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Roll No & Branch:	29-CSE(DS)
Class/Sem:	BE/VII
Experiment No.:	07
Title:	Create an immersive environment (living room/ battlefield/ tennis court) with only static game objects. 3D game objects can be created using Blender or use available 3D models
Date of Performance:	
Date of Submission:	
Marks:	
Sign of Faculty:	

Aim :-

To create an immersive environment (living room/ battlefield/ tennis court) with only static game objects.

Theory:-

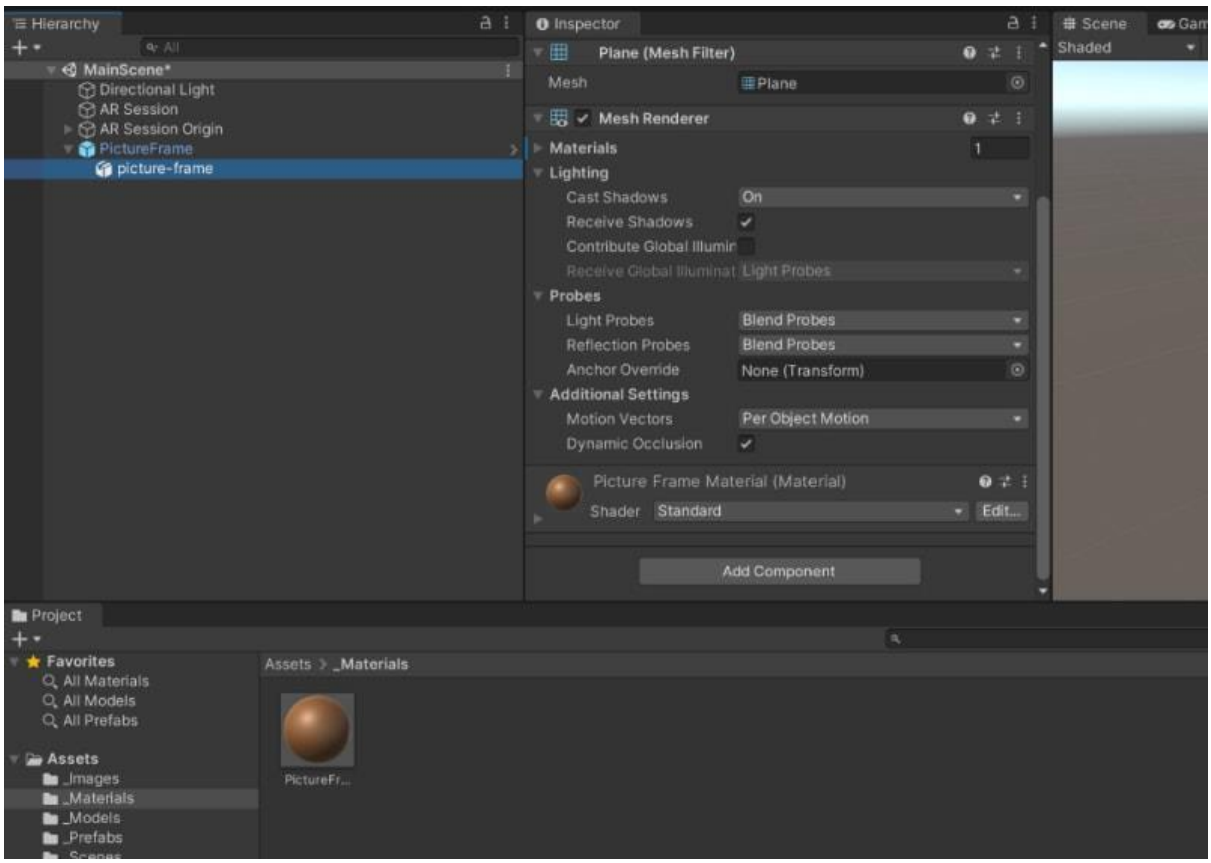
In Unity, the creation of an immersive environment, such as a living room, battlefield, or tennis court, primarily involves the integration of static game objects. These objects can either be designed from scratch using 3D modeling tools like Blender or selected from existing 3D models. By placing and arranging these objects within the Unity scene, developers can establish the desired environment. While these game objects remain static, their initial positioning and properties are essential in setting the stage for a realistic and immersive experience. The proper arrangement, scale, and materials of these objects, combined with appropriate lighting and ambiance, play a critical role in crafting an engaging and visually compelling virtual space, offering users a rich and immersive environment within Unity. Furthermore, the inclusion of additional features such as audio and interactive elements can further enhance the immersive quality of the environment.

