INFO 5900 PROJECT Presentation

Virtual Campus Tour:

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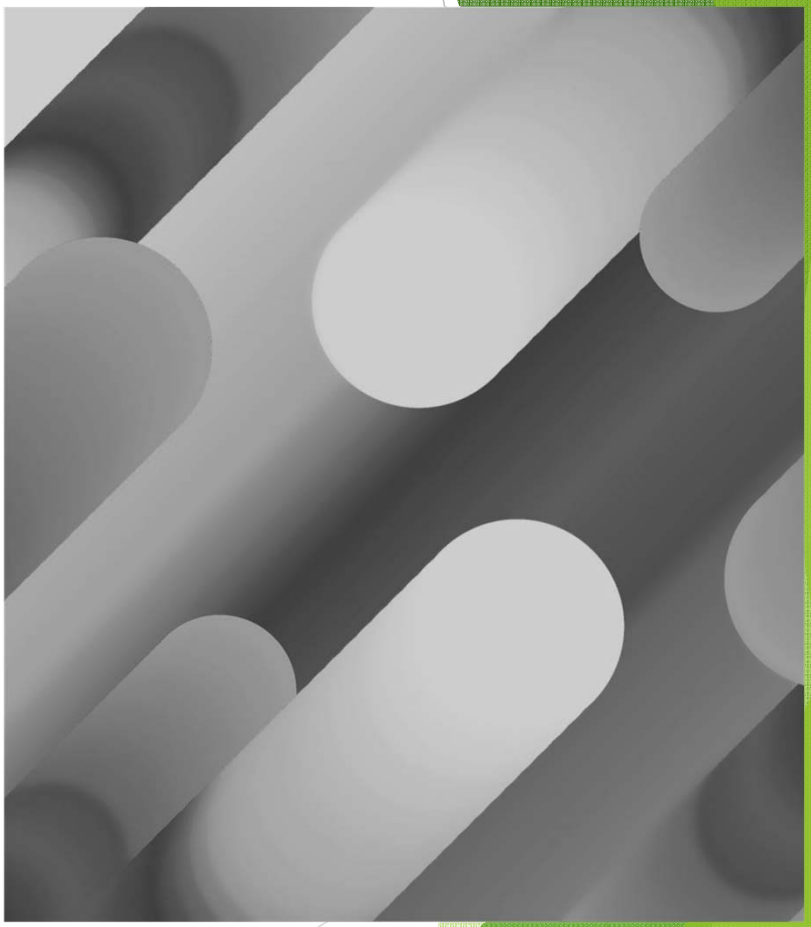


