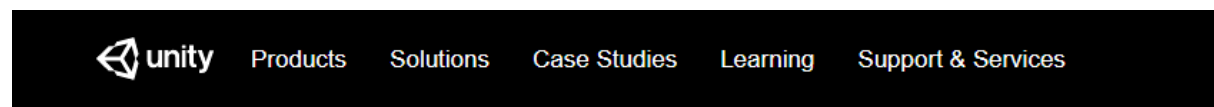


Chapter 1: Setting Up for AR Development with Unity



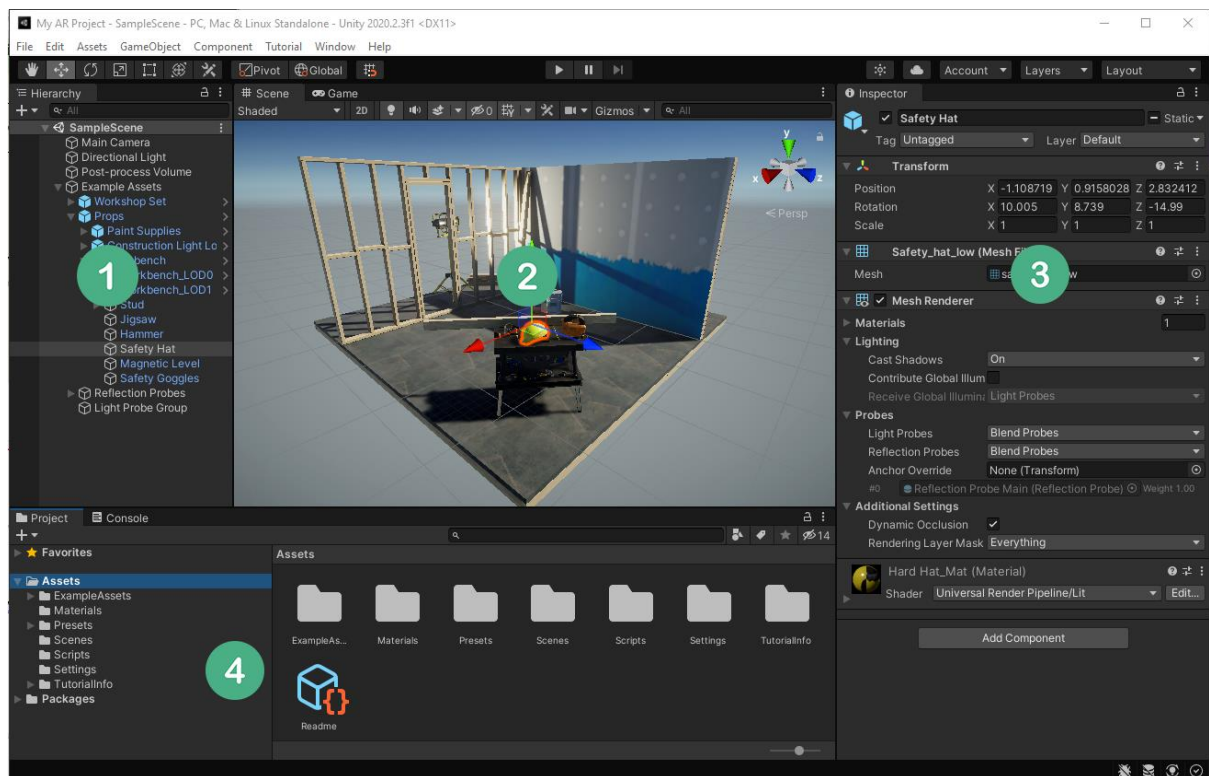
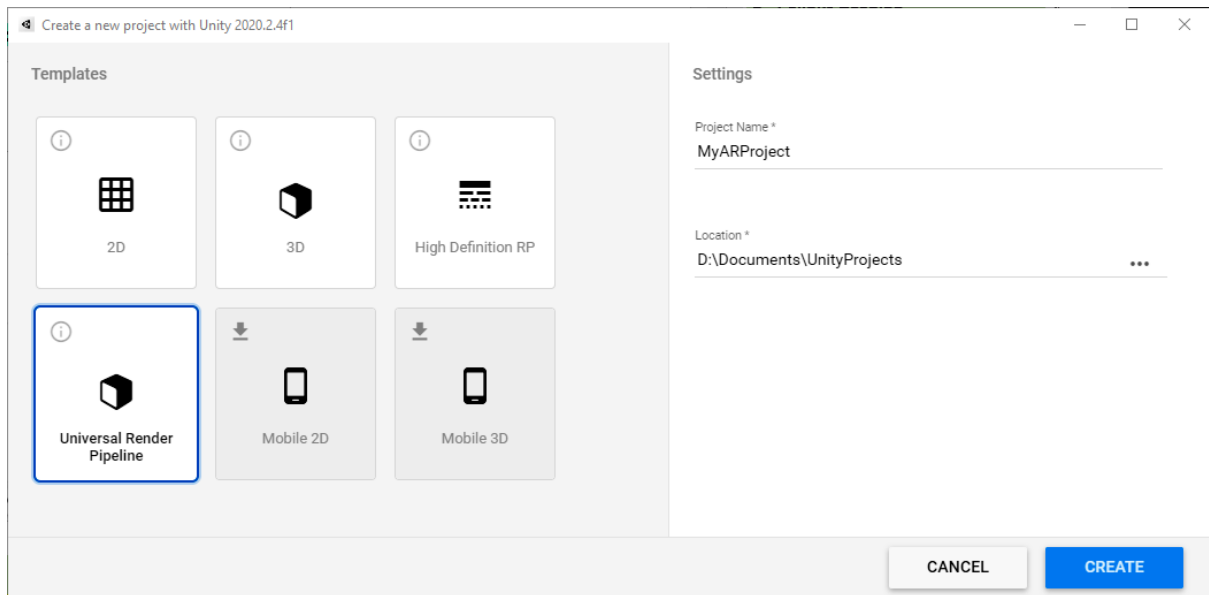
Download Unity

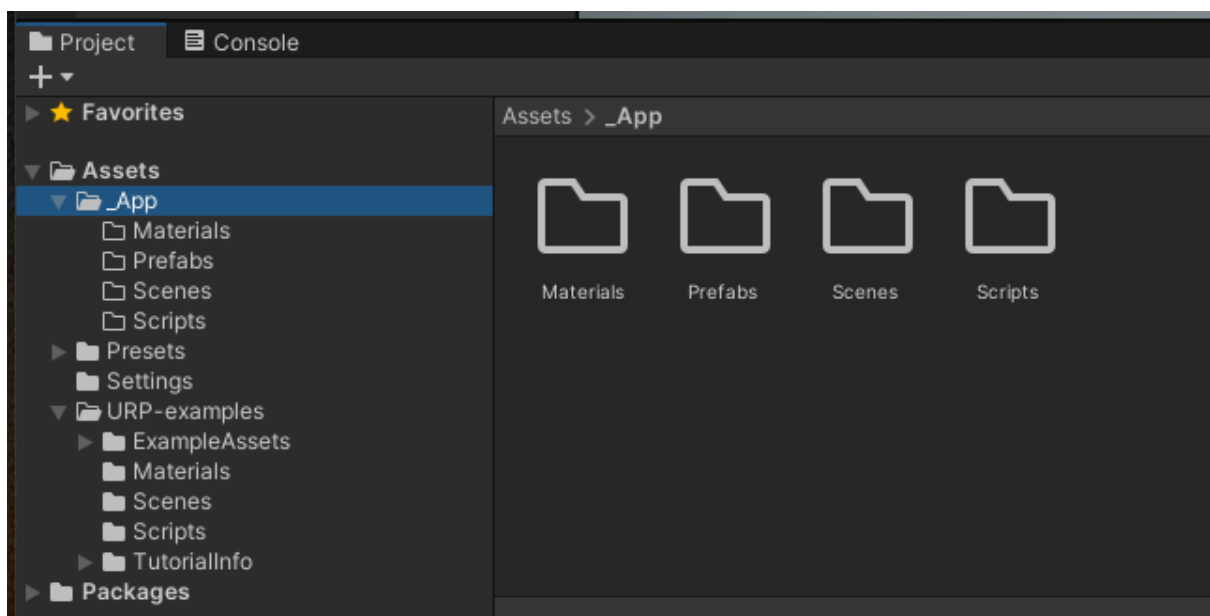
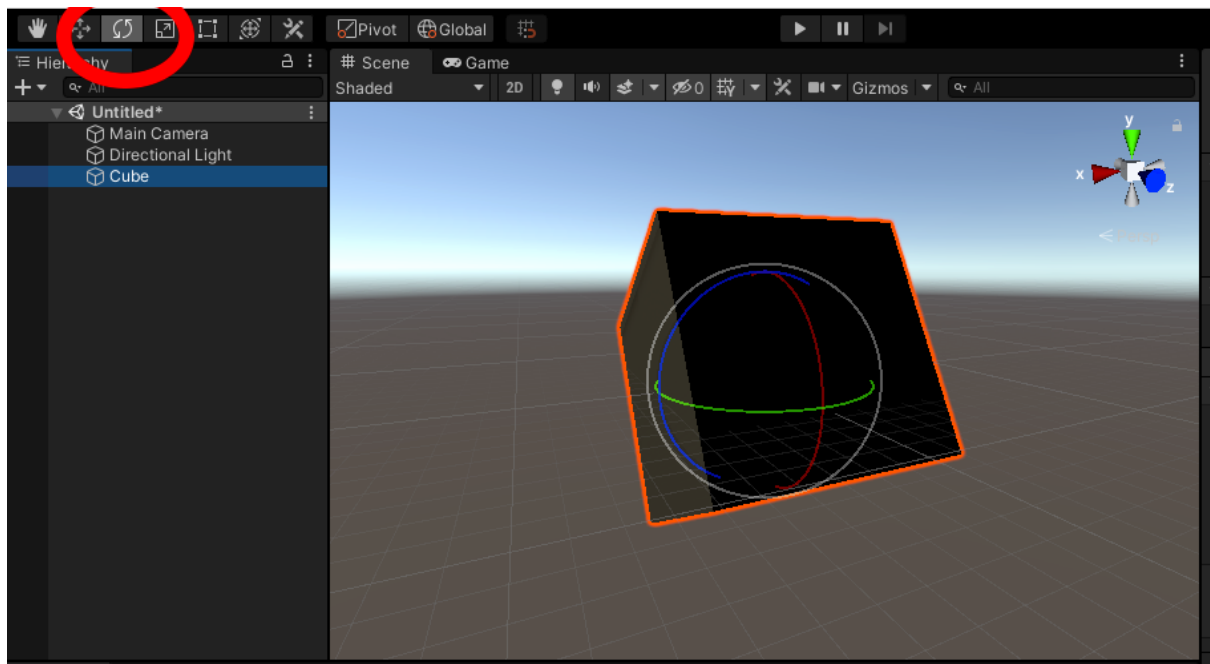
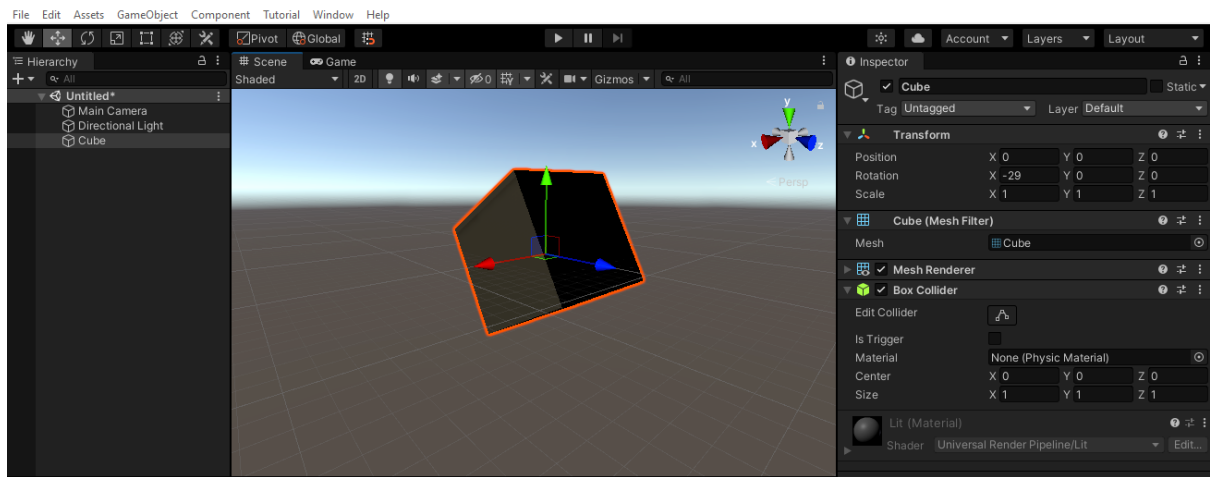
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Before you download choose the version of Unity that's right for you.

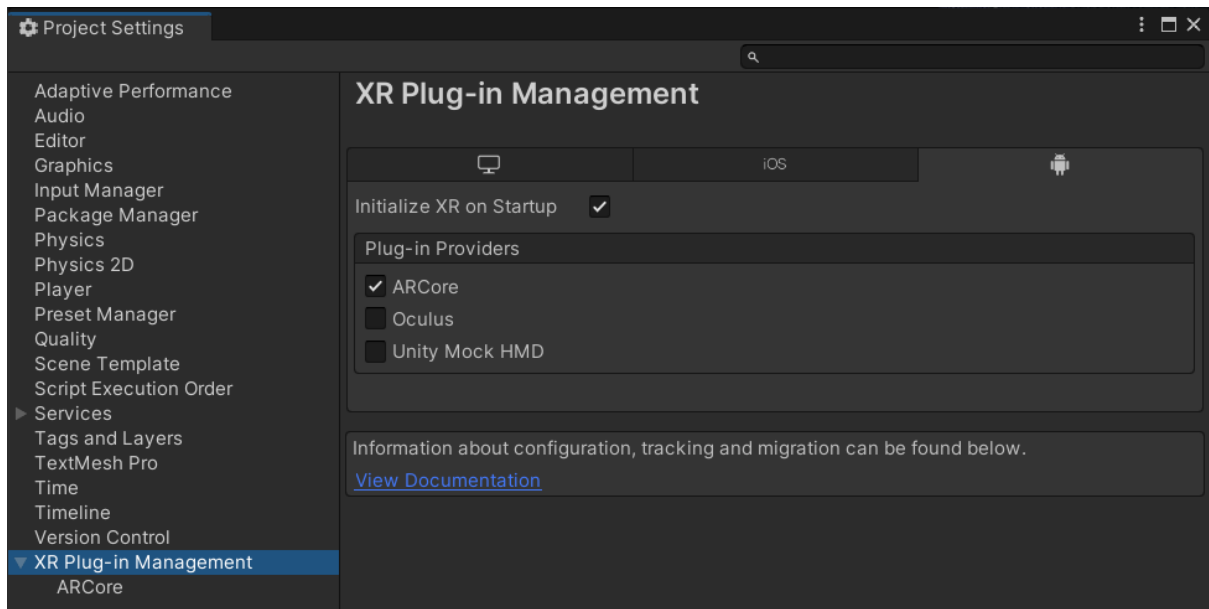
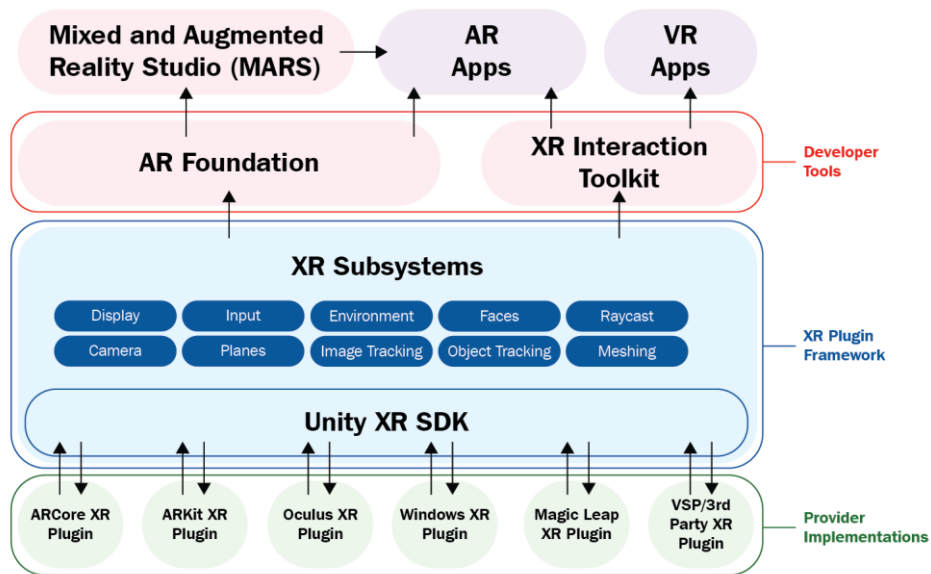


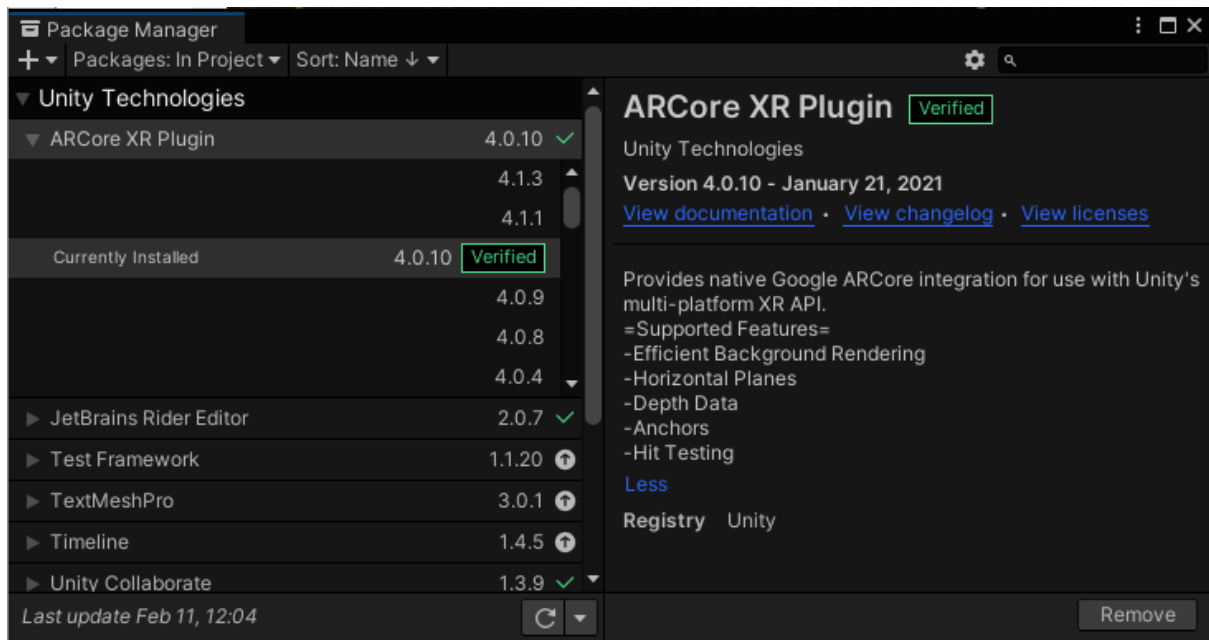
[Learn more about the new Unity Hub here](#)



