**NAME : MANGESH A. GHADWAJE**

**ROLL NO:24**

**BATCH : B2**

**COURSE: AR/VR PRACTICAL**

**Assginment No. 5**

# Assingment Title :- Problem Statement: Develop a scene in Unity that includes a sphere and plane. Apply Rigid body component, material and Box collider to the game Objects. Write a C# program to grab and throw the sphere using VR controller.

Steps:

# Setup Unity Project:

Open Unity and create a new 3D project.

Name your project appropriately and select a location to save it.

# Import VR Package (if necessary):

If you haven't already, import the VR package into your Unity project.

You can do this by going to Window > Package Manager, searching for the VR package (e.g., Oculus Integration, SteamVR), and clicking Install.

# 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 Sphere and Plane to Scene:

Create a sphere and a plane in the scene.

Go to GameObject > 3D Object and select Sphere and Plane. Position the objects as desired in the scene.

# Apply Rigid Body Component:

Select the sphere and plane GameObjects in the Hierarchy. Add a Rigidbody component to each object.

In the Inspector panel, click Add Component, search for "Rigidbody", and click to add it. Adjust the Rigidbody properties as needed (e.g., mass, drag, constraints).

# Apply Box Collider:

Add Box Collider components to both the sphere and plane.

Click Add Component, search for "Box Collider", and add it to each GameObject. Adjust the Box Collider properties to fit the shape of each object.

You may need to resize and position the colliders appropriately.

# Create VR Controller:

If you haven't already, set up a VR controller for grabbing and throwing objects. This will depend on the VR platform you're using (e.g., Oculus, SteamVR).

Follow the platform-specific documentation or tutorials to set up the controller.

# Write C# Script:

Create a new C# script for grabbing and throwing the sphere using the VR controller.

Open the script and implement the logic to detect controller input, grab the sphere, and apply forces to throw it.

You may need to use methods like Input.GetButtonDown() to detect controller input and Rigidbody.AddForce() to throw the sphere.

# Attach Script to Controller:

Attach the C# script you wrote to the VR controller GameObject.

If you're using Oculus Integration, you may need to attach the script to the Hand GameObject associated with the controller.

# Test the Scene:

Run the scene in Unity with your VR headset connected. Use the VR controller to grab and throw the sphere.

Ensure that the sphere reacts to physics and collides with the plane as expected.