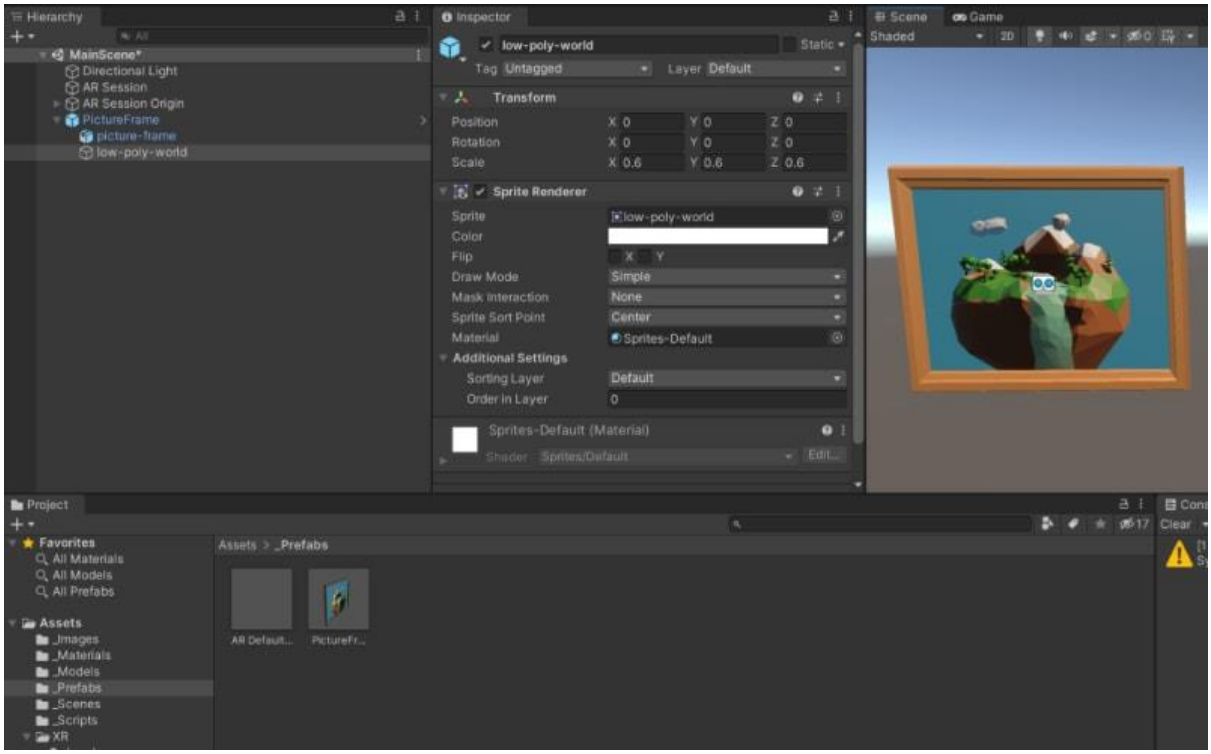
Procedure:-

1. **Create Project:** Begin by starting a new 3D Unity project, ensuring that you have the necessary Unity version and appropriate packages installed for your development needs.
2. **Create & Position Objects:** Within the Unity Hierarchy, add static game objects (furniture, terrain, props) relevant to the chosen environment (living room, battlefield, or tennis court) and adjust their properties, such as scale and rotation, to fit the scene.
3. **Import 3D Assets:** Import custom 3D models created using Blender or obtain existing 3D models from external sources into Unity's "Assets" folder to include them in the project.
4. **Apply Materials and Textures:** Generate materials for the 3D objects by creating material assets through the Project window and assign these materials in the Inspector to provide realistic textures and appearances to the game objects.
5. **Set Up Lighting and Ambiance:** Configure the scene's lighting and ambiance to match the mood and atmosphere of the intended environment, ensuring that the static game objects interact seamlessly with the lighting conditions.
6. **Fine-Tune Object Placement:** Refine the positioning and arrangement of the static game objects to establish a cohesive and realistic layout, taking into account the spatial constraints and thematic elements of the chosen environment.
7. **Implement Additional Features:** Optionally, integrate visual and auditory elements such as background music, ambient sounds, or particle effects to further enrich the immersive experience for users within the environment.

8. **Testing and Debugging:** Save the scene and conduct thorough testing to validate the correct placement of static game objects, appropriate lighting effects, and material properties, ensuring a seamless and captivating user experience.
9. **Optimization and Performance:** Optimize the scene's performance by adjusting the rendering settings, level of detail, and other parameters to maintain a smooth and immersive visual experience, particularly for lower-end devices or platforms.
10. **Build and Deployment:** Finally, build the project for the targeted platform, verifying that the immersive environment retains its visual fidelity and interactive elements across different devices or platforms, ensuring a polished and engaging user experience.