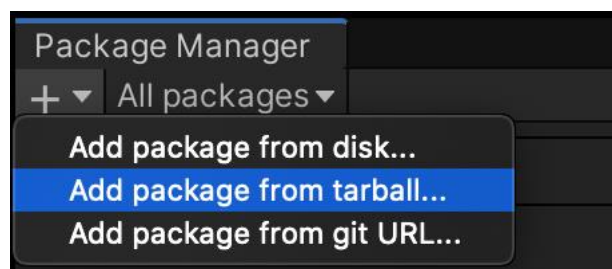
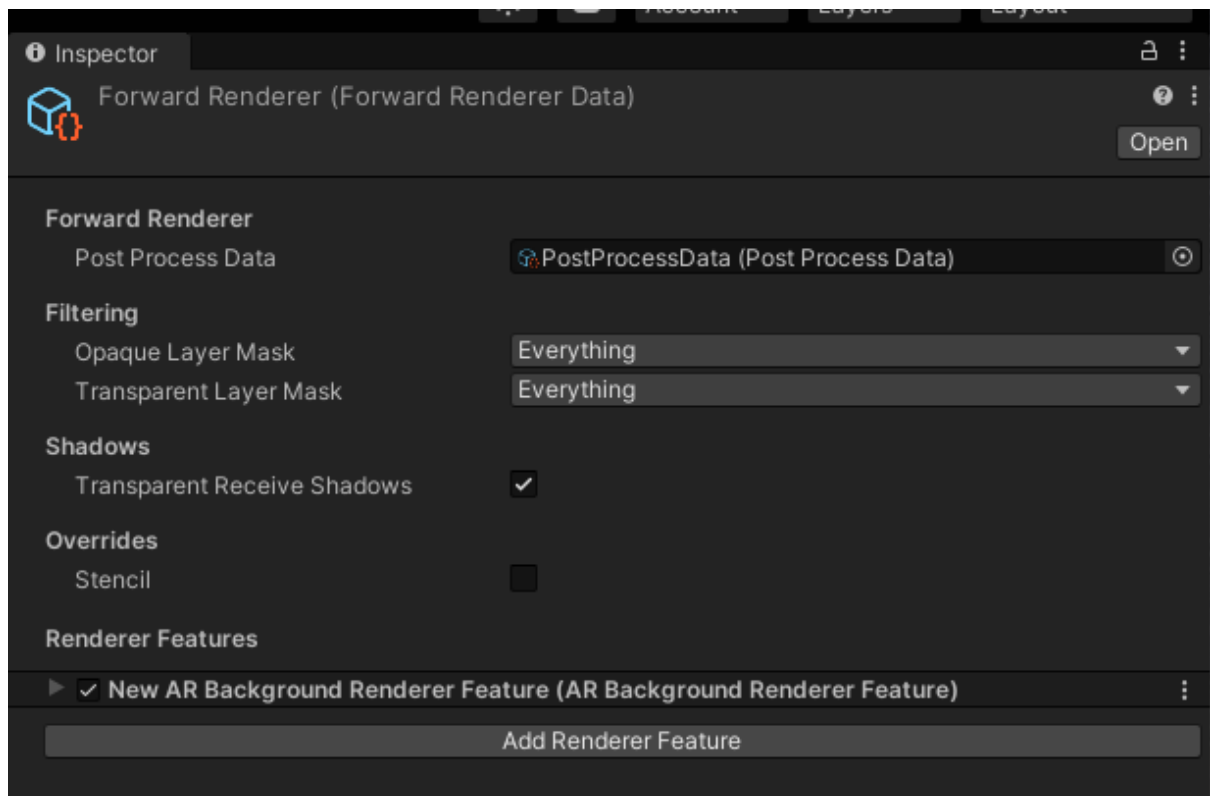


Unity XR Tech Stack





AR Foundation Feature	ARCore	ARKit	Magic Leap	HoloLens
Device tracking	yes	yes	yes	yes
Plane tracking	yes	yes	yes	
Point clouds	yes	yes		
Anchors	yes	yes	yes	yes
Light estimation	yes	yes		
Environment probes	yes	yes		
Face tracking	yes	yes		
2D Image tracking	yes	yes	yes	
3D Object tracking		yes		
Meshing		yes	yes	yes
2D & 3D body tracking		yes		
Collaborative participants		yes		
Human segmentation		yes		
Raycast	yes	yes	yes	
Pass-through video	yes	yes		
Session management	yes	yes	yes	yes
Occlusion	yes	yes		

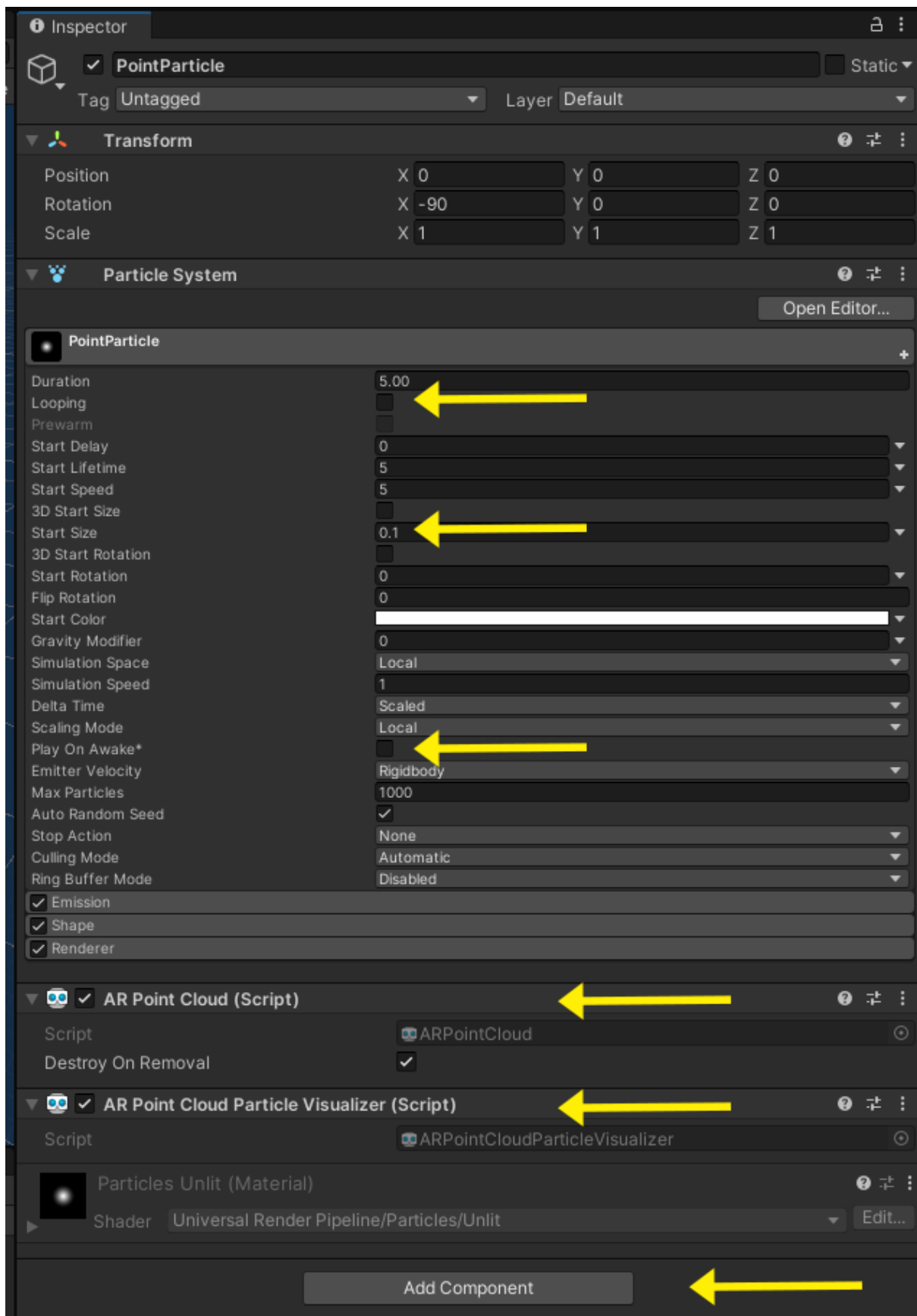


Add Modules				✕	
<input type="checkbox"/>	Linux Build Support (Mono)	102.5 MB	4.3 MB		
<input type="checkbox"/>	Mac Build Support (Mono)	317.2 MB	1.8 GB		
<input checked="" type="checkbox"/>	Universal Windows Platform Build Support	287.4 MB	2.1 GB		
<input type="checkbox"/>	WebGL Build Support	314.0 MB	1.1 GB		
<input checked="" type="checkbox"/>	Windows Build Support (IL2CPP)	Installed	373.8 MB		
<input type="checkbox"/>	Lumin OS (Magic Leap) Build Support	159.2 MB	870.8 MB		

Add Modules



<input type="checkbox"/>	Linux Build Support (Mono)	102.5 MB	4.3 MB
<input type="checkbox"/>	Mac Build Support (Mono)	317.2 MB	1.8 GB
<input type="checkbox"/>	Universal Windows Platform Build Support	287.4 MB	2.1 GB
<input type="checkbox"/>	WebGL Build Support	314.0 MB	1.1 GB
<input checked="" type="checkbox"/>	Windows Build Support (IL2CPP)	Installed	373.8 MB
<input checked="" type="checkbox"/>	Lumin OS (Magic Leap) Build Support	159.2 MB	870.8 MB



AR Session Origin

Static

Tag UntaggedLayer Default

Transform

Position

X0Y0Z0

Rotation

X0Y0Z0

Scale

X1Y1Z1

AR Session Origin (Script)

Script

ARSessionOrigin

Camera

AR Camera (Camera)

AR Point Cloud Manager (Script)

Script

ARPointCloudManager

Point Cloud Prefab

PointParticle

Add Component

AR Session Origin

Static

Tag UntaggedLayer Default

Transform

Position

X0Y0Z0

Rotation

X0Y0Z0

Scale

X1Y1Z1

AR Session Origin (Script)

Script

ARSessionOrigin

Camera

AR Camera (Camera)

AR Point Cloud Manager (Script)

Script

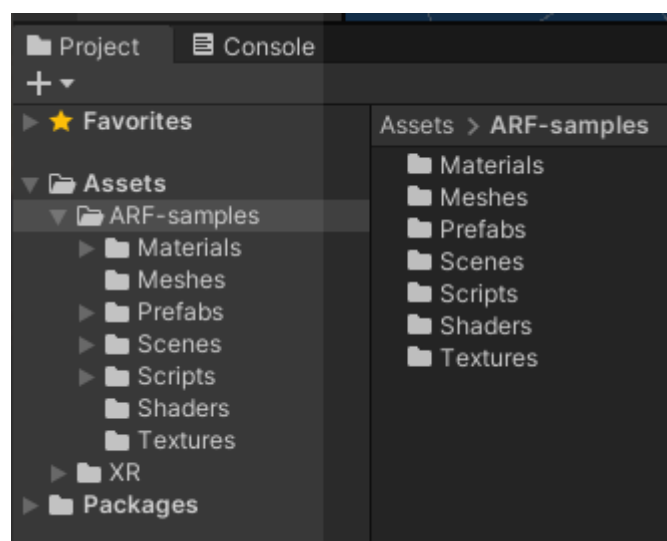
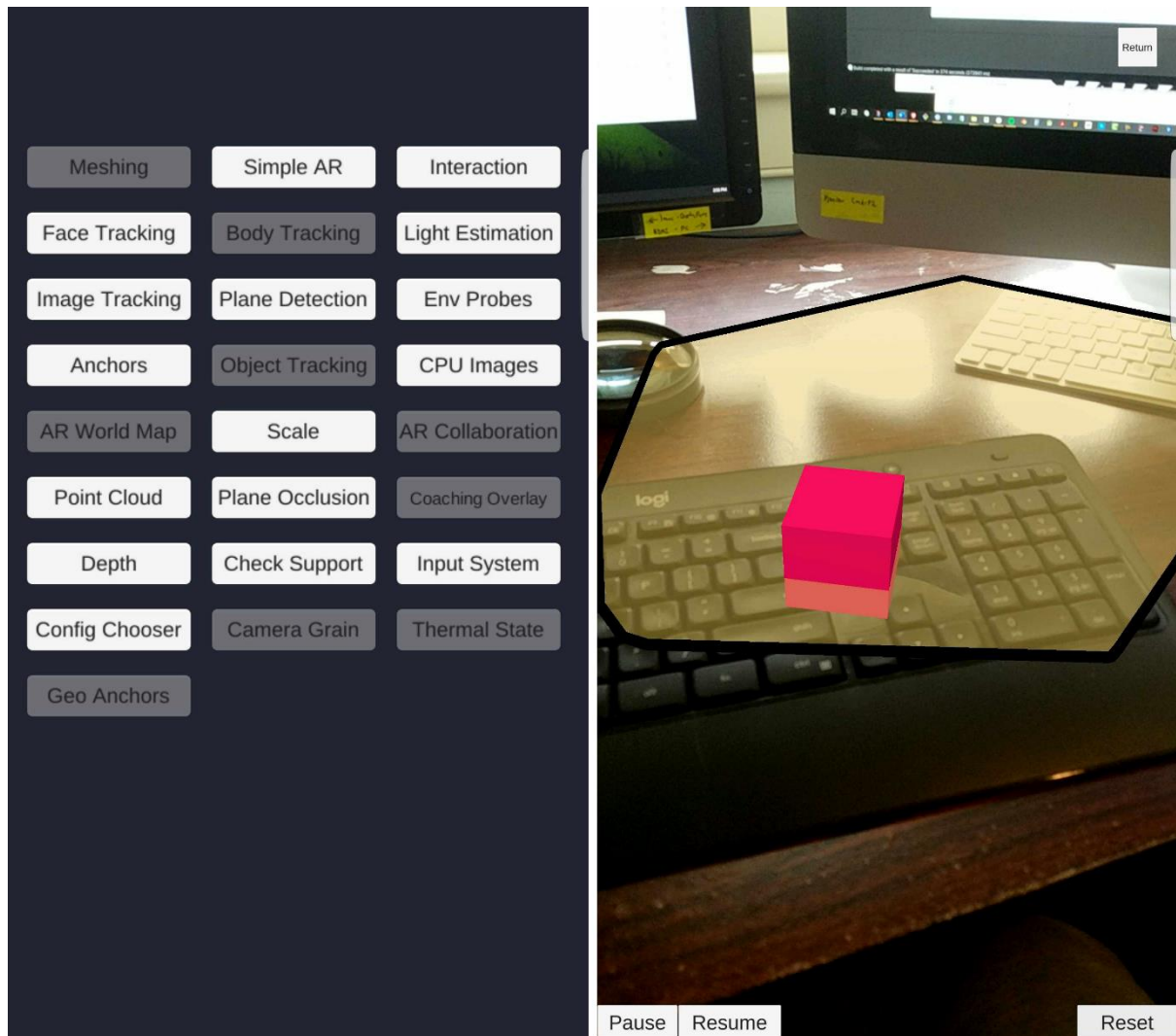
ARPointCloudManager

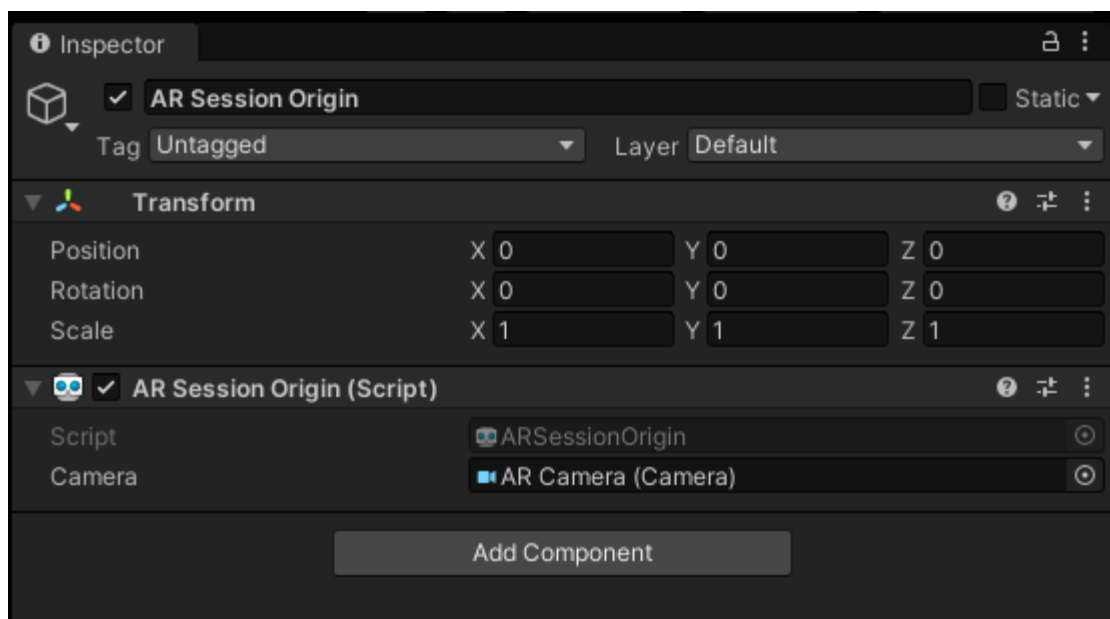
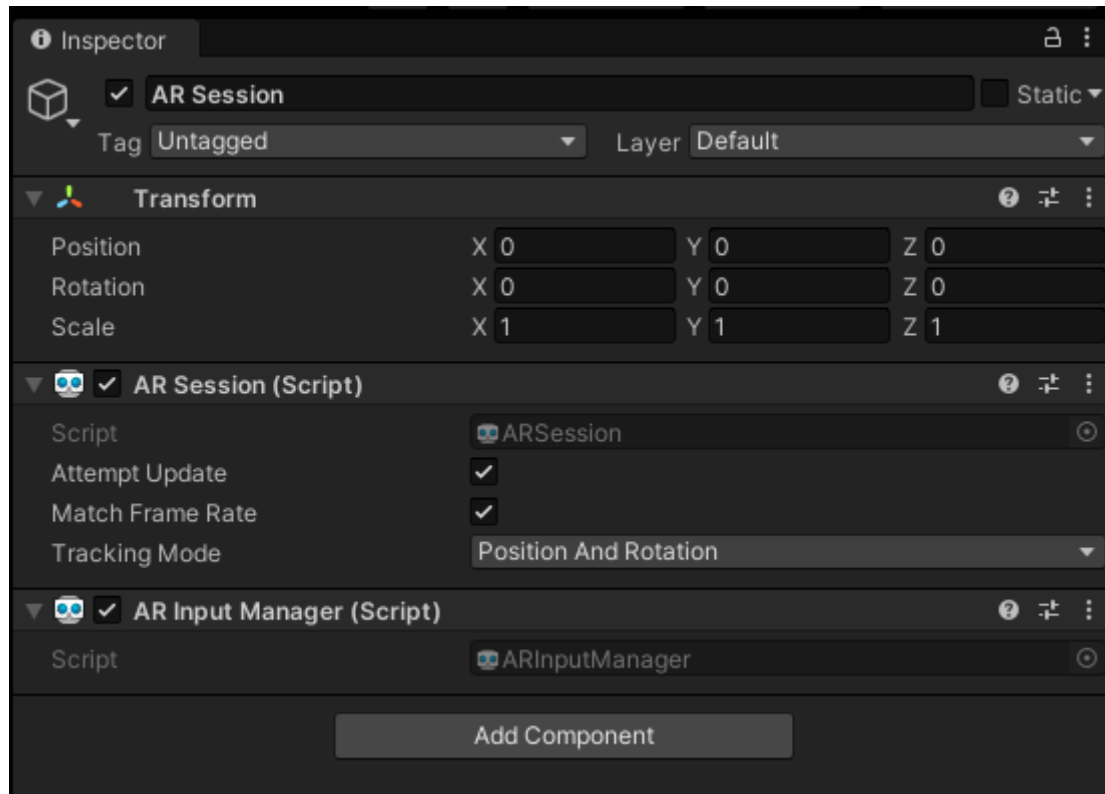
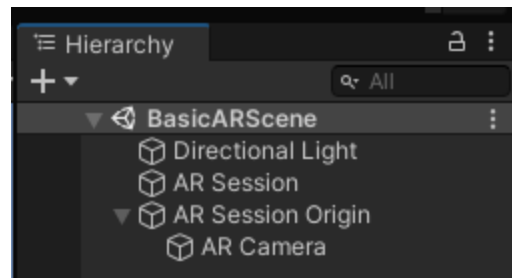
Point Cloud Prefab

