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CLASS: FYMCA-B

SUBJECT: AR-VR

ROLLNO: 30

Assignment-6

**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.

**Solution-**

create a simple UI menu with images, canvas, sprites, and buttons in Unity, and then write a C# script to interact with the UI menu through a VR trigger button and display a score on the scene.

Step 1: Setting up the UI Menu

* Create a Canvas:
* Right-click in the Hierarchy panel.
* Choose "UI" > "Canvas" to create a Canvas GameObject.

Create an Image for the background:

* Right-click the Canvas GameObject.
* Choose "UI" > "Image" to create an Image GameObject.
* Set its size and position to cover the whole canvas.

Add a Sprite to the Image:

* Import your sprite image into the project.
* Drag the sprite from the Project panel onto the "Source Image" field of the Image component in the Inspector panel.

Create a Button:

* Right-click the Canvas GameObject.
* Choose "UI" > "Button" to create a Button GameObject.
* Position it on the canvas as desired.

Customize the Button:

* You can change the text or add an image to the button by adding an Image component to it and dragging a sprite onto it.

Step 2: Write C# Script

Create a new C# script named UIInteraction:

using UnityEngine;

using UnityEngine.UI;

public class UIInteraction : MonoBehaviour

{

    public Text scoreText;

    private int score = 0;

    private void OnTriggerEnter(Collider other)

    {

        if (other.CompareTag("VRController"))

        {

            IncreaseScore();

        }

    }

    private void IncreaseScore()

    {

        score++;

        UpdateScoreText();

    }

    private void UpdateScoreText()

    {

        scoreText.text = "Score: " + score;

    }

}

Step 3: Attach Script

* Attach the UIInteraction script to the Canvas GameObject.
* Drag the Text component from the Canvas onto the scoreText field in the Inspector panel of the UIInteraction script.