Result:-




Hierarchy
MainScene*
Directional Light
AR Session
AR Session Origin
PictureFrame
picture-frame
low-poly-world
Inspector
low-poly-world
Static
Tag Untagged
Layer Default
Transform
Position
Rotation
Scale
Sprite Renderer
Sprite
Color
Flip
Draw Mode
Simple
Mask Interaction
None
Sprite Sort Point
Center
Material
Sprites-Default
Additional Settings
Sorting Layer
Default
Order in Layer
Sprites-Default (Material)
Scene
Game
Shaded
Project
Favorites
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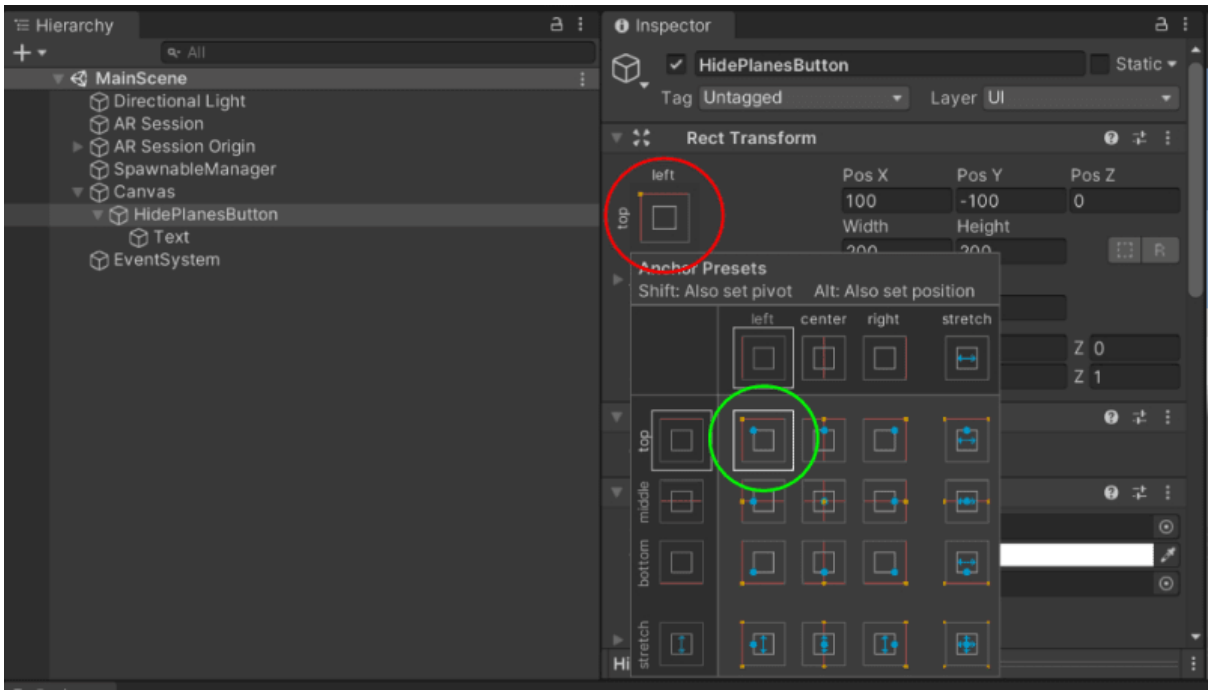
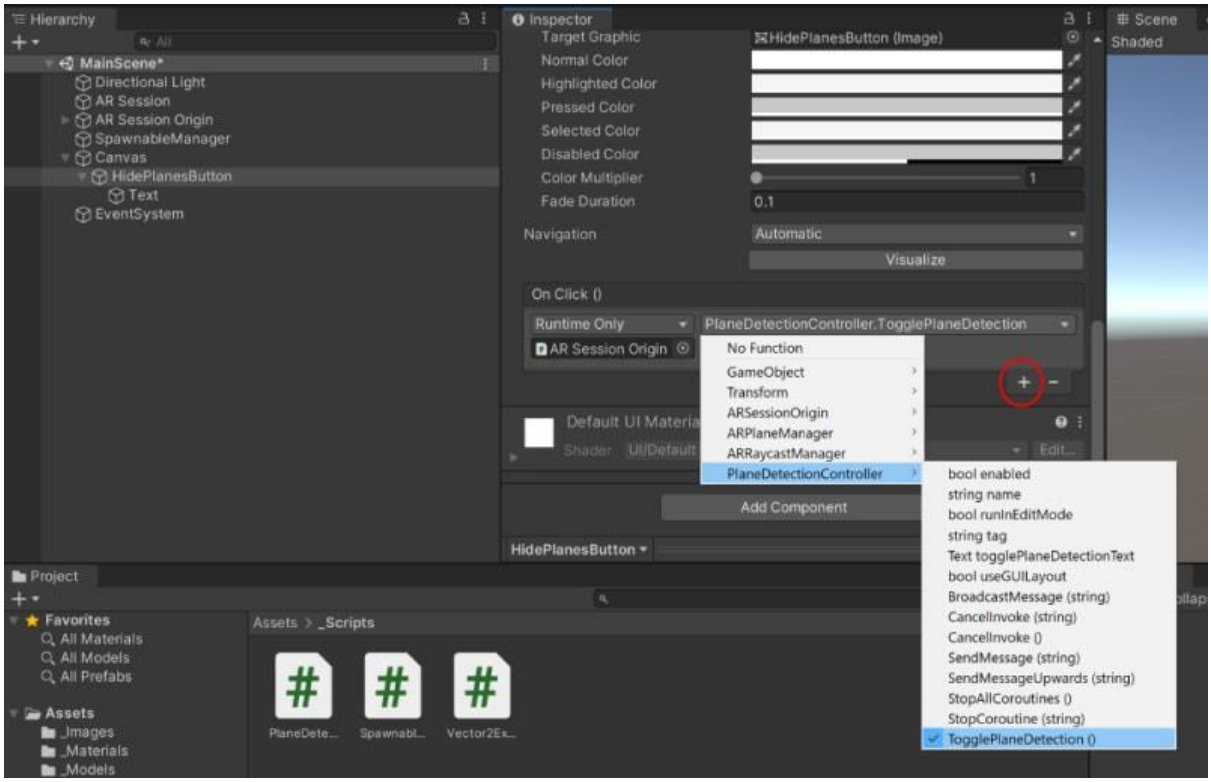
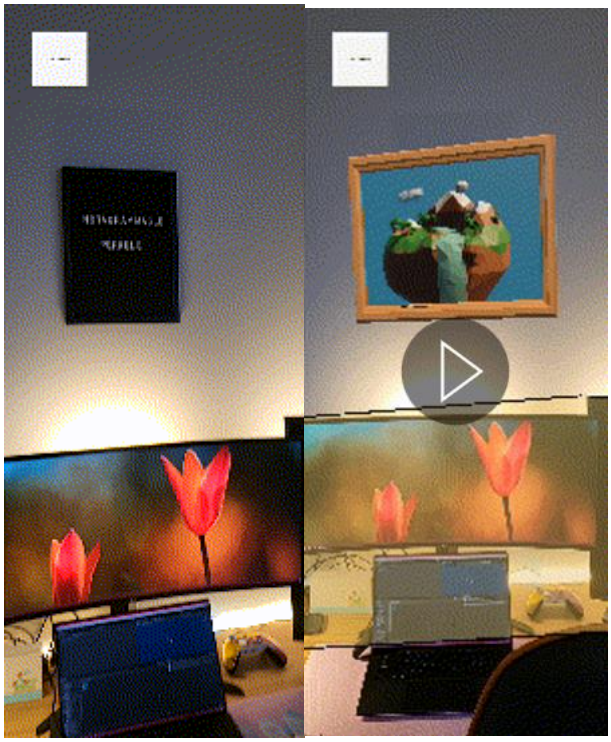
All Prefabs
Assets
_Images
_Materials
_Models
_Prefabs
_Scenes
_Scripts
XR
Assets > _Prefabs