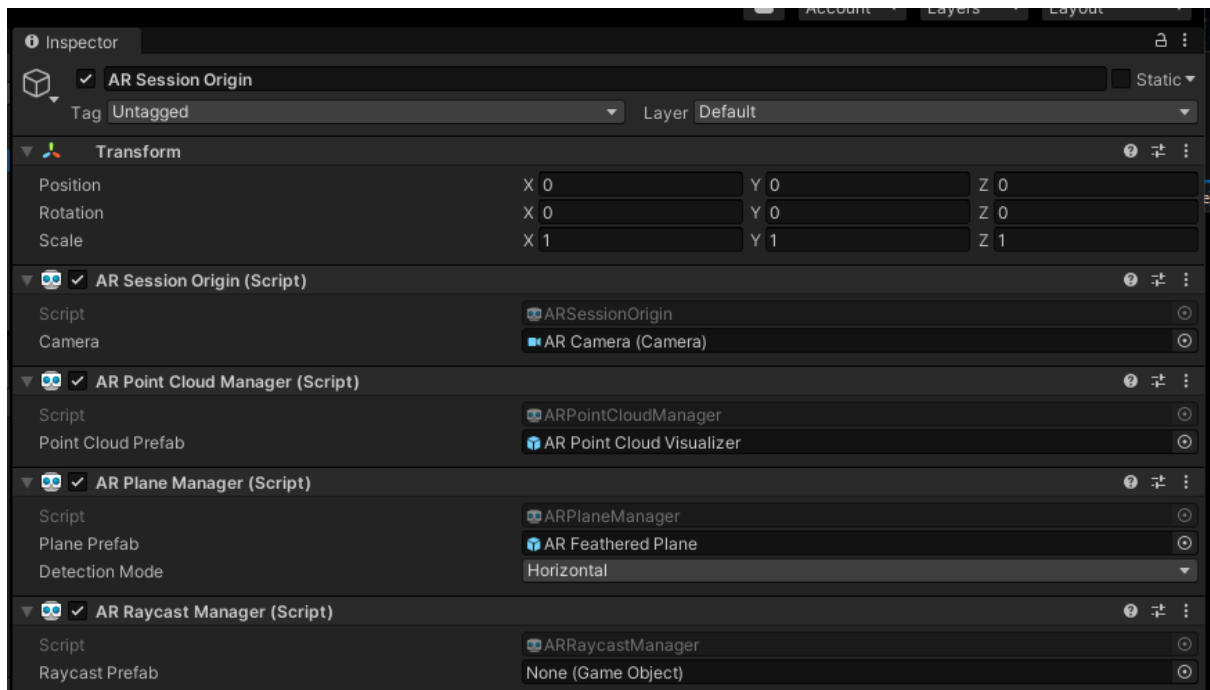
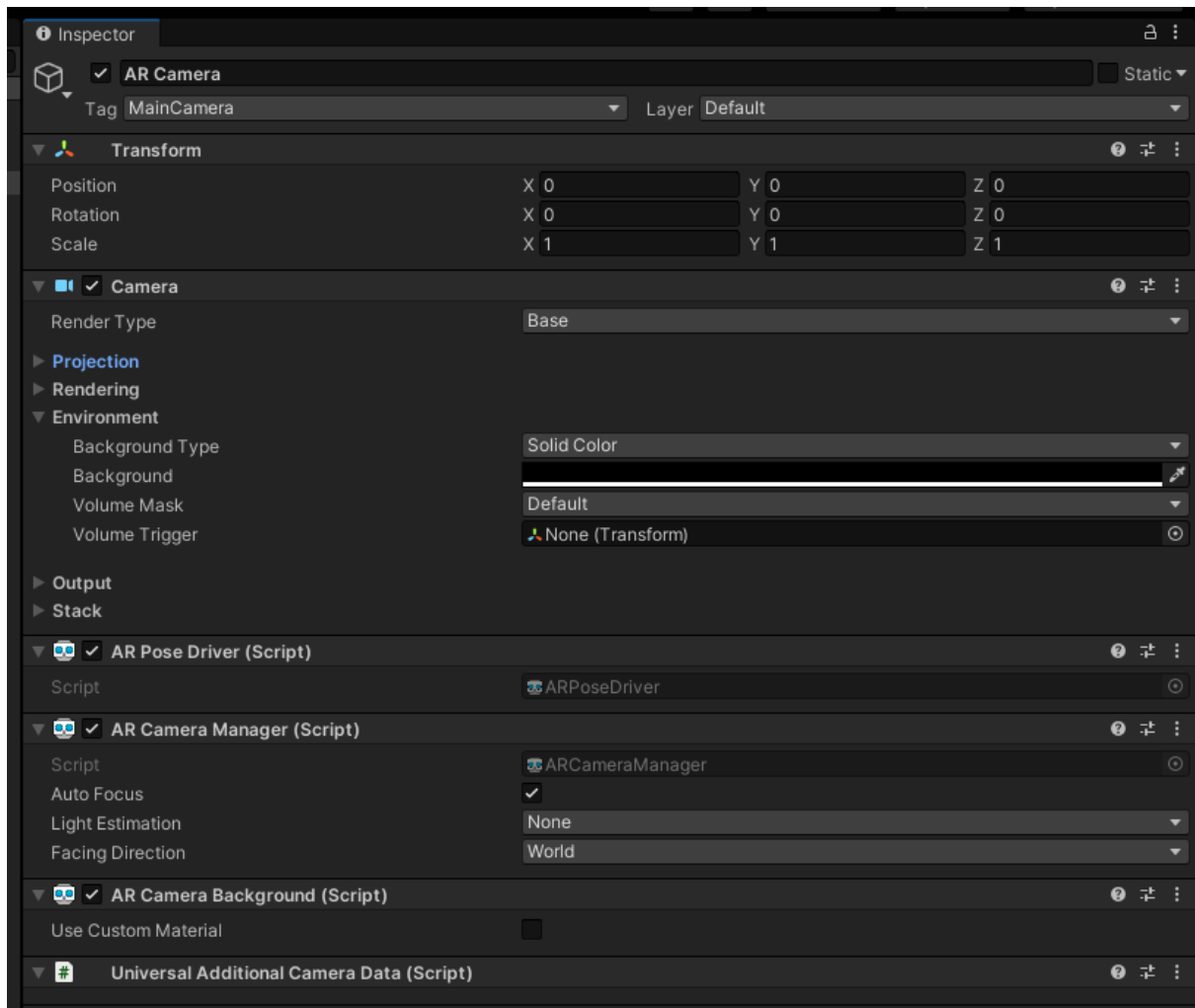
PointParticle

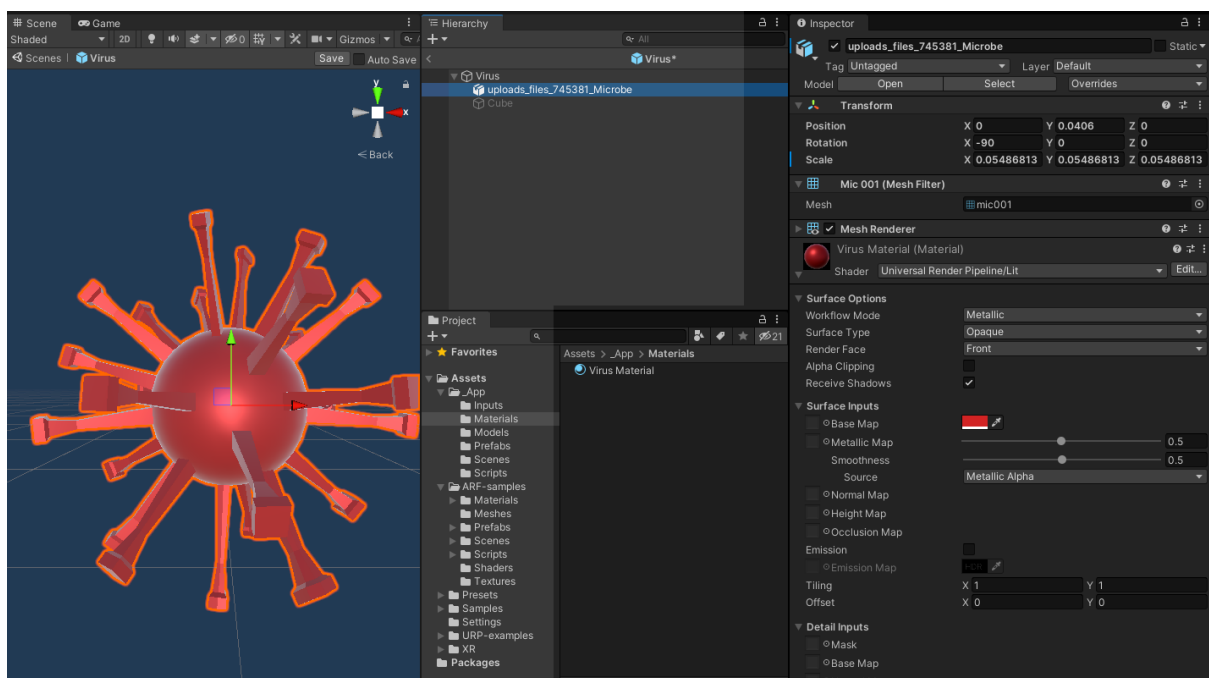
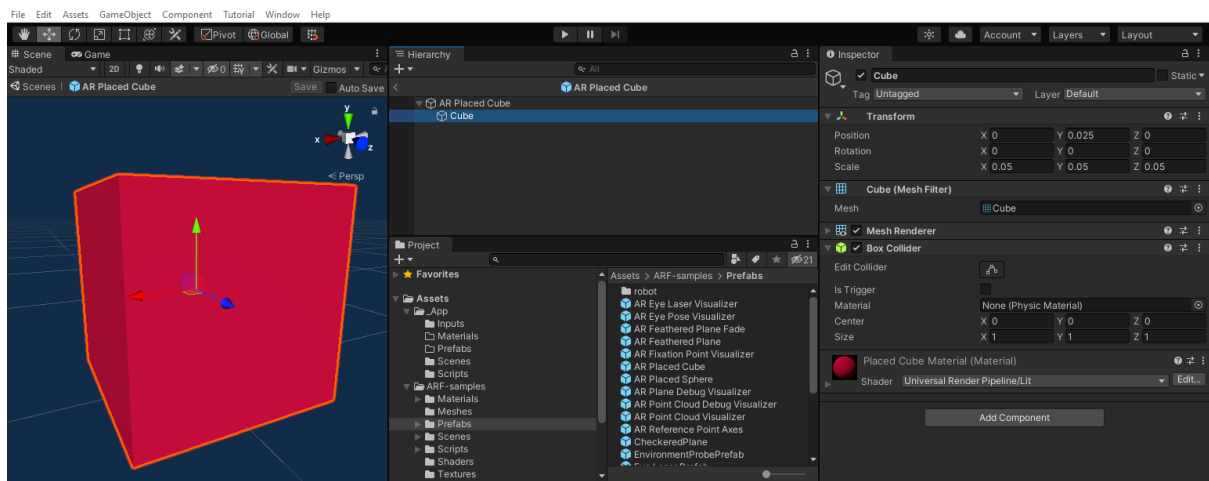
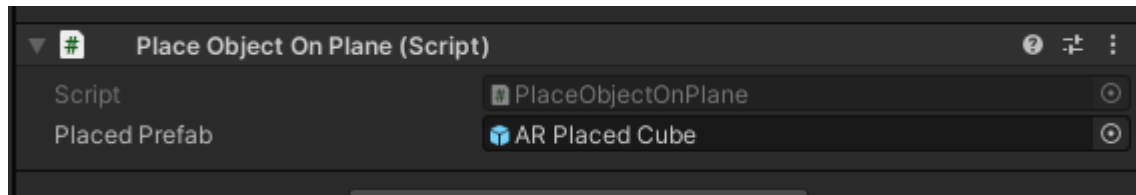
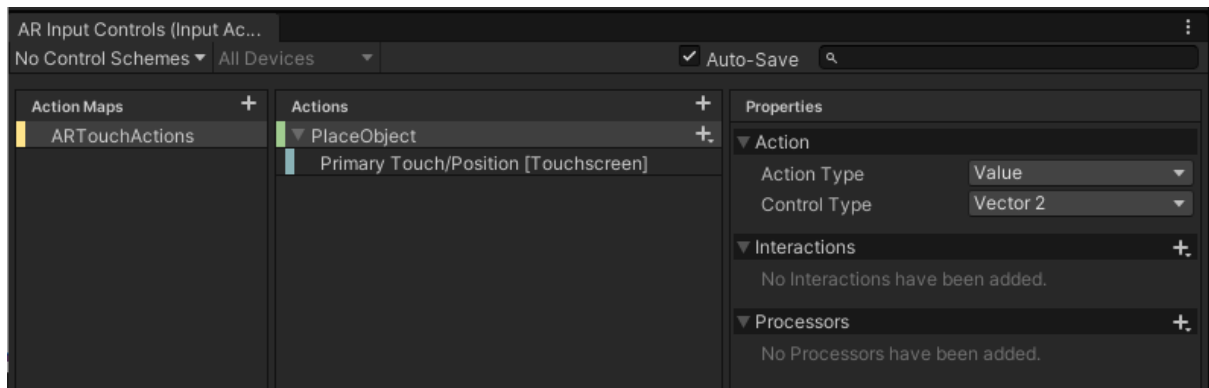
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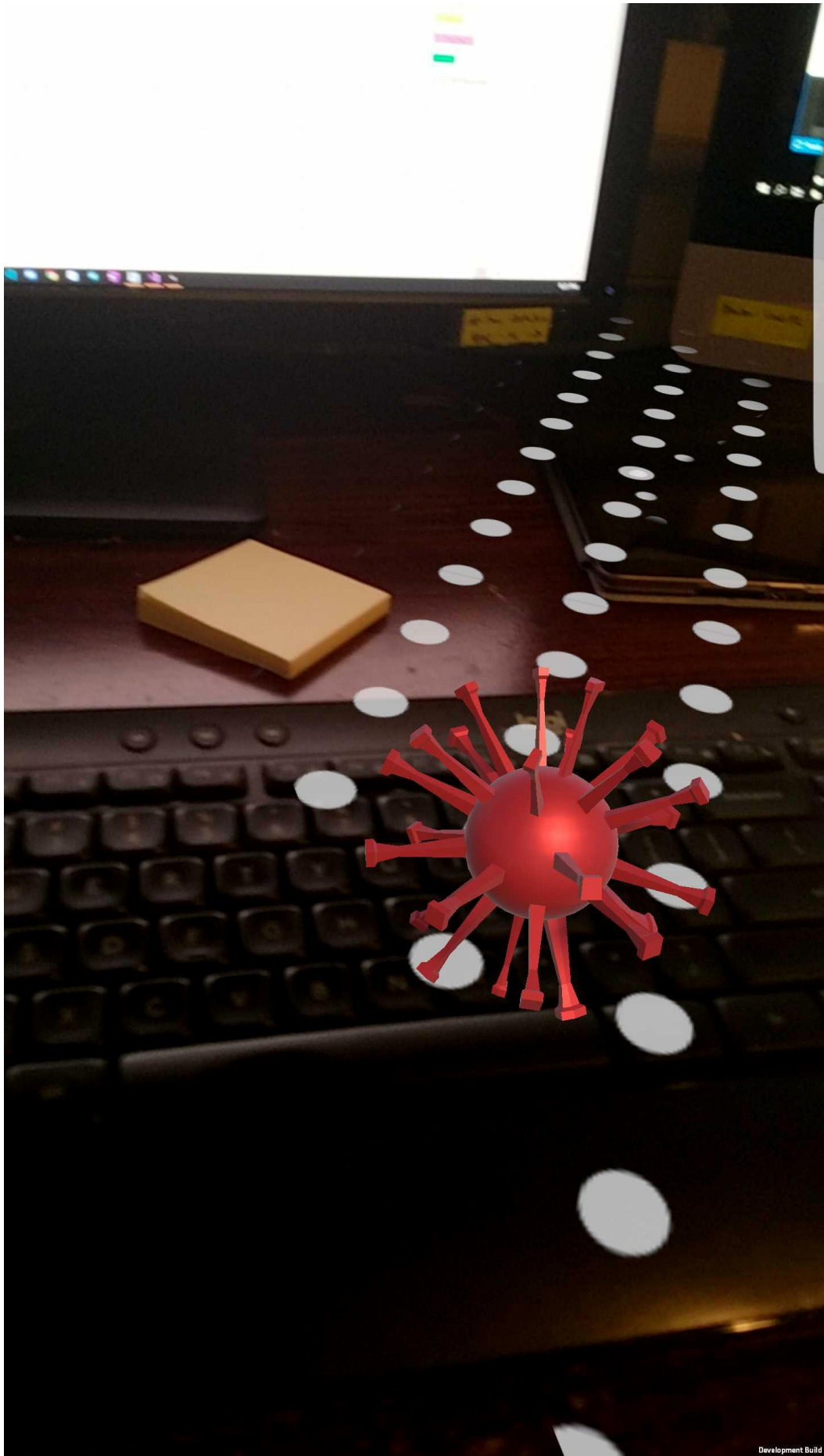
Chapter 2: Your First AR Scene



