves** and the **Water** flowing are implemented in the game environment.

Paused
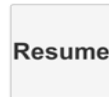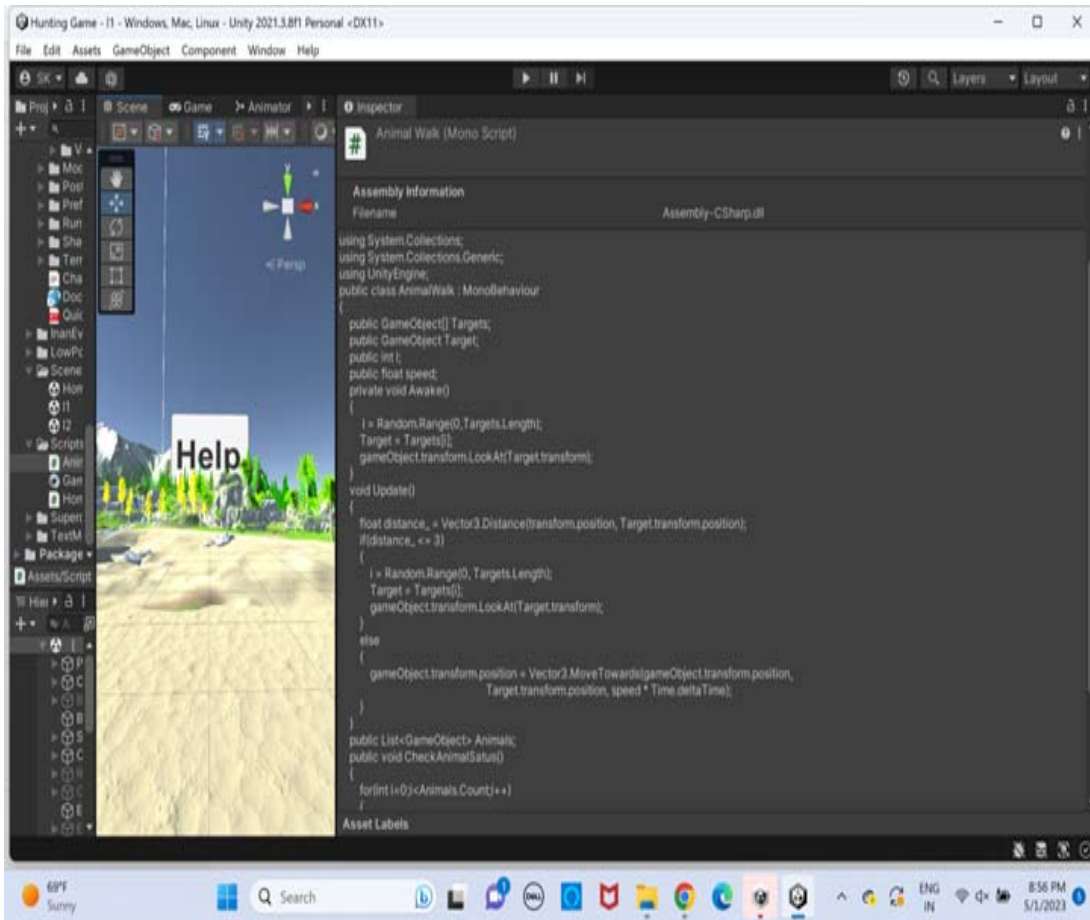
Resume

INTERACTIVITY :