Hierarchy
All
MainScene
Directional Light
AR Session
AR Session Origin
SpawnableManager
Canvas
HidePlanesButton
Text
EventSystem
Inspector
HidePlanesButton
Static
Tag Untagged
Layer UI
Rect Transform
left
top
Pos X
Pos Y
Pos Z
100
-100
0
Width
Height
Anchor Presets
Shift: Also set pivot
Alt: Also set position
left
center
right
stretch
top
middle
bottom
stretch


Hierarchy
MainScene*
Directional Light
AR Session
AR Session Origin
SpawnableManager
Canvas
HidePlanesButton
Text
EventSystem
Inspector
Target Graphic
HidePlanesButton (Image)
Normal Color
Highlighted Color
Pressed Color
Selected Color
Disabled Color
Color Multiplier
Fade Duration
0.1
Navigation
Automatic
Visualize
On Click ()
Runtime Only
PlaneDetectionController.TogglePlaneDetection
AR Session Origin
No Function
GameObject
Transform
ARSessionOrigin
ARPlaneManager
ARRaycastManager
PlaneDetectionController
Add Component
HidePlanesButton
bool enabled
string name
bool runInEditMode
string tag
Text togglePlaneDetectionText
bool useGUILayout
BroadcastMessage (string)
CancelInvoke (string)
CancelInvoke ()
SendMessage (string)
SendMessageUpwards (string)
StopAllCoroutines ()
StopCoroutine (string)
TogglePlaneDetection ()
Project
Favorites
All Materials
All Models
All Prefabs
Assets
_Images
_Materials
_Models
Assets > _Scripts
Scene
Shaded



Conclusion:-

In essence, the process of constructing an immersive environment in Unity, whether it's a living room, battlefield, or tennis court, relies on the careful integration of static game objects designed in Blender or obtained from available 3D models. By strategically placing and configuring these objects within the Unity scene, developers can craft a visually captivating and engaging virtual space that resonates with users, delivering a compelling and interactive experience within the digital realm.