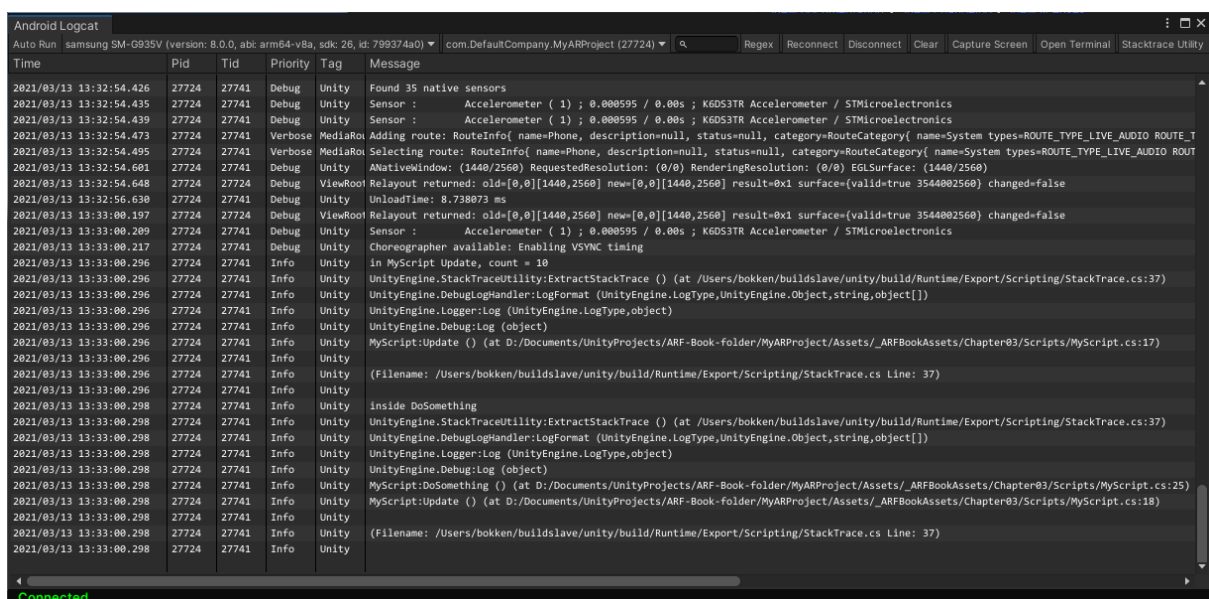
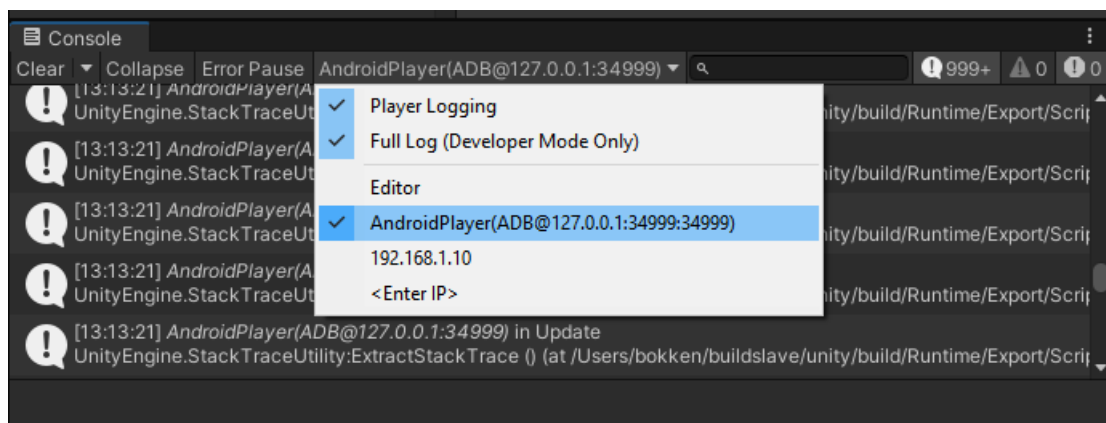
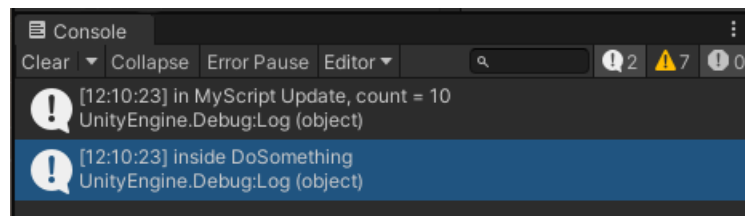
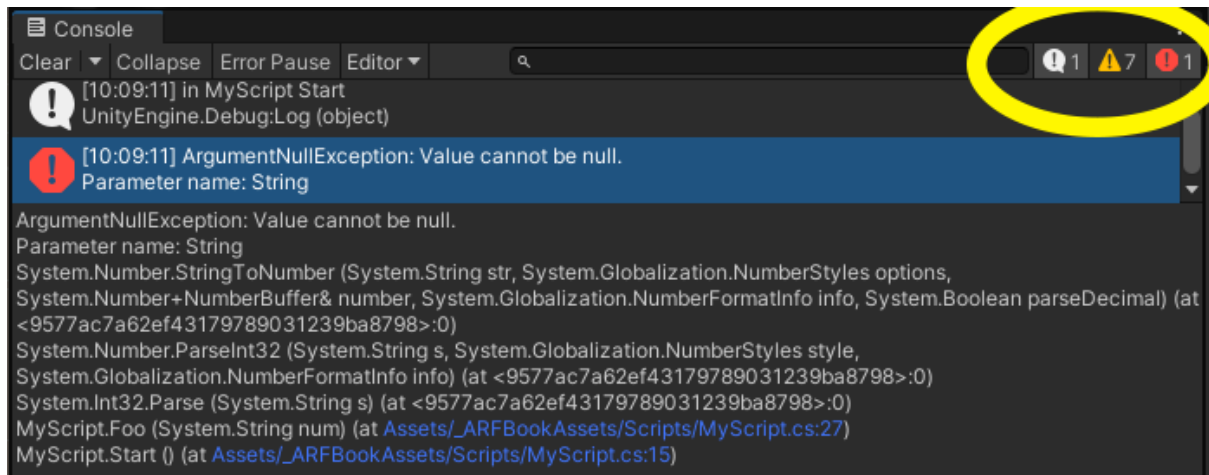


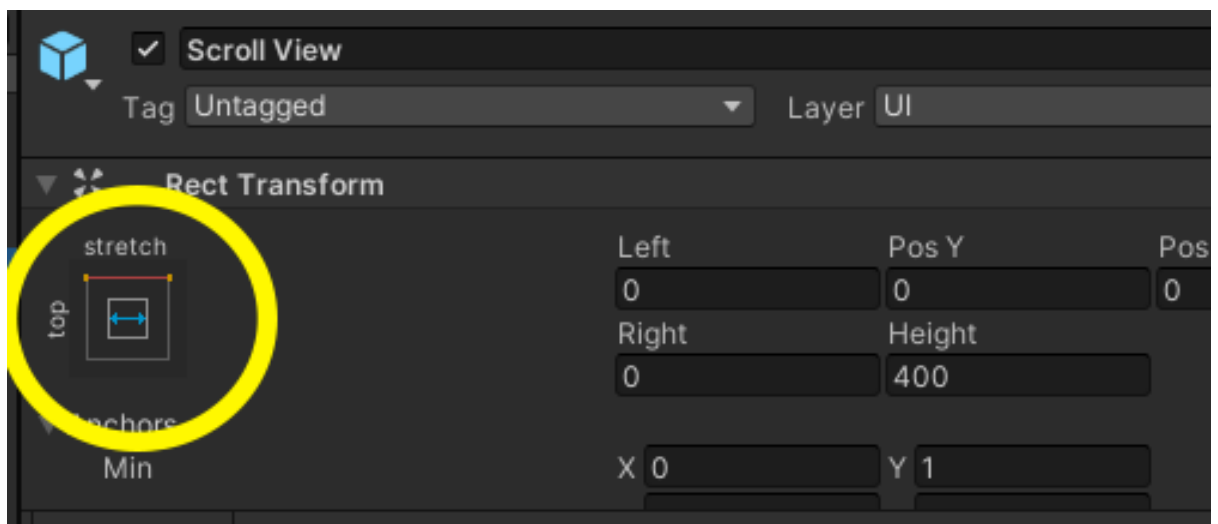
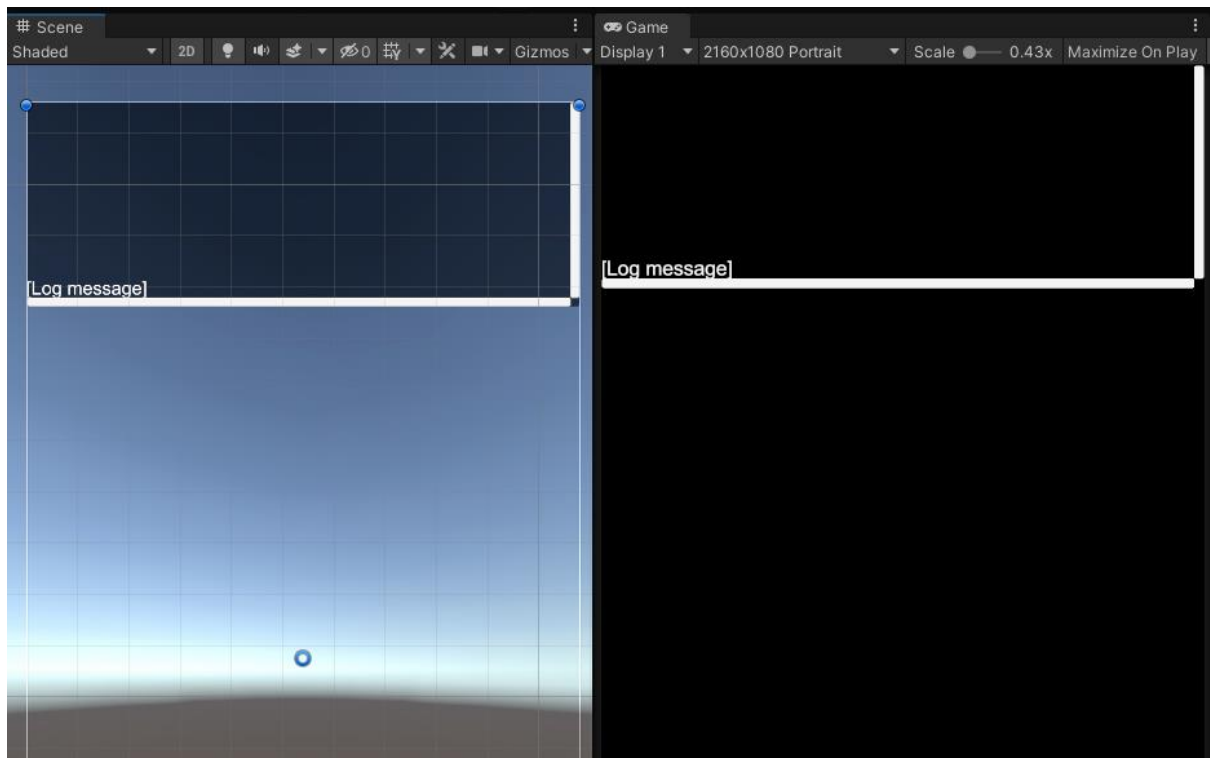


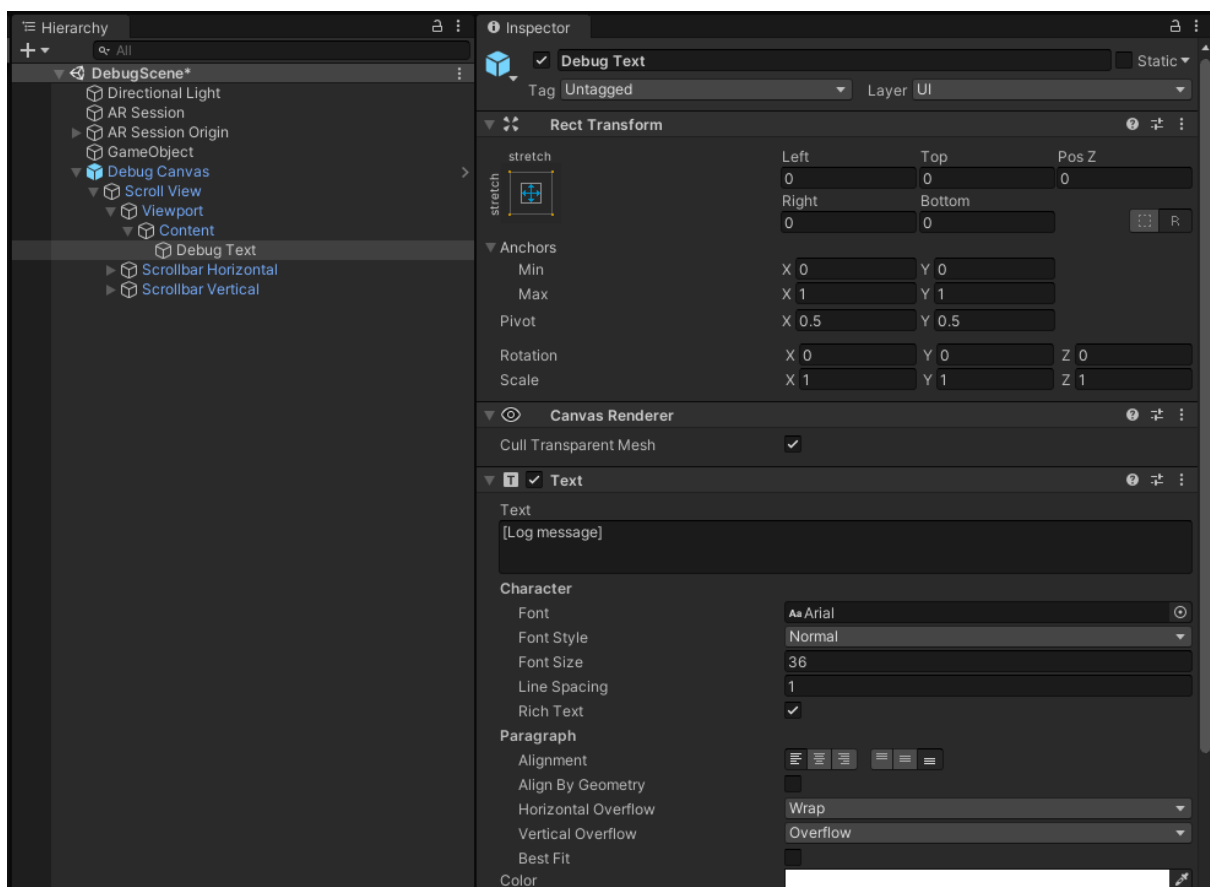
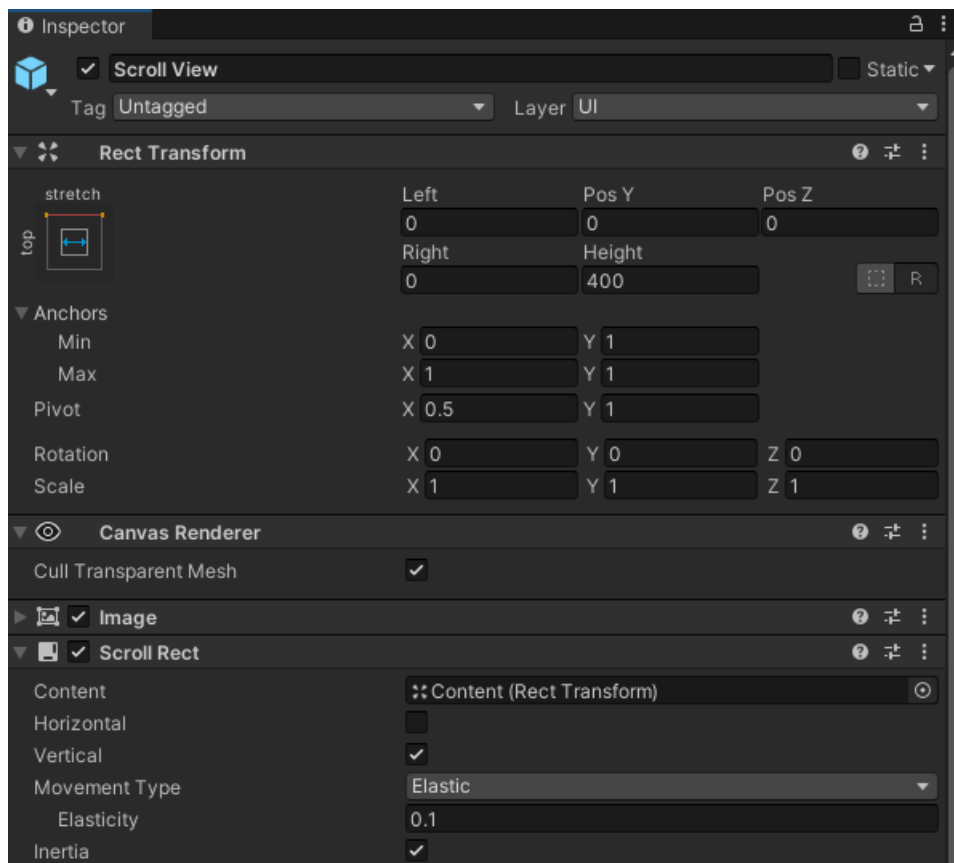


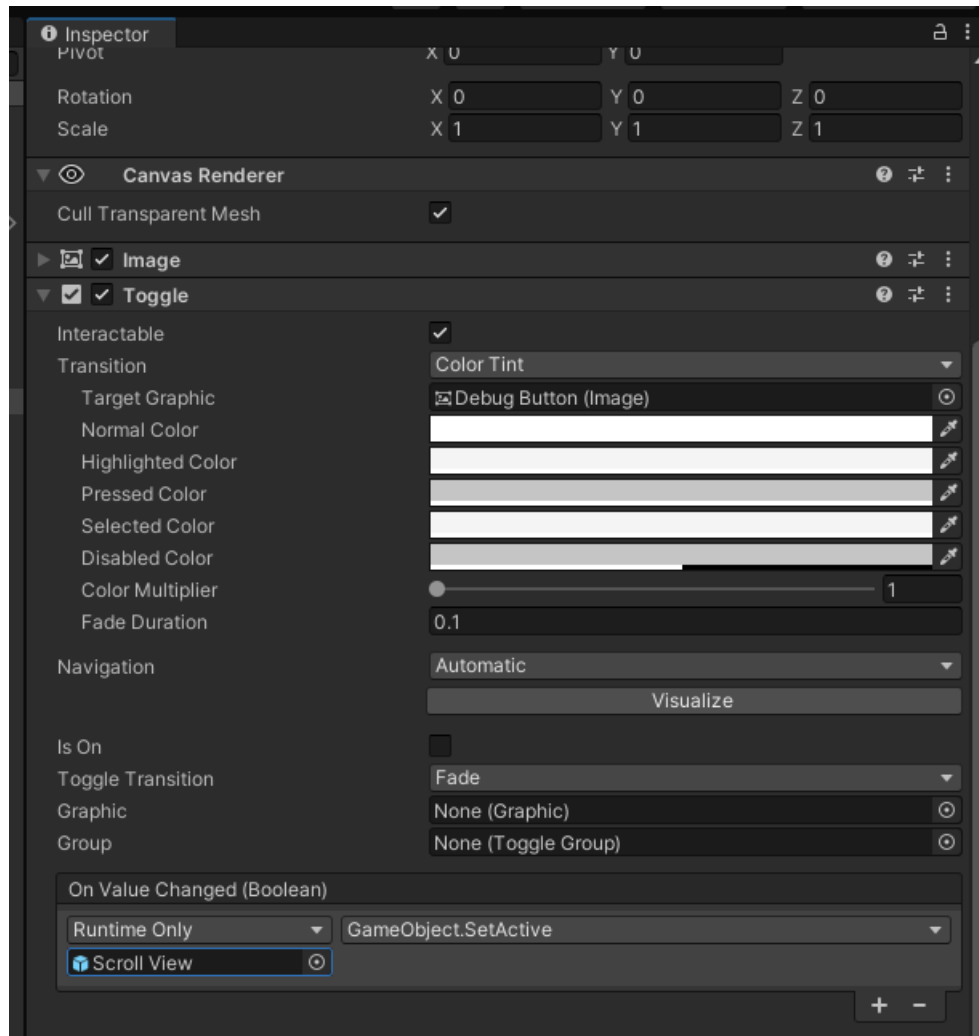
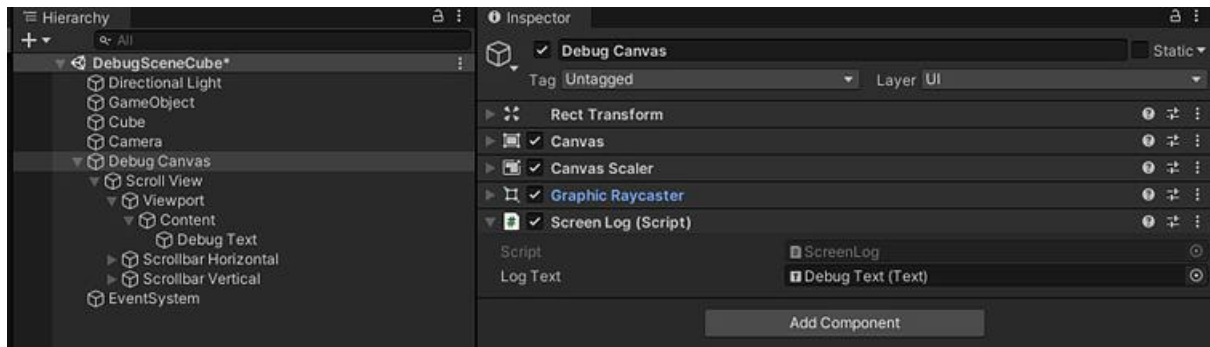