Abstract

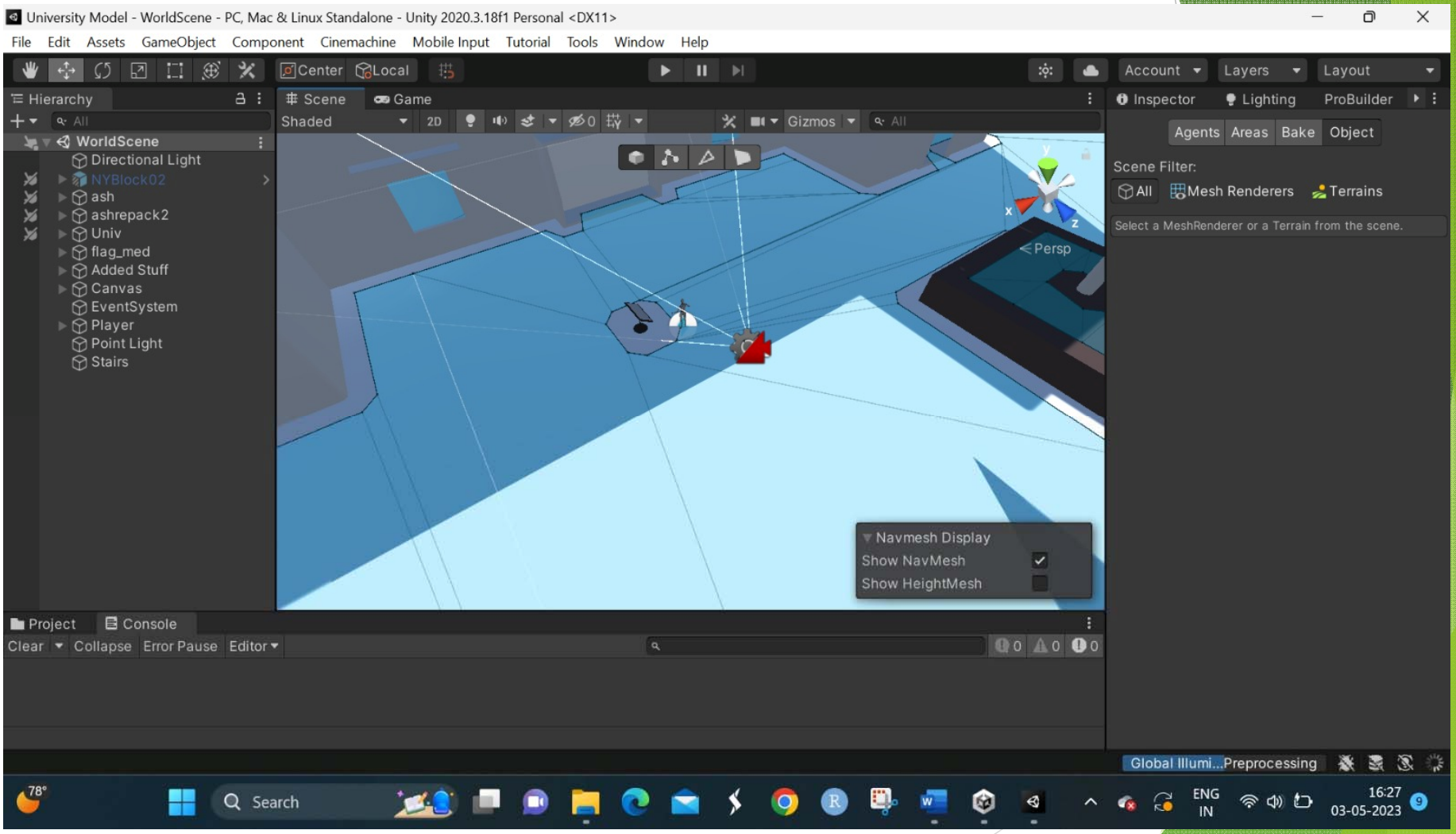
- The Virtual Campus Tour project is to create a virtual reality application that would allow prospective students to explore the campus and its resources.
- The software will be developed to deliver an immersive experience of the campus, authentically representing its various locations, facilities, and services.
- This project will be valuable in providing prospective students, their families, and anybody interested in seeing the campus with a genuine and interesting experience.

Objective

- Goal:
- Develop a virtual campus tour that allows prospective students to explore the campus and its facilities.
- Objectives:
  - Develop a virtual environment that accurately represents the campus and its facilities.
  - Implement interactive features that allow users to navigate the virtual environment and access information about various locations on campus.

Modelling

- The virtual environment will be created using Unity.
- The environment will include buildings, trees, people, furniture, landscaping elements, etc.
- The geometry will accurately represent the campus and its facilities.
- Textures will provide detail.
- Animations will simulate movement within the environment, such as opening and closing doors.


University Model - WorldScene - PC, Mac & Linux Standalone - Unity 2020.3.18f1 Personal <DX11>
File Edit Assets GameObject Component Cinemachine Mobile Input Tutorial Tools Window Help
Center Local
Account Layers Layout
Hierarchy
WorldScene
Directional Light
NYBlock02
ash
ashrepack2
Univ
flag_med
Added Stuff
Canvas
EventSystem
Player
Point Light
Stairs
Scene Game
Shaded 2D Gizmos
Persp
Navmesh Display
Show NavMesh
Show HeightMesh
Inspector Lighting ProBuilder
Agents Areas Bake Object
Scene Filter:
All Mesh Renderers Terrains
Select a MeshRenderer or a Terrain from the scene.
Project Console
Clear Collapse Error Pause Editor
Global Illumi...Preprocessing
Search
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Softwares:

- Unity software
- Computer with sufficient processing power and graphics capabilities to run the Unity software and the virtual environment.
- 3d’s max
- Sketchup

Programming

- In this it will shows the avatar when reaches the door it will opens and closes respectively.

