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Title of Experiment: Develop a scene in Unity that includes:

i. a cube, plane and sphere, apply transformations on the 3 game objects.
ii. add a video and audio source

Objective of Experiment: Create a Unity scene with the transformed cube, plane, and sphere game objects, and integrate video and audio sources so to introduces the students how to use unity

Outcome of Experiment: Thus, we inserted a cube, plane & Sphere and Perform Various Transformation on them and Also integrated Video and Audio

Problem Statement: Develop a Unity scene that involves applying transformations to game objects (cube, plane, sphere), and seamlessly integrating video and audio sources, thus combining basic 3D manipulation with multimedia integration within Unity.

Description / Theory:

Unity Scene Development and Transformations:

- Game Objects in Unity: In Unity, "game objects" are fundamental entities that can represent various elements in a scene, such as characters, props, or environments. These game objects can be 3D models (like cubes, spheres, or custom models) or 2D sprites. They serve as the building blocks of a Unity scene.

- Transformations: Transformations in Unity refer to changing the position, rotation, and scale of game objects. These transformations are essential for creating dynamic and interactive scenes.

- Translation: Moving a game object from one point to another.

- Rotation: Changing the orientation or direction of a game object.

- Scaling: Adjusting the size of a game object.

- Transform Component: Each game object in Unity has a "Transform" component, which holds information about its position, rotation, and scale. Developers can access and modify these values through scripts to create animations and interactive elements.

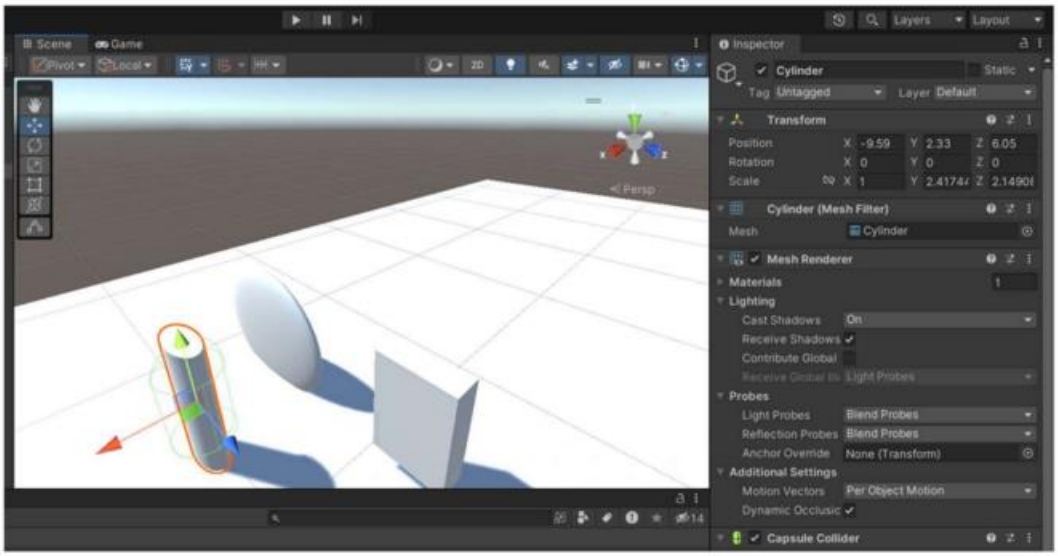
Multimedia Integration in Unity:

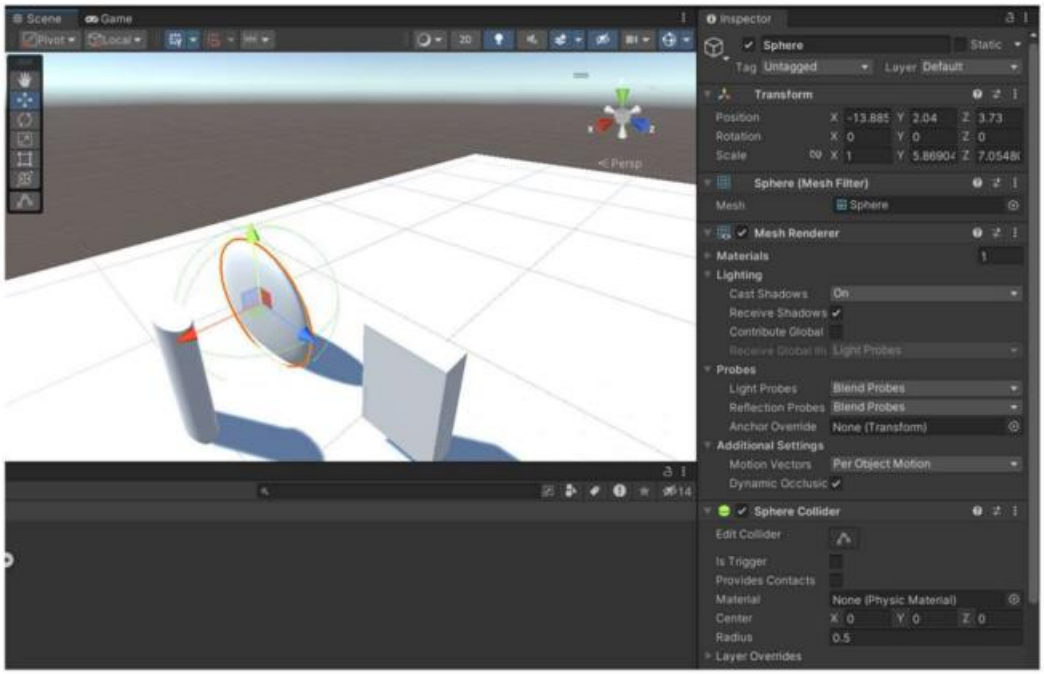
- Video Integration: Unity supports video integration through the Video Player component. This component allows developers to play video files (e.g., MP4) in various formats. Video sources can be used for cutscenes, UI elements, or interactive game elements, adding depth and engagement to the user experience.