Chapter 3: Improving the Developer Workflow



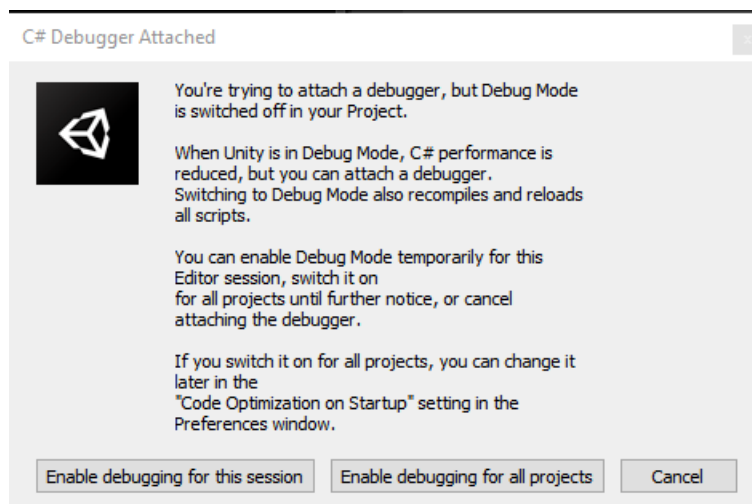
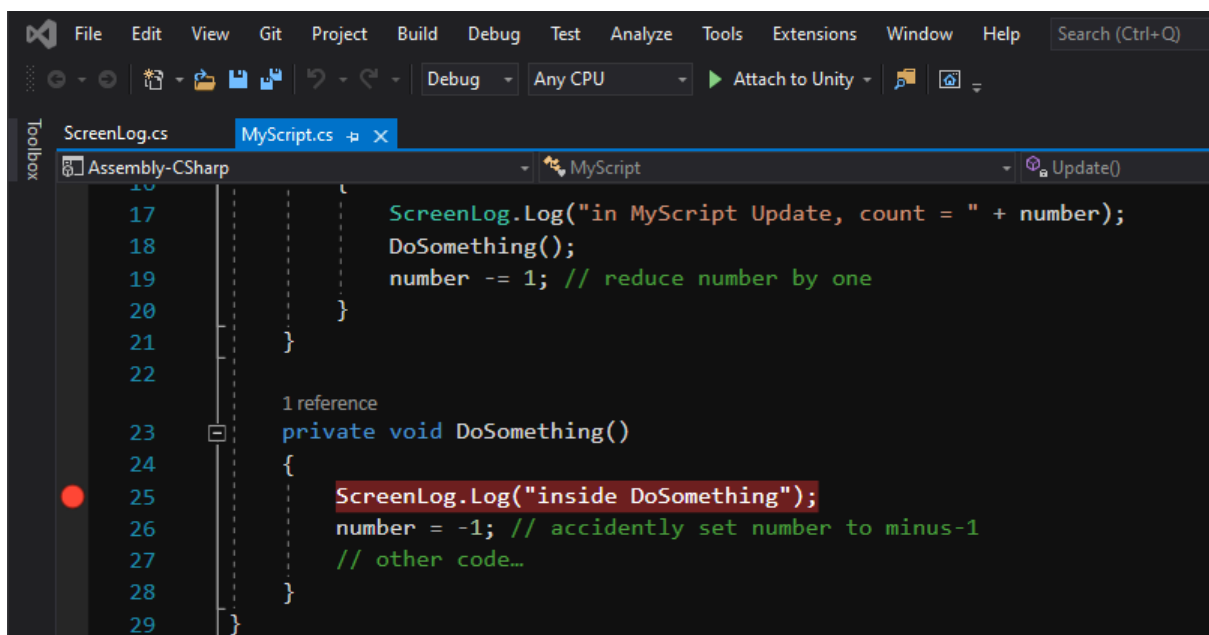
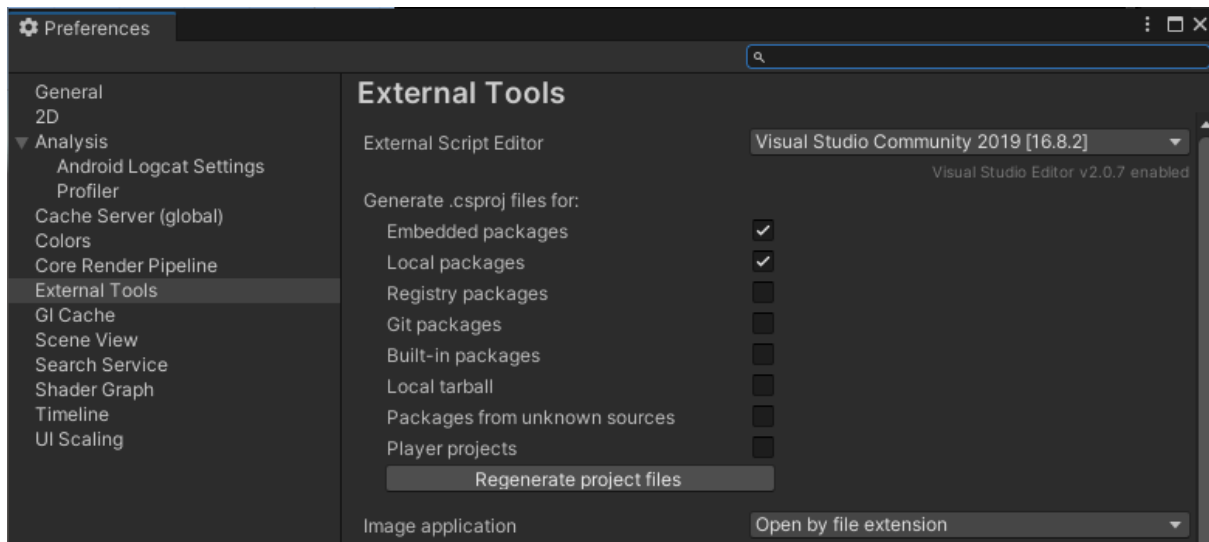


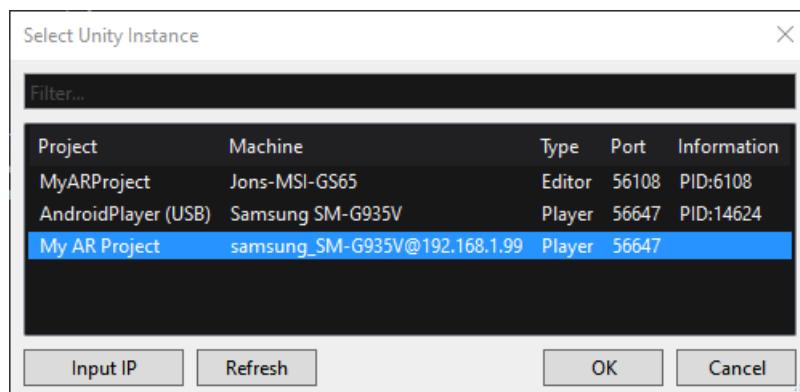
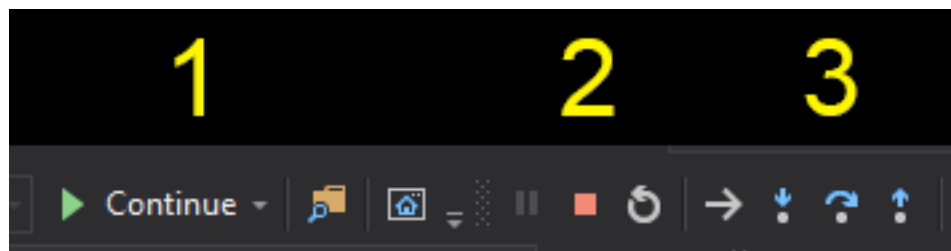
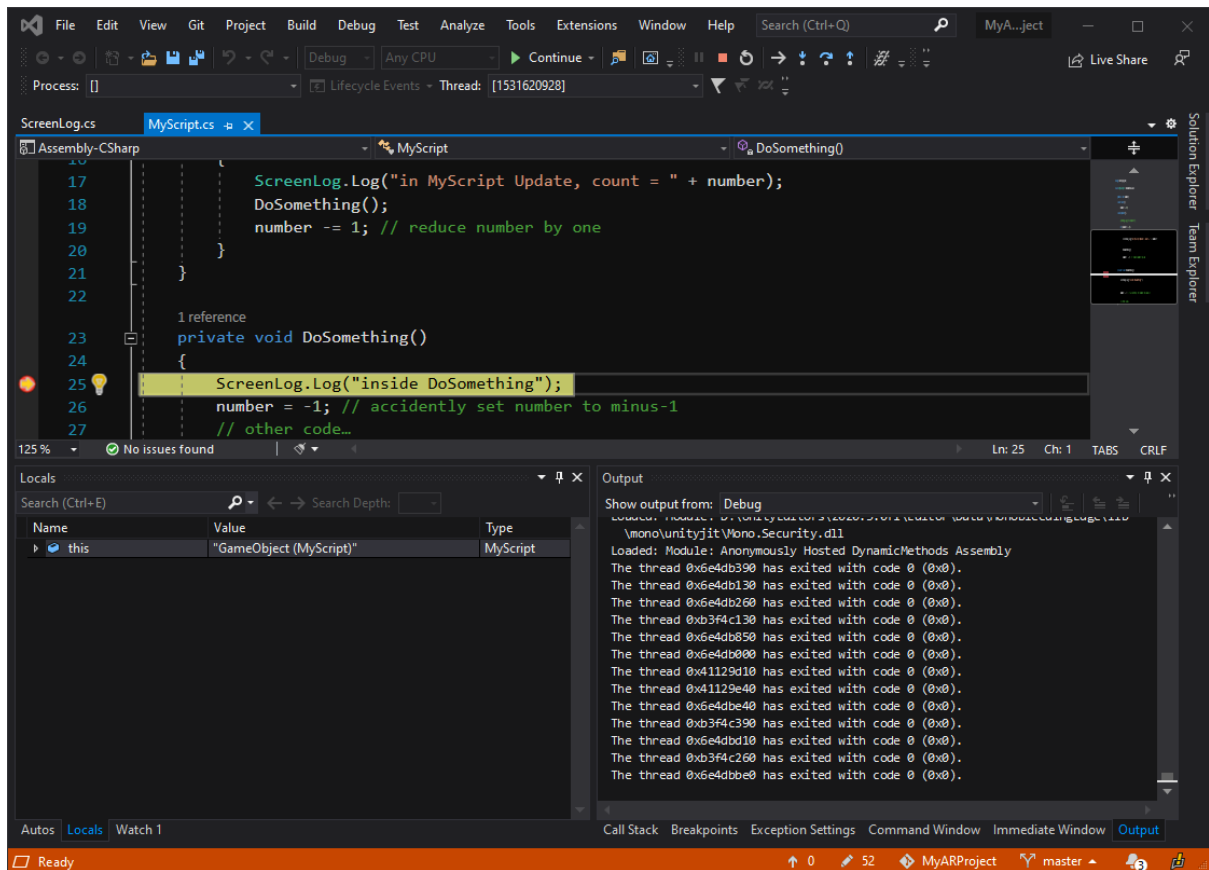




in MyScript Update, count = 10
inside DoSomething

Debug

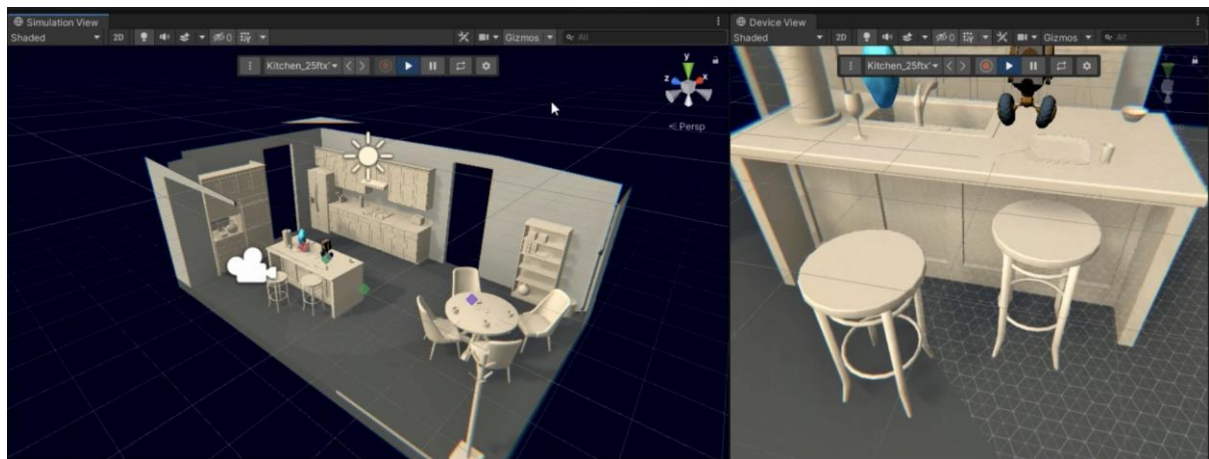
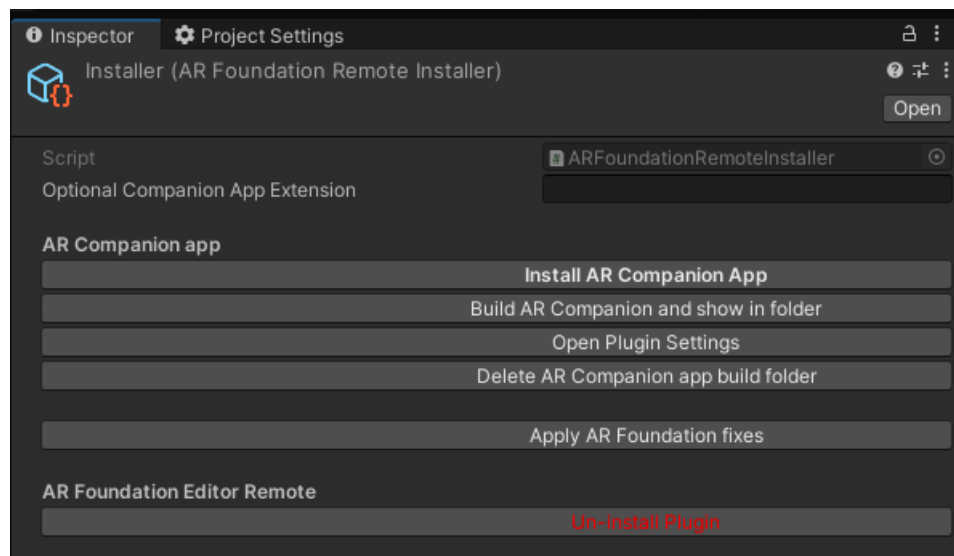