- The code shows the navigation of each block. When the avatar reaches the navigation screen it will navigate to each block, and it shows the history of each block.

CanvasController.cs InteractScript1.cs

D: > Unity > Projects > University Model > Assets > Scripts > InteractScript1.cs

```
1   using System.Collections;
2   using System.Collections.Generic;
3   using UnityEngine;
4   using UnityEngine.InputSystem;
5
6   public class InteractScript1 : MonoBehaviour
7   {
8       void OnTriggerEnter(Collider other)
9       {
10          CanvasController.colliderID = 1;
11          CanvasController.inCollider = true;
12      }
13
14      void OnTriggerExit(Collider other)
15      {
16          CanvasController.inCollider = false;
17          CanvasController.colliderID = 0;
18      }
19  }
20
```

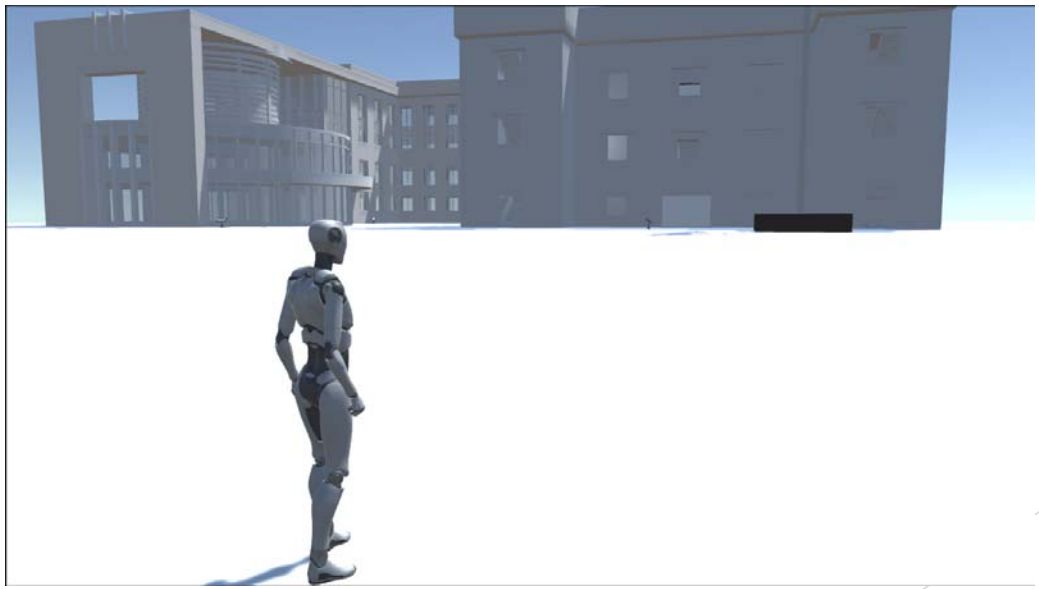
Implementation

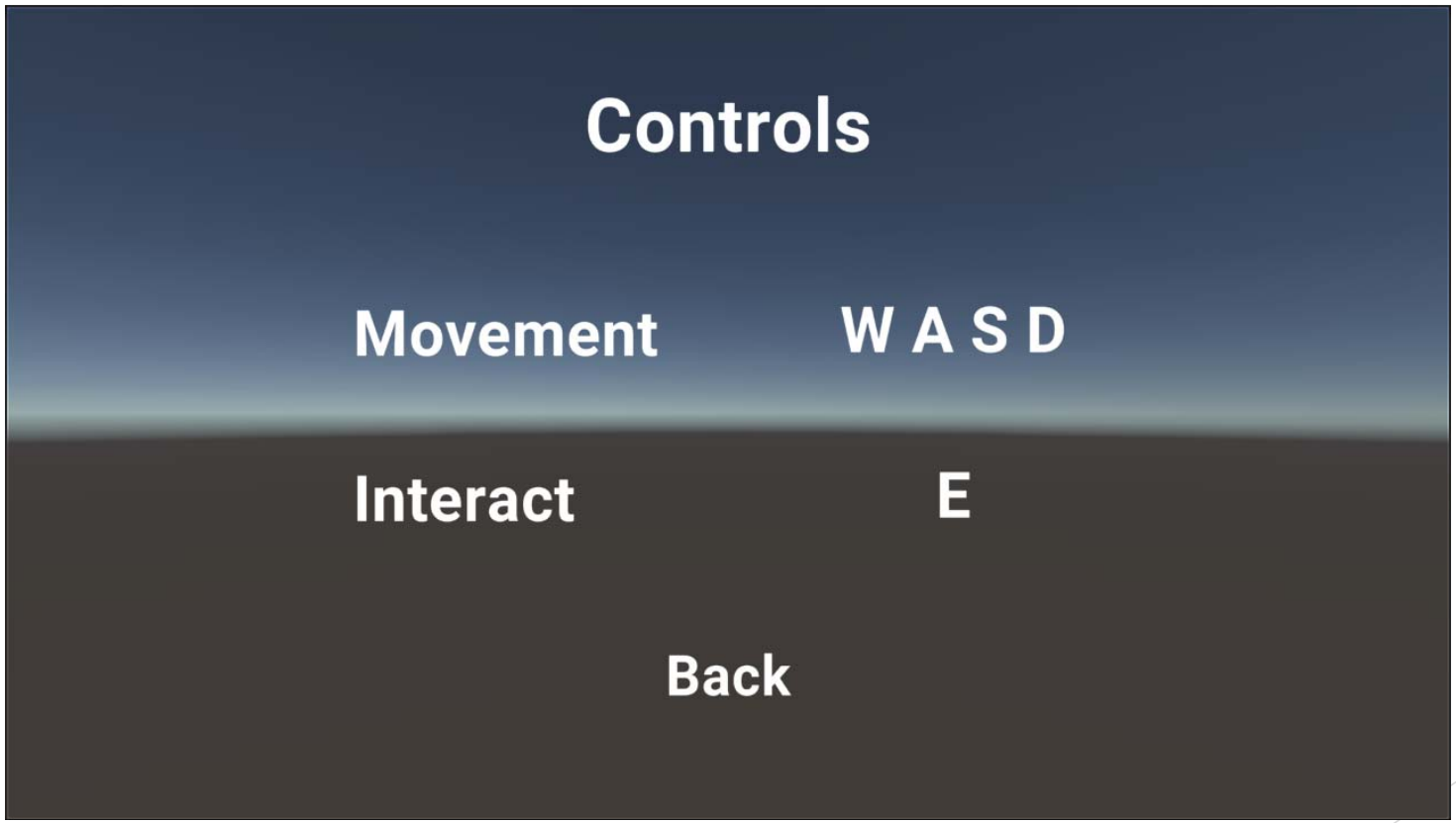
The following functionalities will be implemented in the virtual environment:

- **Vision**
- **Sound**
- **Animation**
- **Interactivity**
- **Sensors**
- **Avatars**

Vision:

- Textures and 3D models will be used to provide detailed information about locations on campus.
- For example, the library will have shelves of books, study tables, and chairs.




Controls
Movement
W A S D
Interact
E
Back

Sound:

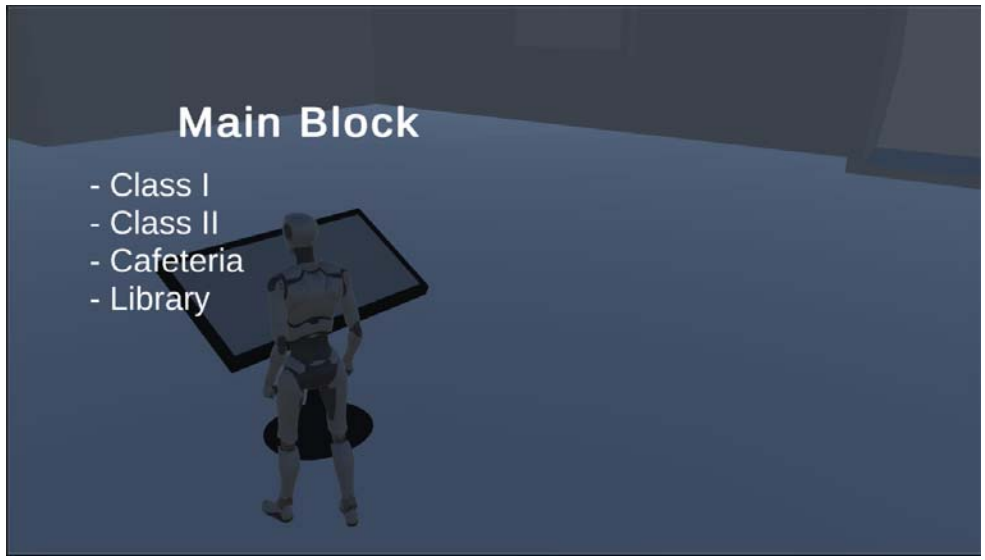
- Ambient sounds will be used to create a realistic environment.
- For example, the library will have the sound of pages turning and people whispering.