User-triggered events such as shoot, reload, pause, and resume are implemented and we can view the distance between the gun view and for the every individual animal in the game environment. These events are triggered by the player's actions and provide a realistic experience to the players.
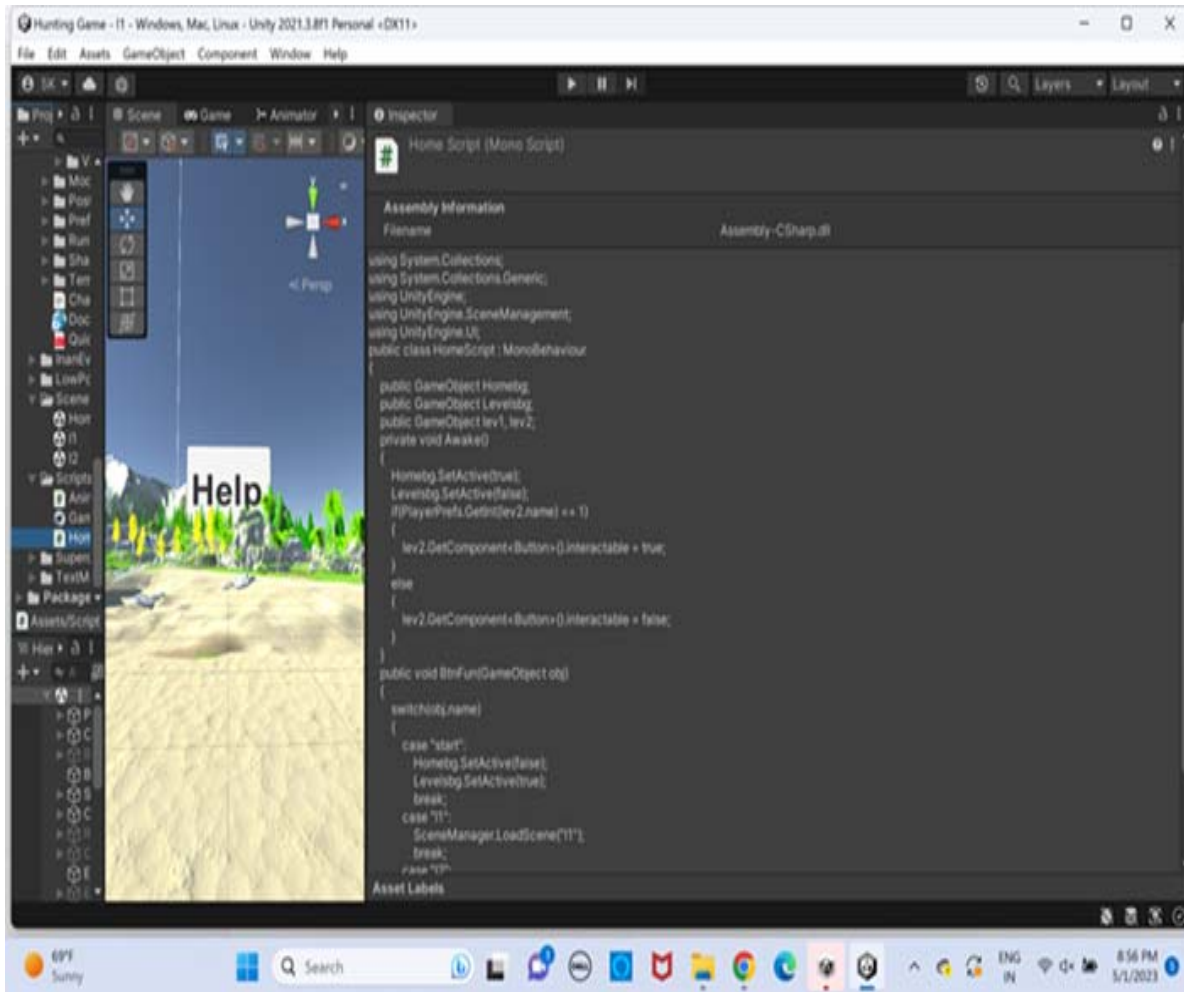
PROGRAMMING

C# was used to implement several functionalities such as animal walking, game manager, and home script.

Animal walking:

The animals were given a path following behavior to move around the environment in a realistic manner.