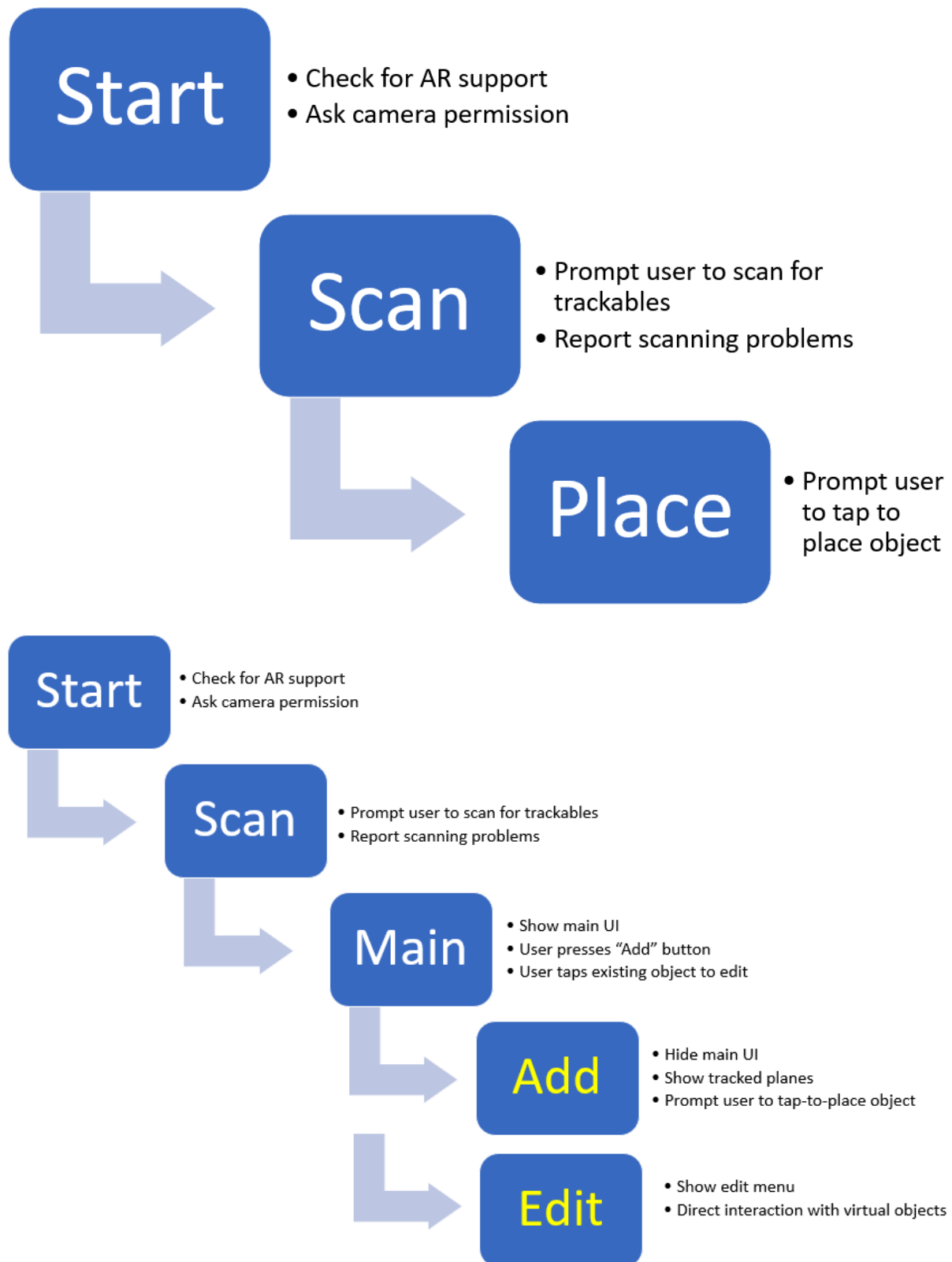
Debug

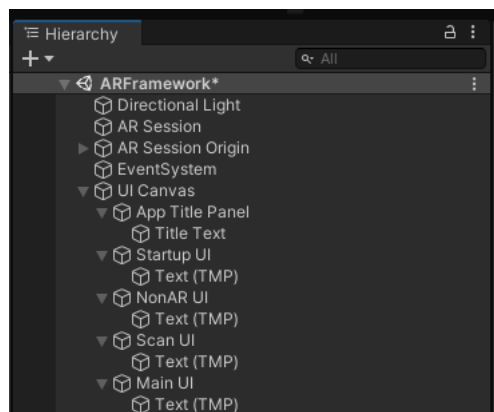
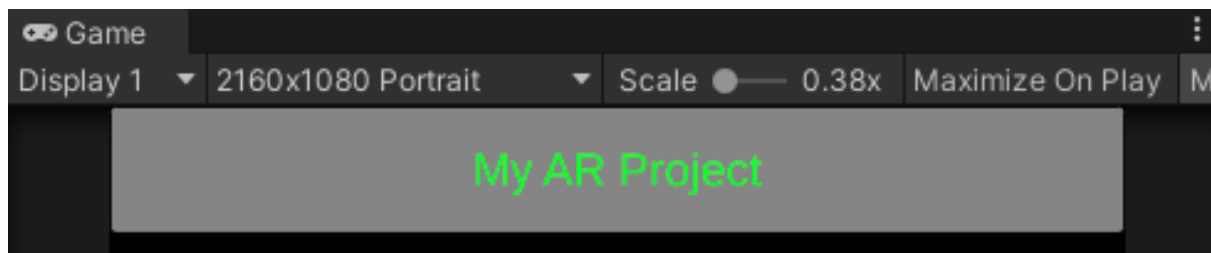
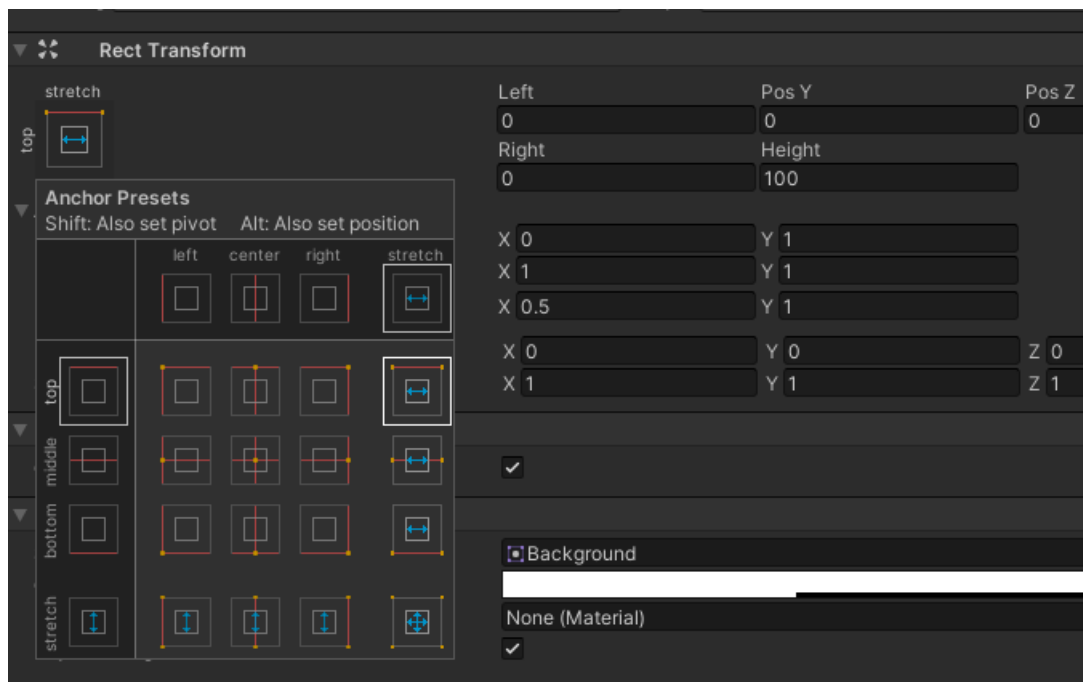
You can attach a managed debugger now if you want

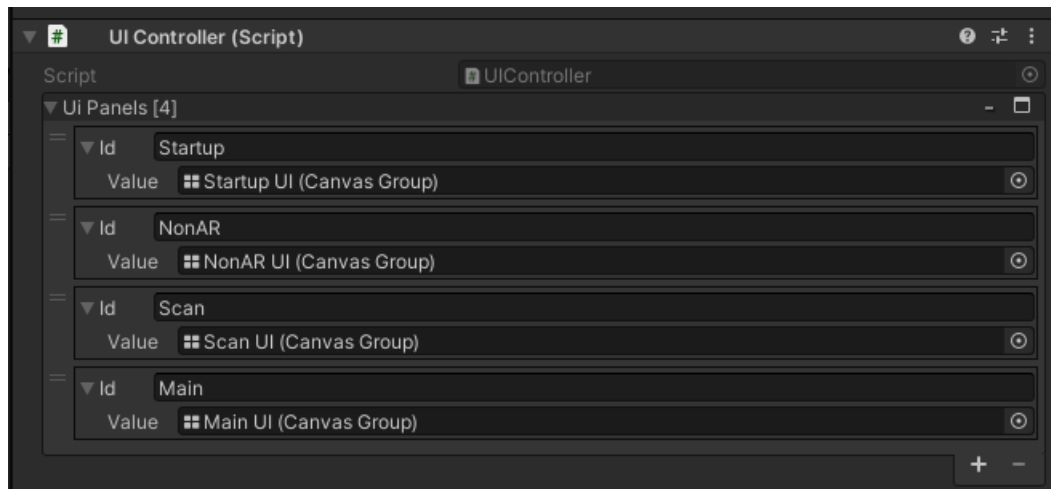
OK



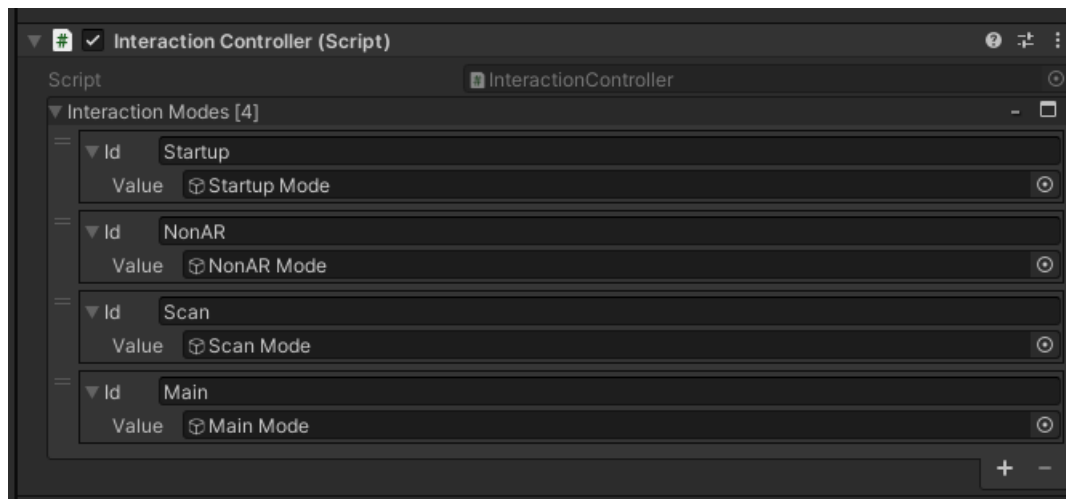
Chapter 4: Creating an AR User Framework







- Interaction Controller
 - Startup Mode
 - NonAR Mode
 - Scan Mode
 - Main Mode





Move Device Slowly



Look for more textures or details in the area.

Development Build

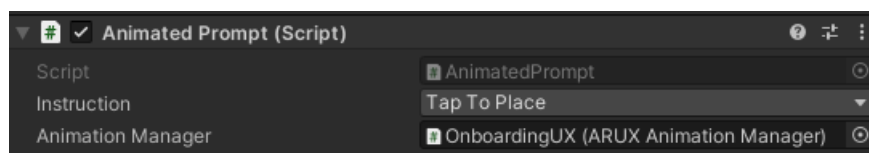
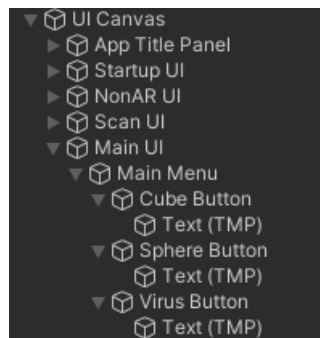
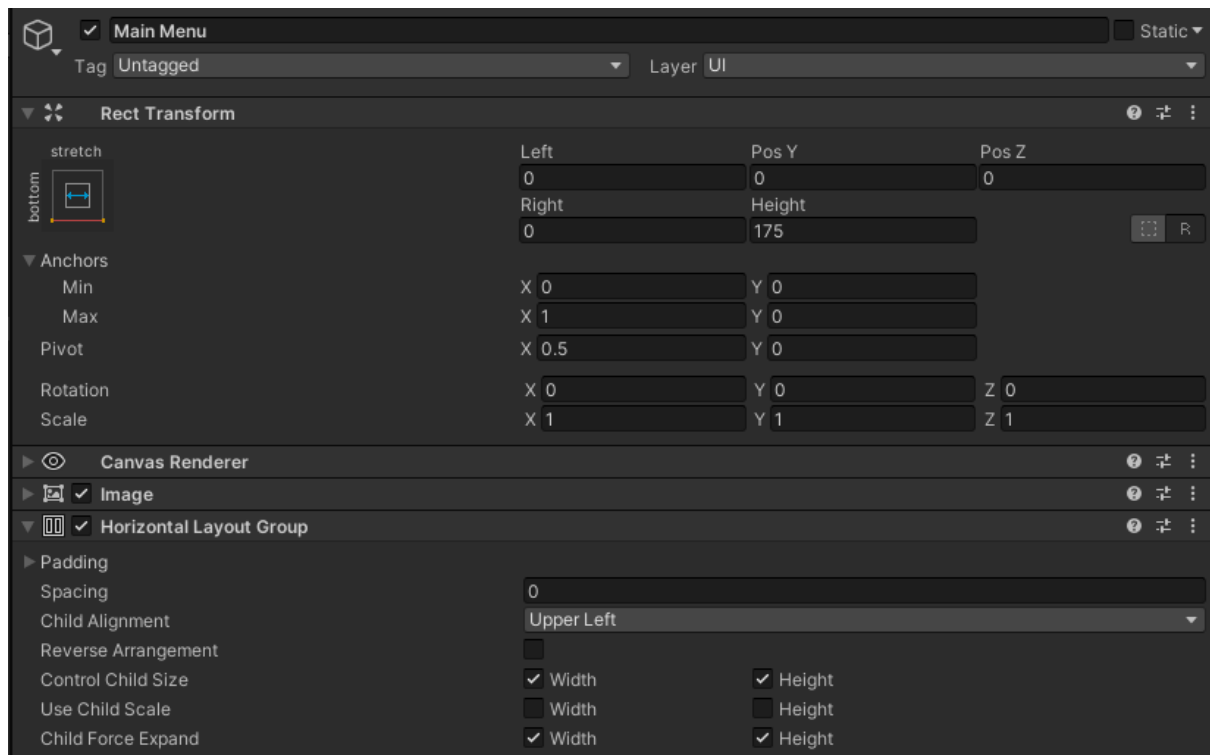


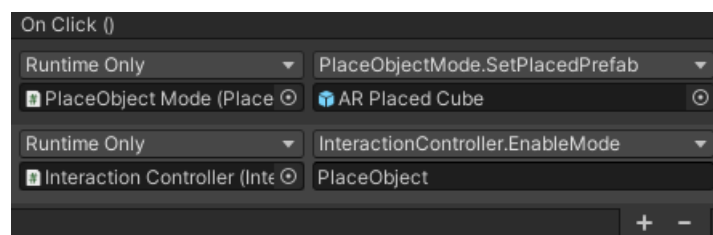
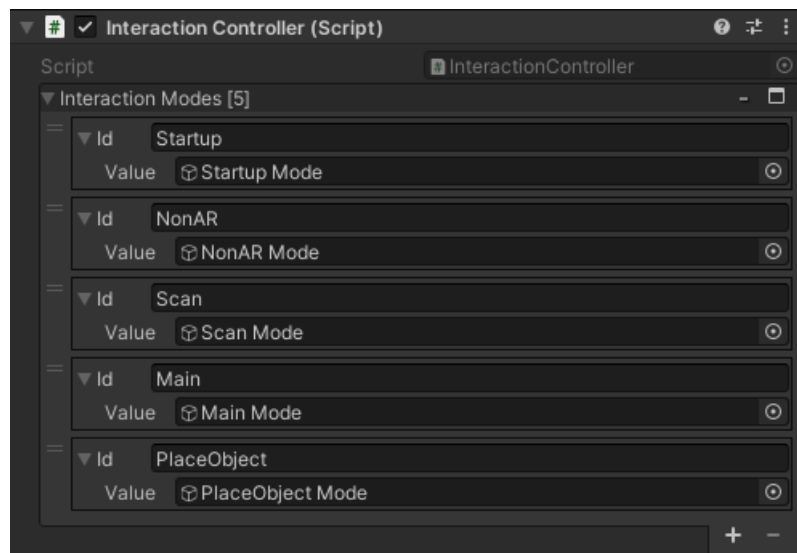
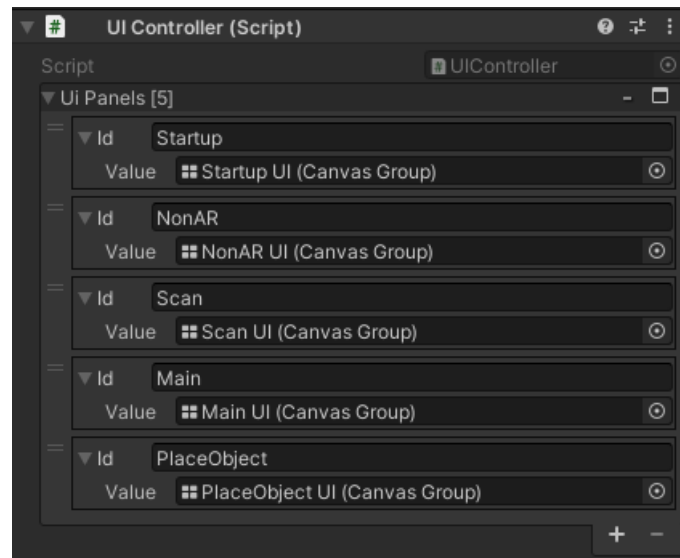
Tap to Place AR

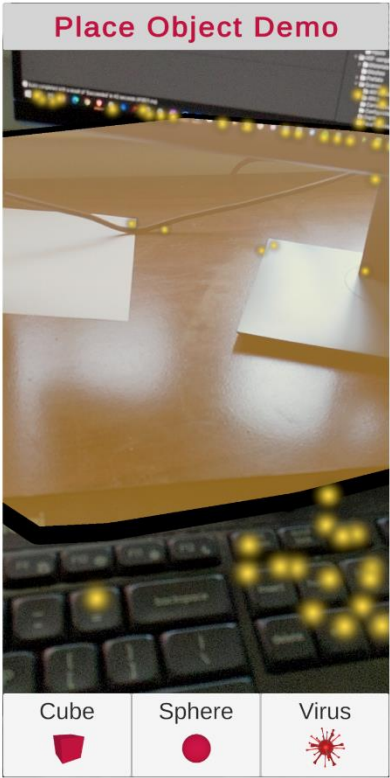
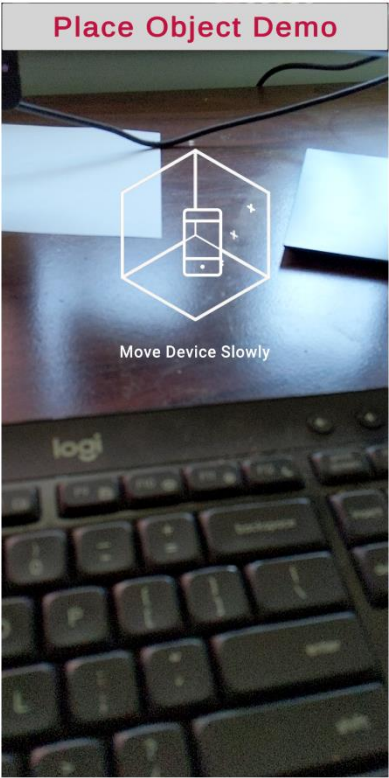
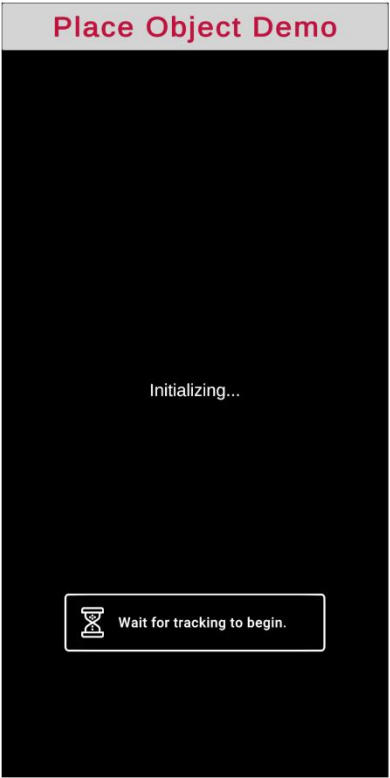