Animation:

- Three animated objects will be used in the project, such as a student walking to class, a door opening, and a flag waving.

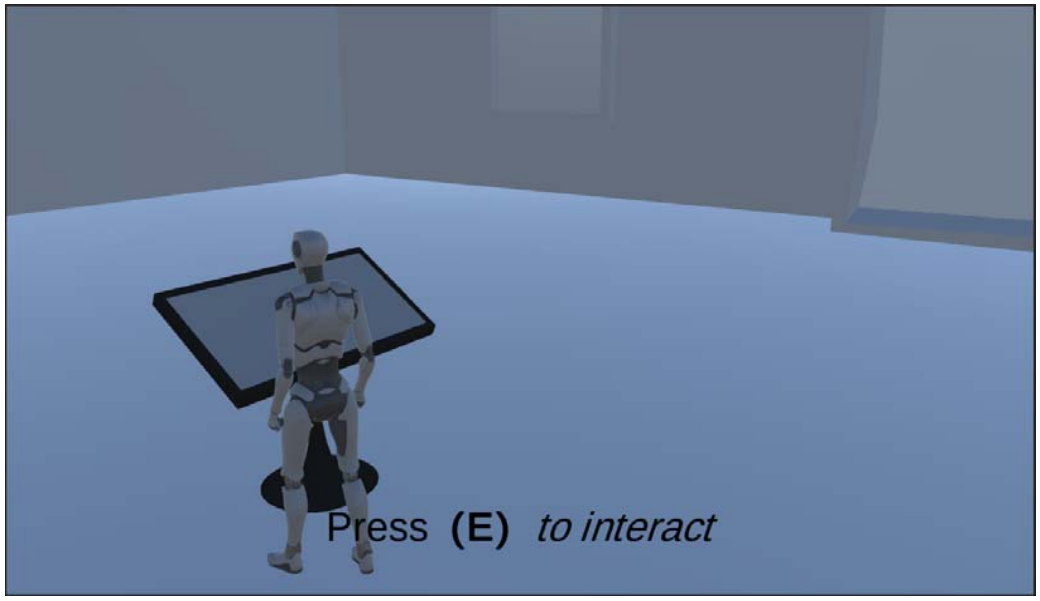
Interactivity:

- At least five user-triggered events will be implemented, such as clicking on a building to access information about its history or clicking on a classroom to see the current schedule.



Sensors:

- Three different types of sensors will be used, such as proximity sensors to trigger events when a user is near a location, touch sensors to allow users to interact with objects, and time sensors to simulate changes in lighting and weather.



Avatars:

- Custom and inbuilt avatars will be used to represent users within the environment. Users will be able to control their avatar using the keyboard and mouse. In the virtual campus tour, different types of avatars will be used to represent users within the environment. These avatars can be customized by the users and will be controlled using the keyboard and mouse.

Why Virtual Reality ?

- Virtual reality is the appropriate technology for this project because it provides a more immersive and interactive experience compared to traditional 2D interfaces. By using virtual reality, users can explore the campus and its facilities as if they were physically there, providing a more realistic and engaging experience. Additionally, virtual reality allows for the implementation of interactive features such as avatars and artificial intelligence, which can enhance the user experience.

Conclusion:

- The project will create a virtual campus tour for prospective students and their families to experience the school. The project goals are to create a virtual environment that adequately portrays the school and its buildings and integrate interactive features that allow users to navigate and obtain university information. Unity software will implement vision, sound, animation, interactivity, sensors, avatars, AI, and an interface. The project could engage prospective students and help current students and faculty.

Thank You