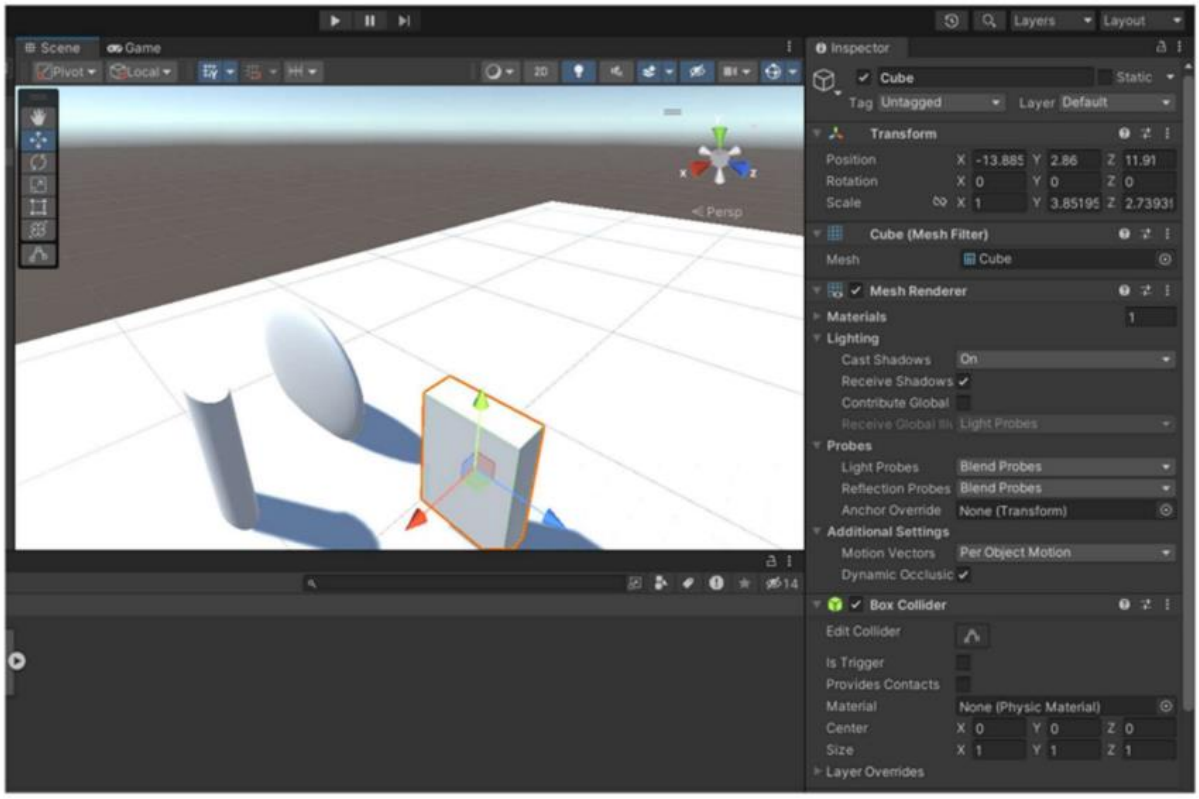
- Audio Integration: Unity provides the Audio Source component for handling audio integration. It can play sounds, music, or voiceovers in games. Audio sources can enhance immersion by providing auditory feedback, background music, or sound effects for in-game events.