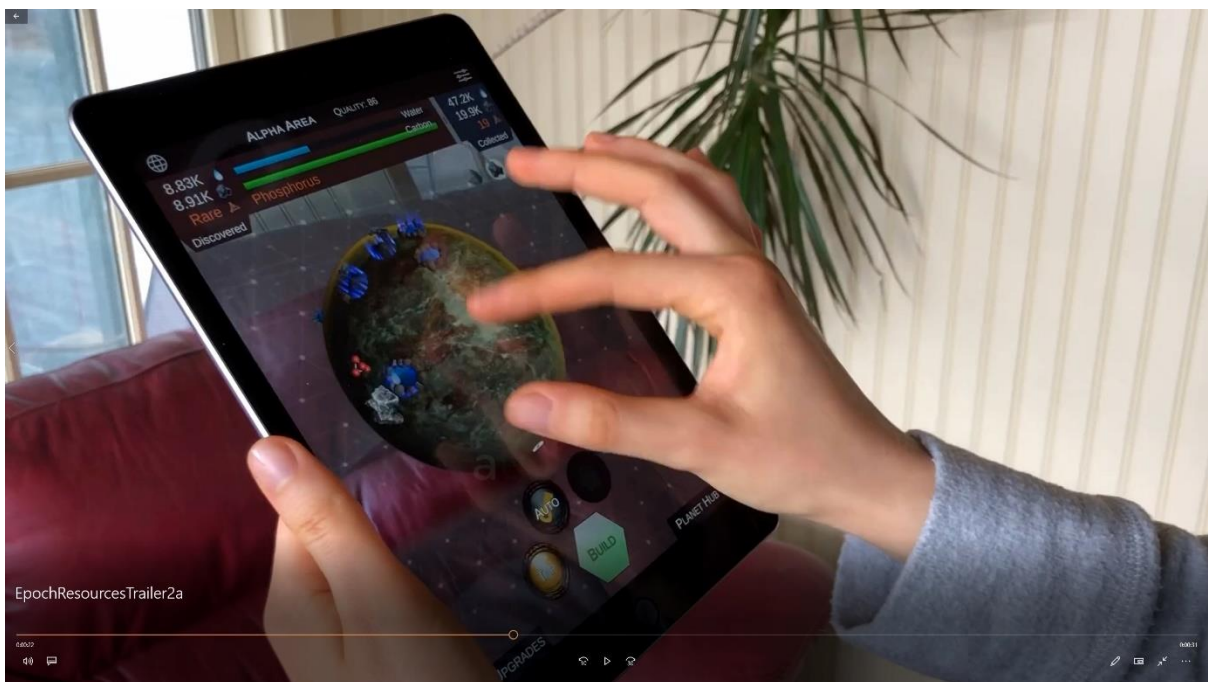
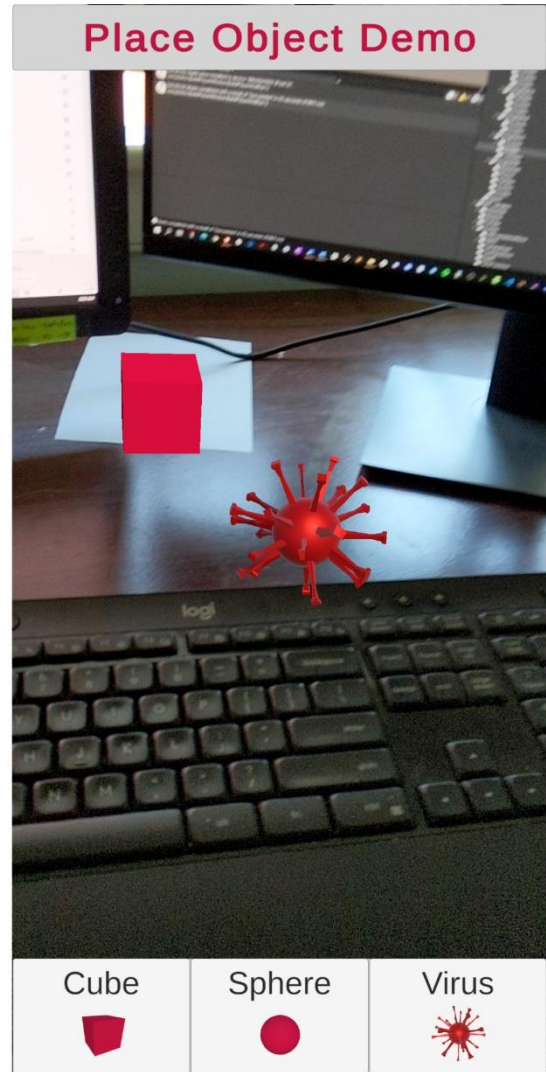
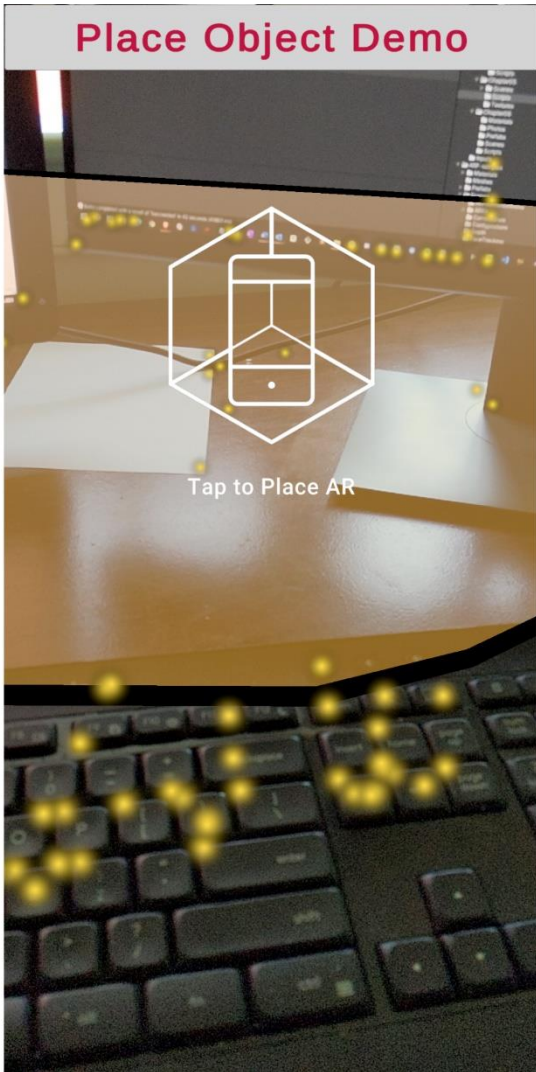
Development Build





























Chapter 5: Using the AR User Framework



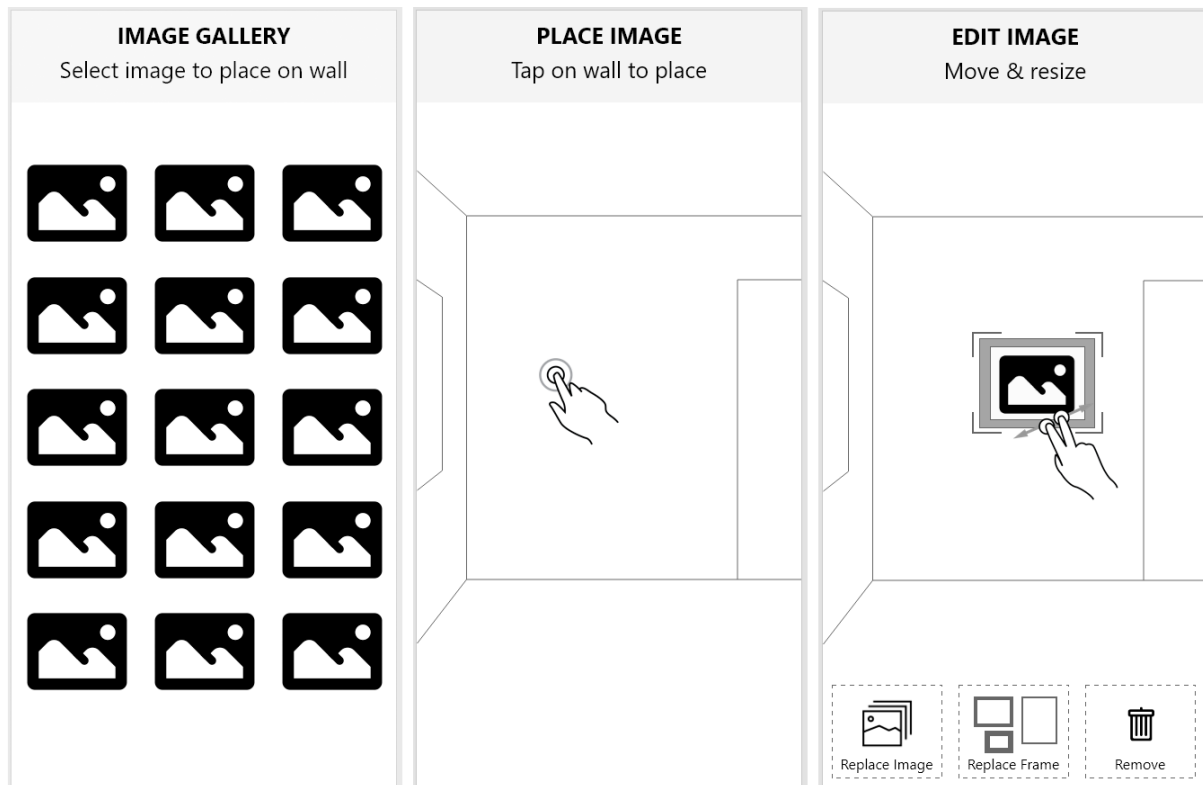


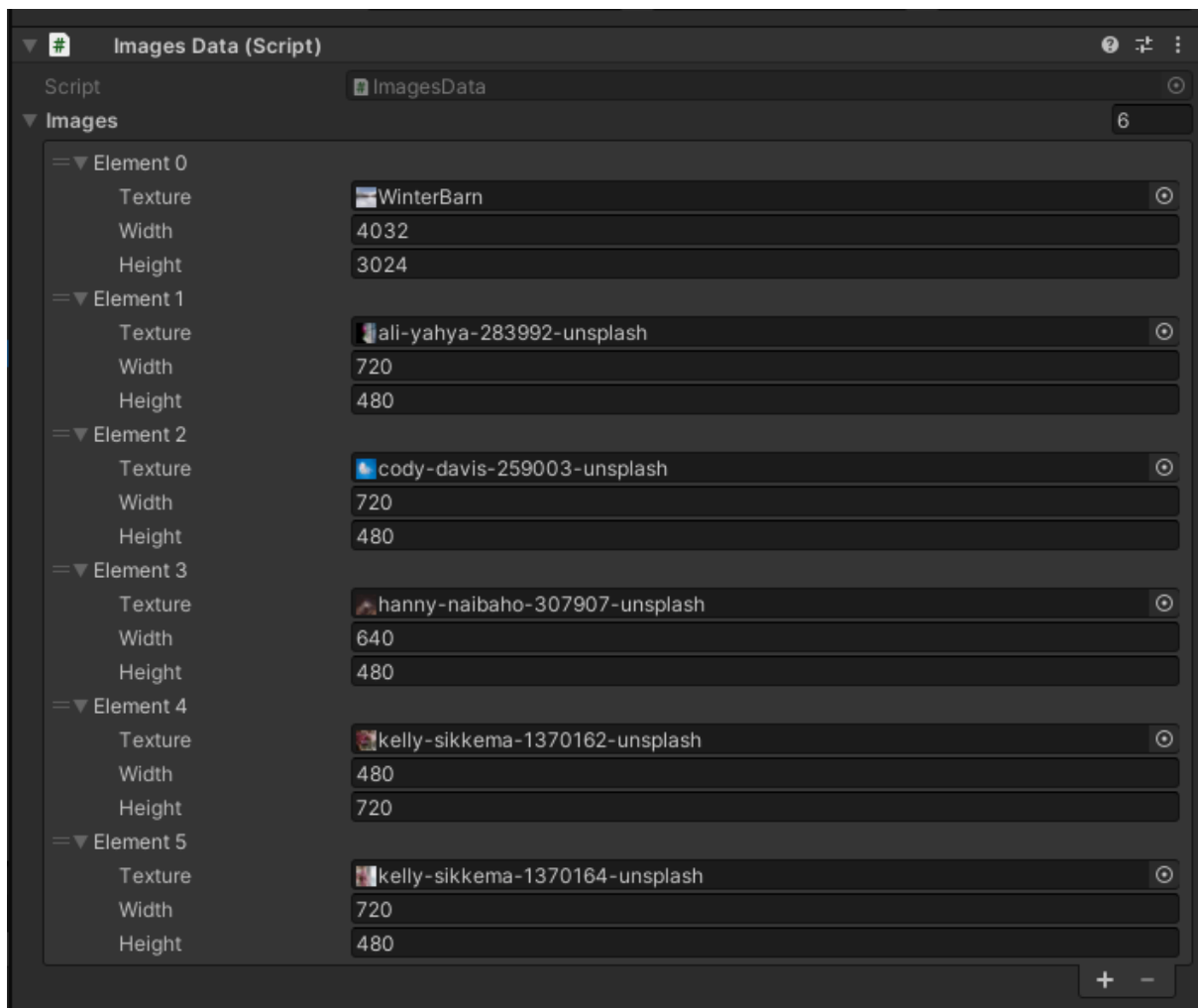


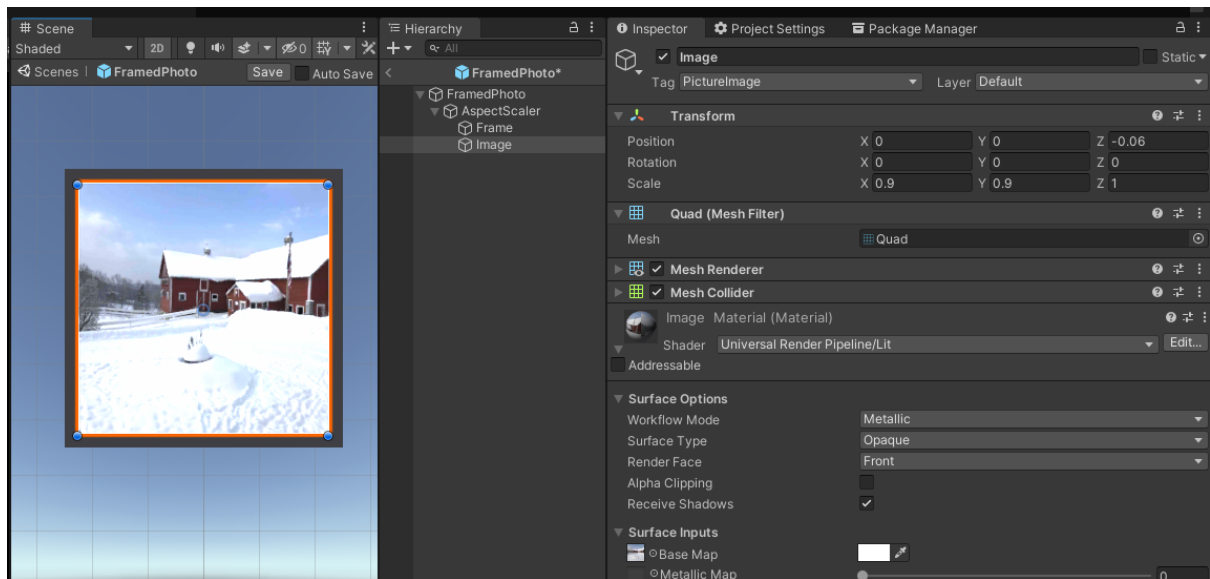
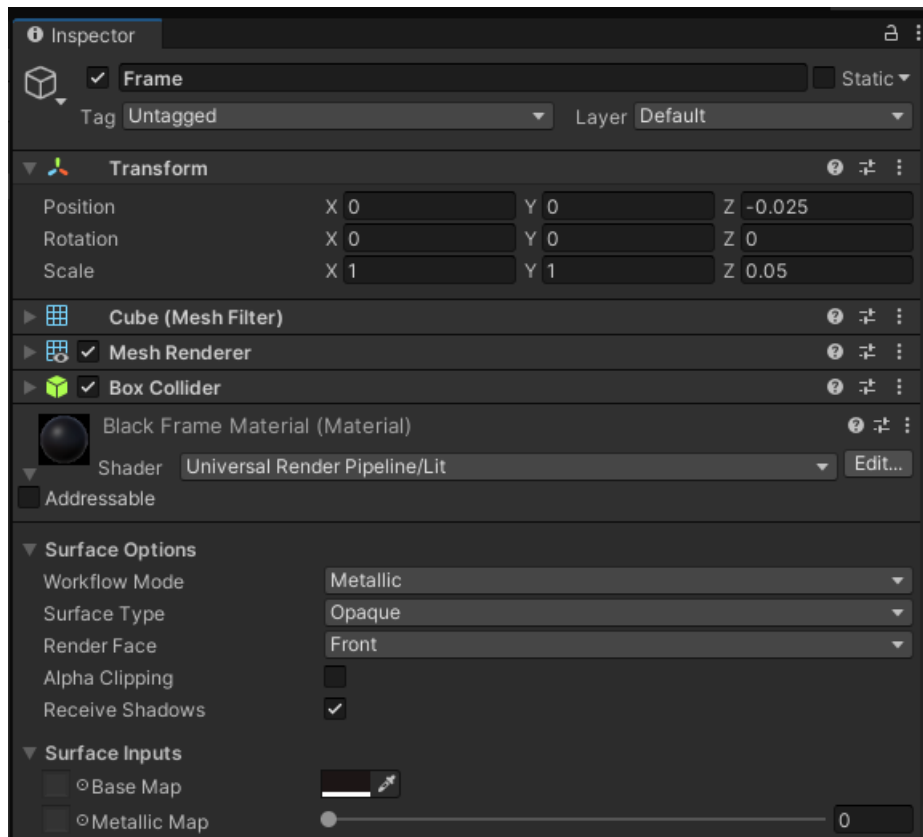


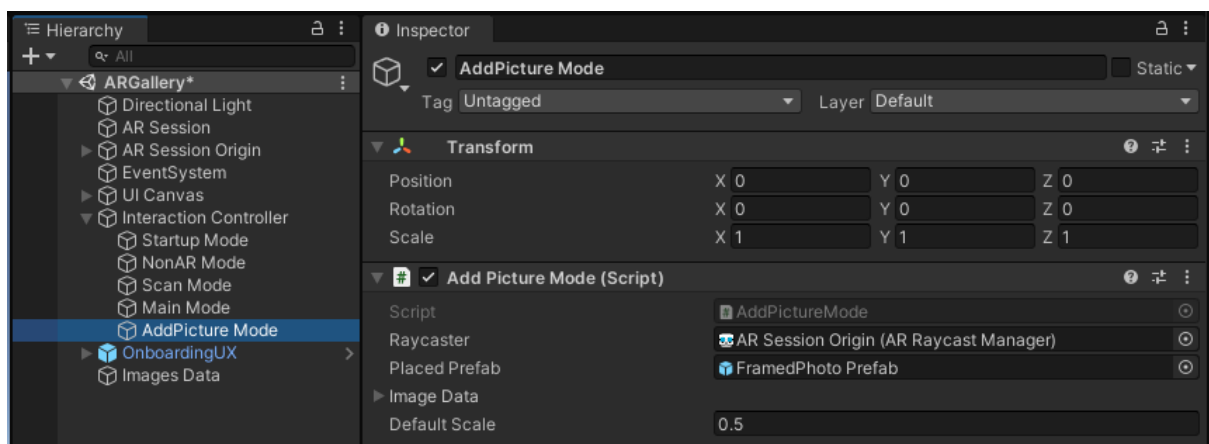
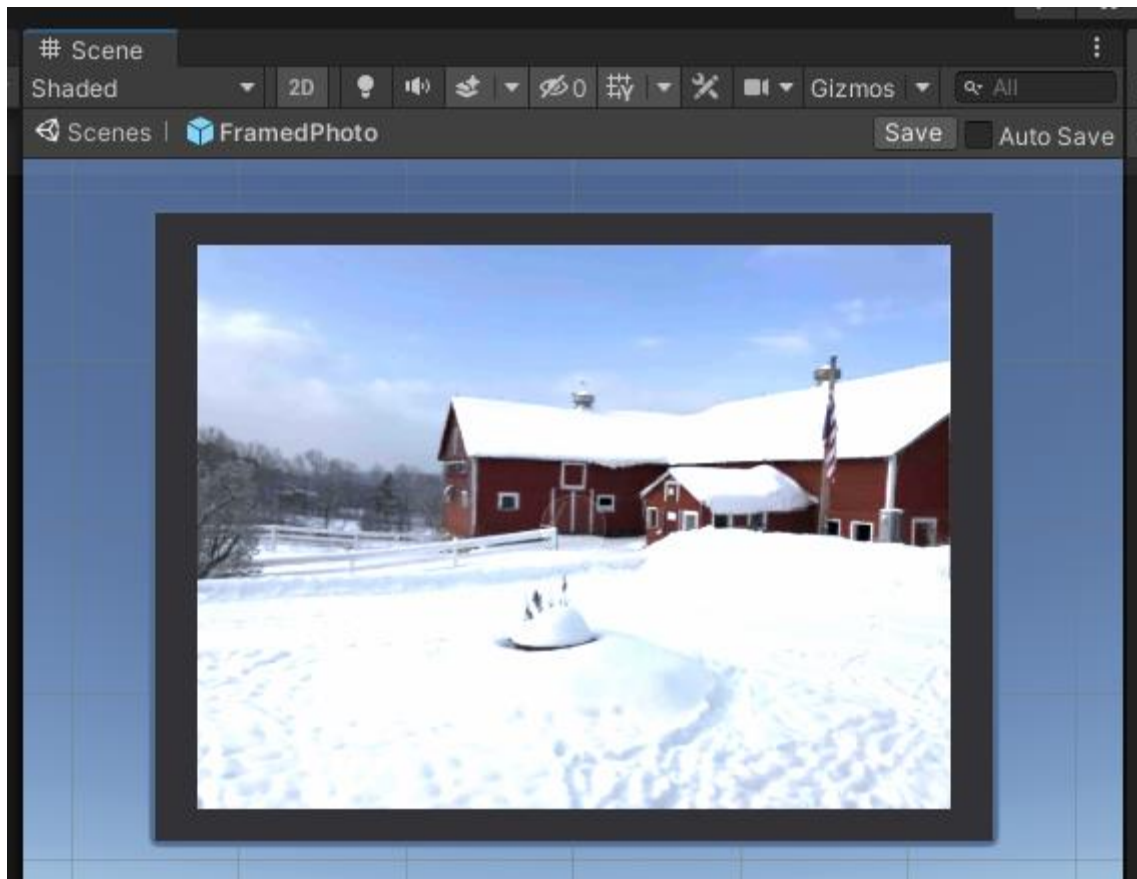
Localization Tables							
New Table Collection		Edit Table Collection					
Selected Table Collection		ReasonsUX(StringTable)					
Table Collection Name		ReasonsUX					
🔍							
Key	 Chinese (Simplified)	 English (en)	 French (fr)	 German (de)	 Hindi (hi)	 Italian (it)	 Japanese
FEATURES	<div> Smart</div> <div>请扫描环境中更多细节</div>	<div> Smart</div> <div>Look for more textures or details in the area.</div>	<div> Smart</div> <div>Recherchez plus de textures ou de détails dans la zone.</div>	<div> Smart</div> <div>Schauen Sie sich nach mehr Strukturen oder Details um.</div>	<div> Smart</div> <div>कृपया अपने इर्दगिर्द अलग अलग आकार तथा रचनाएं ढूँढ़ने का परयास करें.</div>	<div> Smart</div> <div>Cerca più pattern o dettagli nell'area in cui ti trovi.</div>	<div> Smart</div> <div>環境内のチャヤデルを探しさい。</div>
INIT	<div> Smart</div> <div>正在初始化 AR</div>	<div> Smart</div> <div>Initializing augmented reality.</div>	<div> Smart</div> <div>Initialisation de la réalité augmentée.</div>	<div> Smart</div> <div>Initialisiere Erweiterte Realität (AR)</div>	<div> Smart</div> <div>AR की शुरुआत हो रही है.</div>	<div> Smart</div> <div>Inizializzando la realtà aumentata.</div>	<div> Smart</div> <div>拡張現実化してい</div>
LIGHT	<div> Smart</div> <div>当前环境比较暗，请到光线充足</div>	<div> Smart</div> <div>It's too dark. Try going to a</div>	<div> Smart</div> <div>C'est trop sombre.</div>	<div> Smart</div> <div>Es ist zu dunkel hier. Versuchen</div>	<div> Smart</div> <div>थोड़ा अंधेरा है। कपया कसी</div>	<div> Smart</div> <div>È troppo buio. Prova a</div>	<div> Smart</div> <div>暗すぎま り明る</div>