The home script was responsible to allow the user to navigate the environment and interact with different objects using keyboard input. The home script was also responsible for implementing different types of sensors to detect user interactions, such as proximity sensors to detect when the user was near an object.
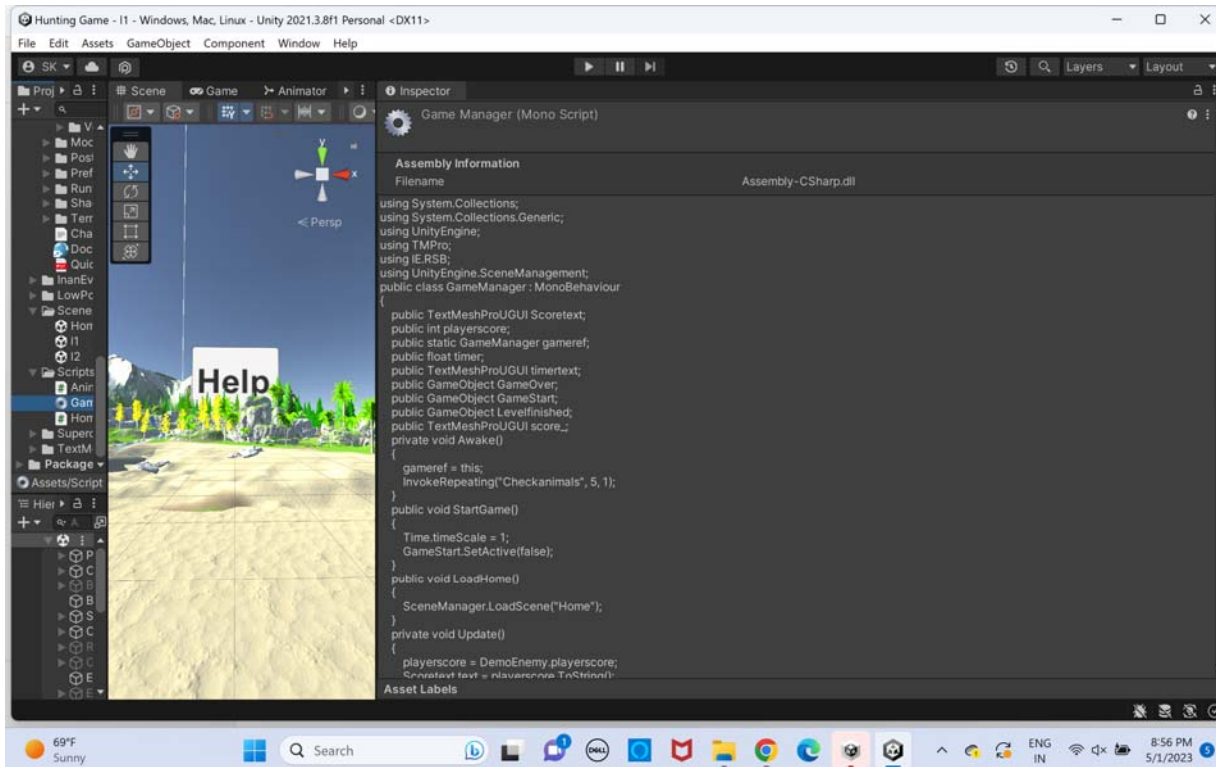
The game manager was responsible for managing different aspects of the game, such as scoring, timing, and game over conditions. This functionality was implemented using C# scripts to ensure that the game flowed smoothly and provided a seamless user experience.

CONCLUSION

The animal hunt game is a VR application that was designed to simulate a hunting environment. The game has several features, including 3D models, textures, animations, sound, interactivity, and artificial intelligence. This project can provide an immersive and realistic hunting experience that could be used for entertainment. The game's target audience is anyone interested in hunting, nature, or outdoor activities. The application uses virtual reality technology, which is an appropriate tool for creating immersive experiences that cannot be replicated in the real world. VR provides users with a sense of presence and allows them to interact with virtual objects and environments.

"The main theme of the project is to improve the Focus and Concentration of the player."

FUTURE SCOPE

Multiplayer functionality: Adding a multiplayer mode to the game would allow players to compete against each other or work together to hunt animals. This would require additional programming and design work to implement, as well as consideration of network performance and stability.

More complex AI behavior: The AI behavior for the animals could be made more complex and realistic, with animals responding to sounds, smells, and other environmental cues in more dynamic ways. This would require additional programming and design work to implement.

Mobile platform compatibility: The game could be ported to mobile platforms such as iOS and Android, potentially reaching a wider audience. This would require optimization of the game's performance and control scheme for touch-based inputs.

REFERENCES

Here are some general references that might be useful for a virtual reality project:

Vizard documentation: https://docs.worldviz.com/vizard/latest/

Unity 3D documentation: https://docs.unity3d.com/Manual/index.html

Google SketchUp documentation: https://help.sketchup.com/en/sketchup

3ds Max documentation: https://help.autodesk.com/view/3DSMAX/2022/ENU/

VRML2.0

specification: https://www.web3d.org/documents/specifications/14772/V2.0/

QuickTimeVRdocumentation:
https://developer.apple.com/library/archive/documentation/QuickTime/QT7ProgOnWindows/QTQT7Prog_Win.pdf

MPEG video documentation: https://mpeg.chiariglione.org/standards/mpeg-video

THANK YOU