Output:

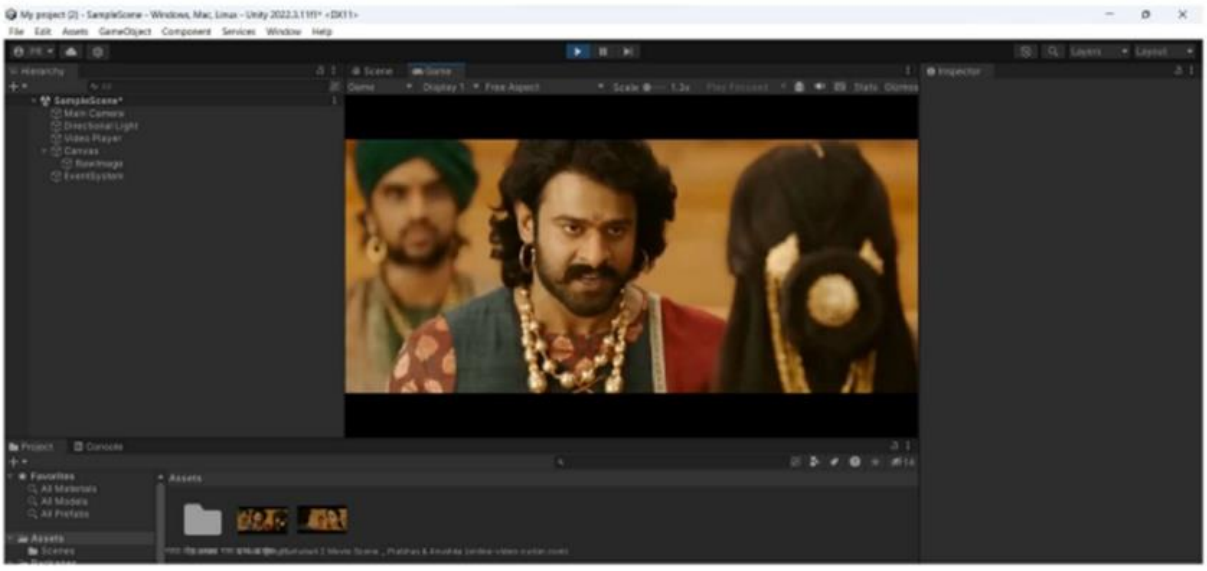
1. Develop a scene in Unity that includes:
   a cube, plane and sphere, apply transformations on the 3 game objects



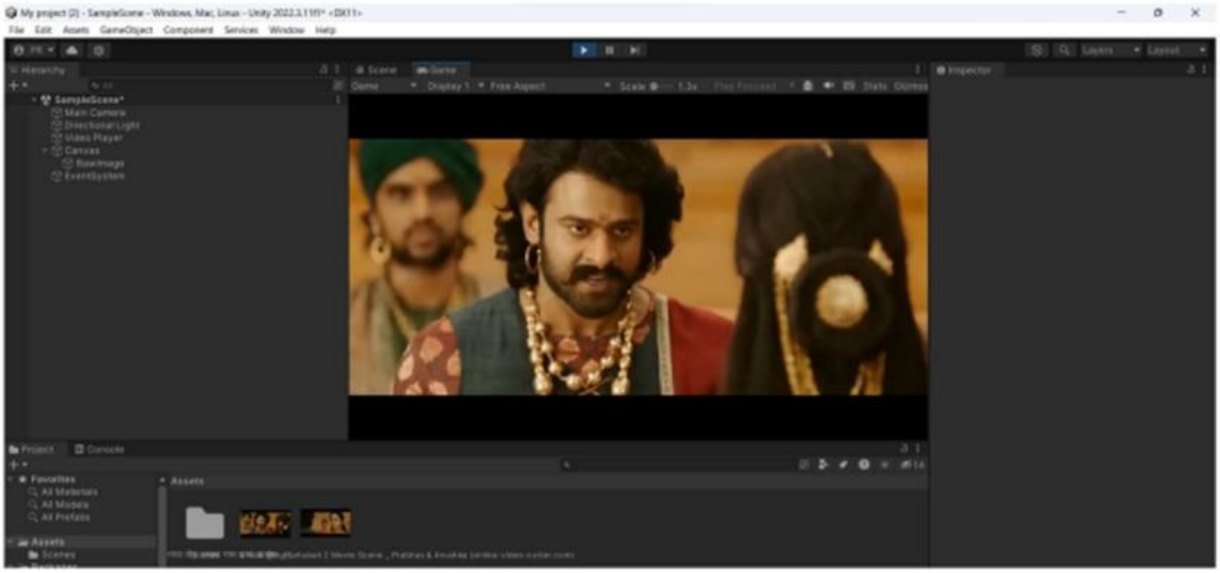



Scene
Game
Inspector
Cube
Tag Untagged
Layer Default
Transform
Position
Rotation
Scale
Cube (Mesh Filter)
Mesh Cube
Mesh Renderer
Materials
Lighting
Cast Shadows On
Receive Shadows
Probes
Light Probes Blend Probes
Reflection Probes Blend Probes
Anchor Override None (Transform)
Additional Settings
Motion Vectors Per Object Motion
Box Collider
Edit Collider
Is Trigger
Provides Contacts
Material None (Physic Material)
Center
Size
Layer Overrides

2. Add a video



3. Add Audio Source:



Results and Discussions:

The Unity project achieved its objectives of applying transformations to game objects (cube, plane, sphere) and integrating multimedia elements, including video and audio sources.

Transformations: We successfully manipulated game objects using Unity's Transform component, enabling animation and dynamic scene changes.

Multimedia Integration: We seamlessly integrated video and audio sources, enhancing the user experience by adding visual and auditory components.