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**ROLL NO:24**

**BATCH : B2**

**COURSE: AR/VR PRACTICAL**

**Assginment No. 4**

Assignment Title: Develop a scene in Unity that includes a cube, plane and sphere. Create a new material and texture separately for three Game objects. Change the colour, material and texture of each Game object separately in the scene. Write a C# program in visual studio to change the colour and material/texture of the game objects dynamically on button click.

# Setup Unity Project:

Open Unity and create a new 3D project.

Name your project and select a location to save it.

# Create Scene:

Create a new scene by going to File > New Scene.

Save the scene by going to File > Save Scene As and name it appropriately.

# Add Objects to Scene:

Create a cube, plane, and sphere in the scene.

Go to GameObject > 3D Object and select Cube, Plane, and Sphere. Arrange these objects as you like in the scene.

# Create Materials and Textures:

Create new materials for each object.

Right-click in the Assets panel, go to Create > Material, and name it appropriately. Assign textures to each material if desired.

You can import textures by dragging them into the Assets panel. Adjust the colors and properties of each material as desired.

# Assign Materials to Objects:

Drag and drop the materials onto their corresponding objects in the scene.

Select an object, then drag the material from the Assets panel onto the object in the Scene or Hierarchy panel.

# Write C# Script:

In Visual Studio or any other preferred code editor, create a new C# script.

Right-click in the Assets panel, go to Create > C# Script, and name it appropriately.

Open the script and write the code to change the color, material, and texture of the objects dynamically on button click.

You'll need to use GetComponent<Renderer>().material to access the material of each object and change its properties.

# Add Buttons to Scene:

In Unity, go to GameObject > UI > Button to create buttons in your scene. Position the buttons as desired.

# Attach Script to Buttons:

Attach the C# script you wrote to the buttons.

Select the button, then drag the script from the Assets panel onto the Inspector panel of the button GameObject.

# Implement Button Click Functionality:

In the script, implement a function that will be called when the button is clicked.

You can use the OnClick() event in Unity to trigger a function when the button is clicked. In this function, change the color, material, and texture of the objects dynamically.

# Test the Scene:

Run the scene in Unity by clicking the play button.

Click on the buttons you created to test if the color, material, and texture of the objects change dynamically as expect