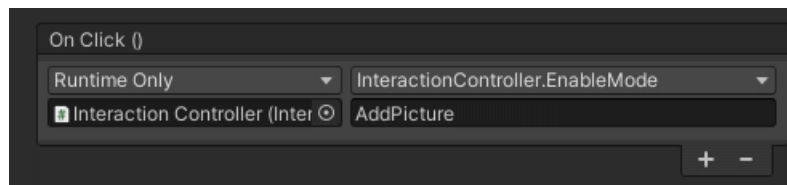
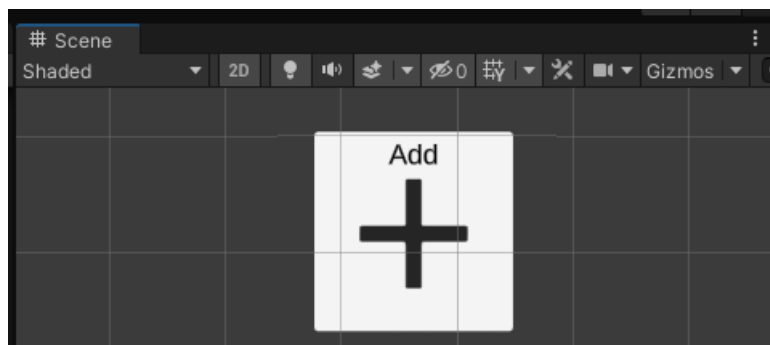
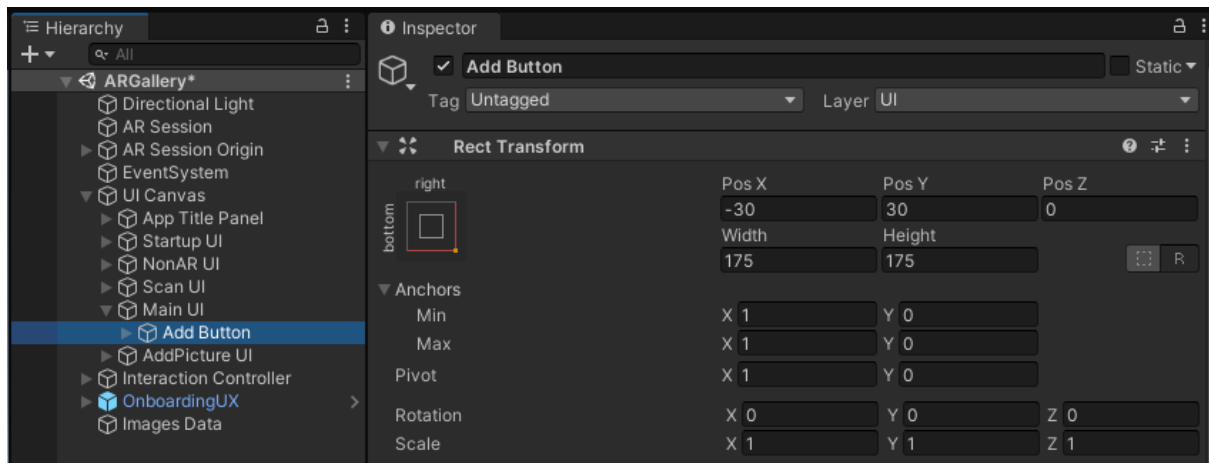
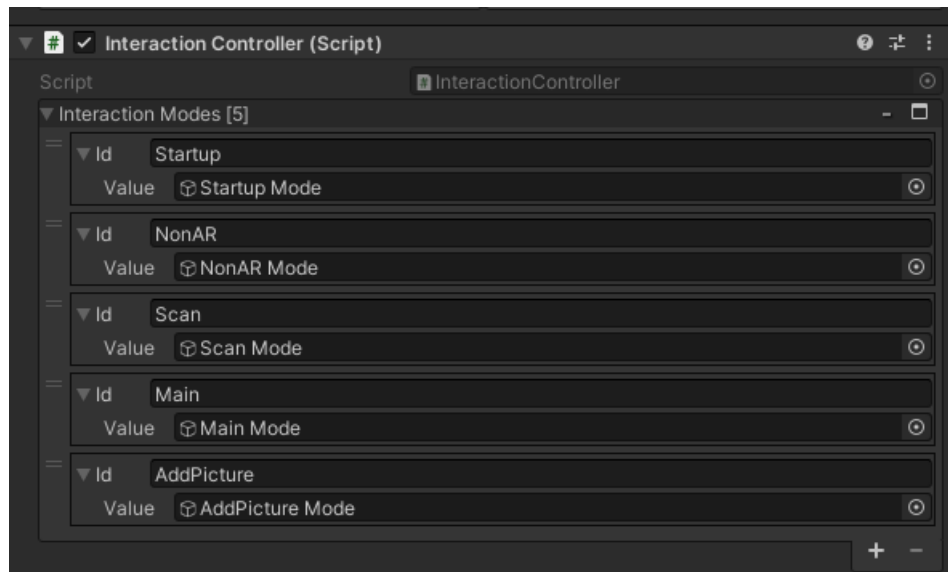
Chapter 6: Gallery: Building an AR App

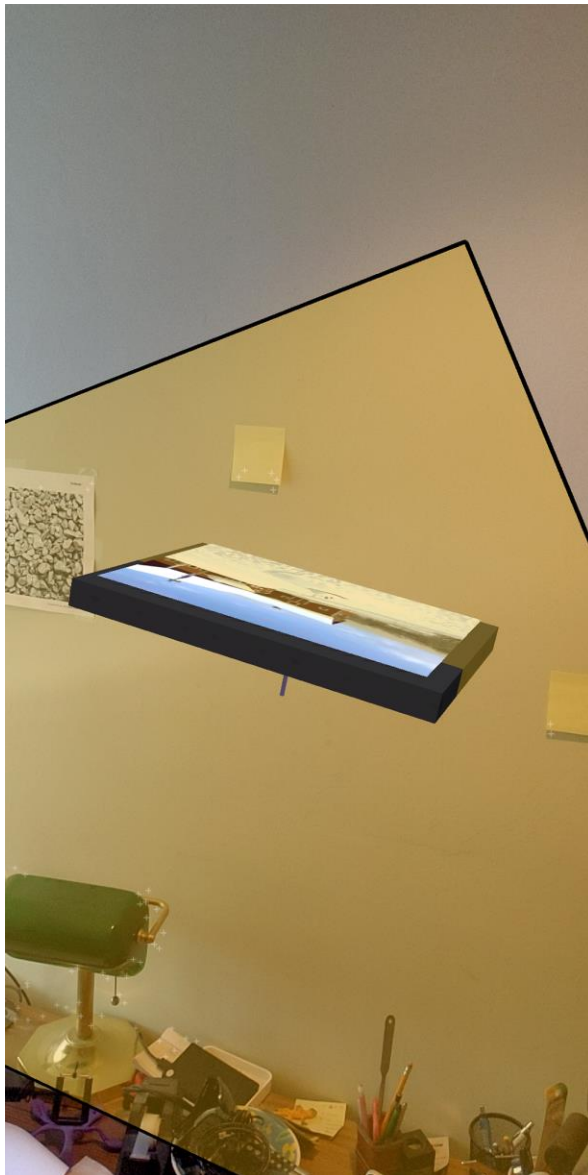


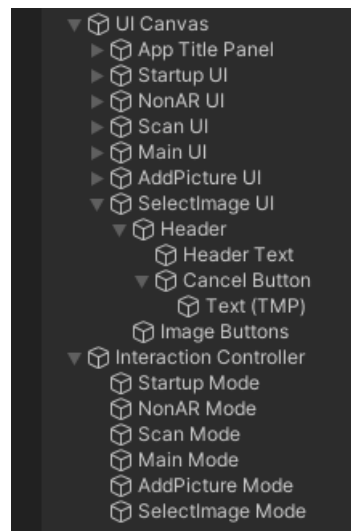
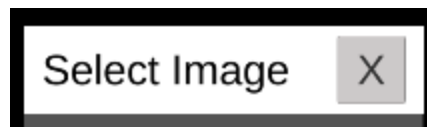
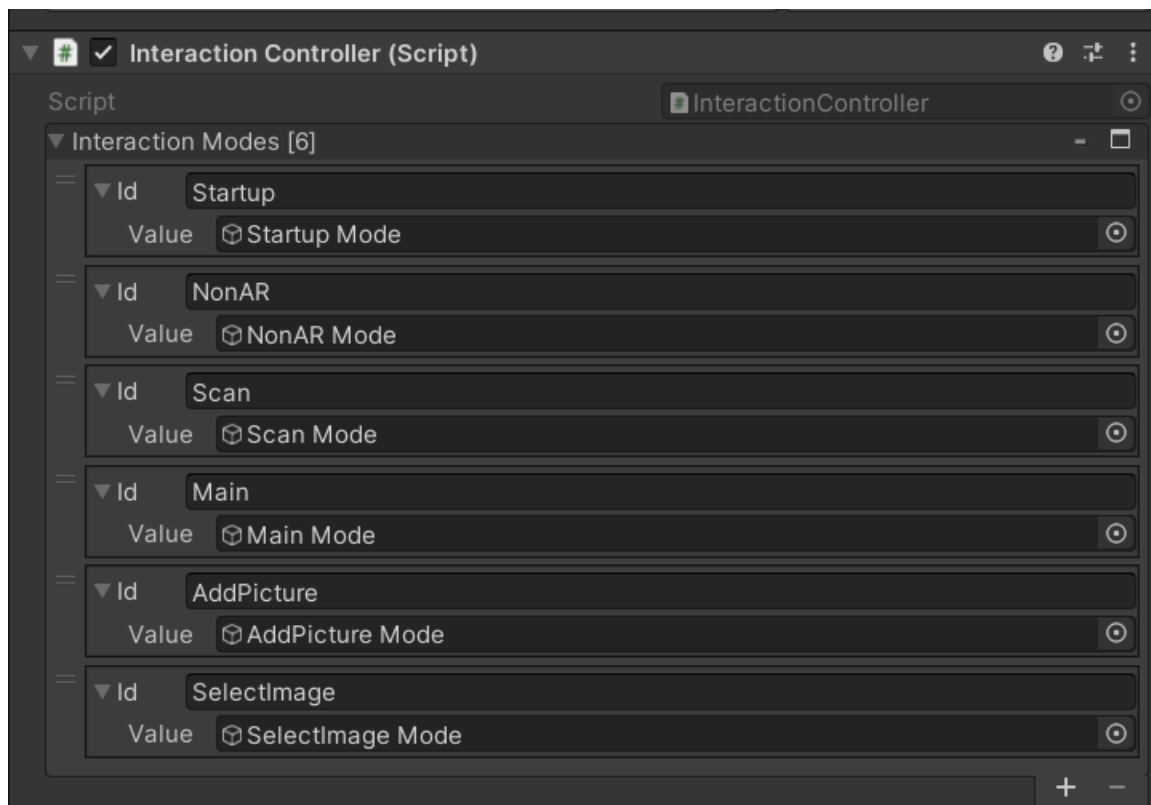


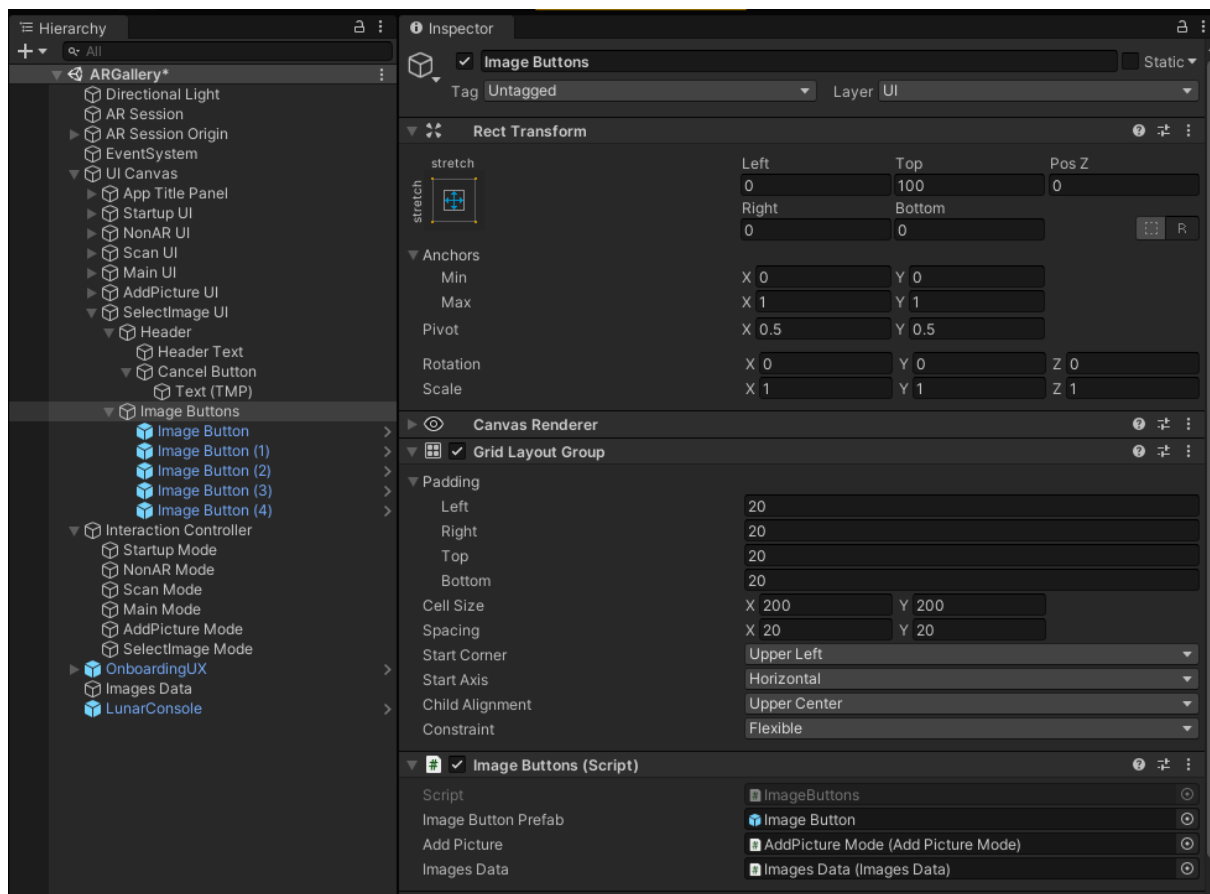
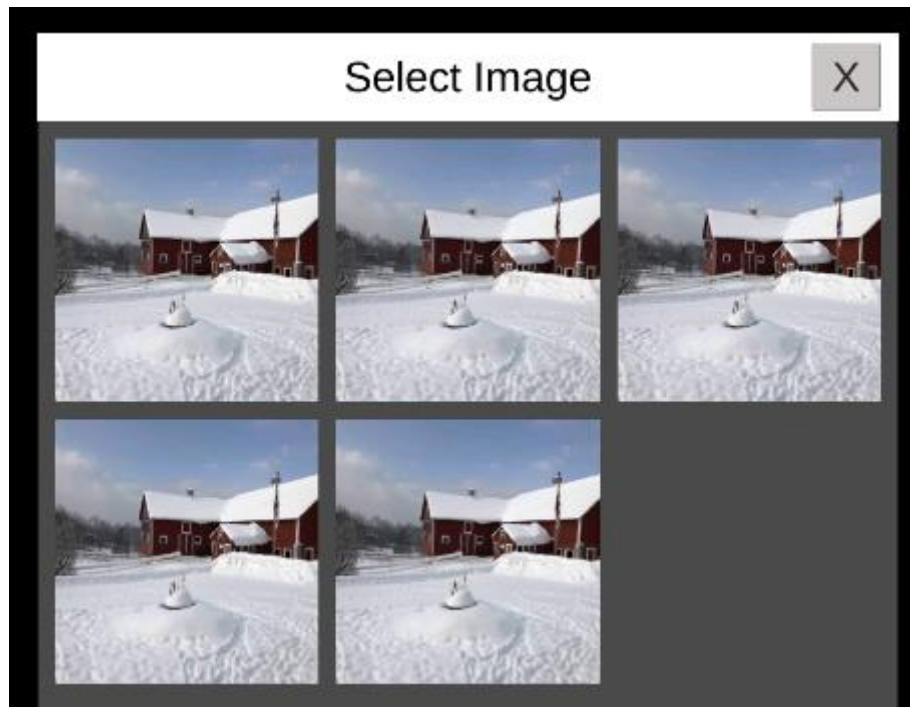






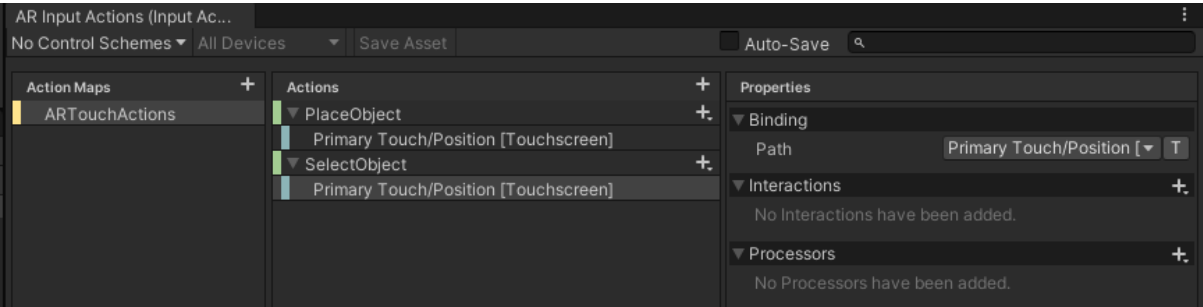
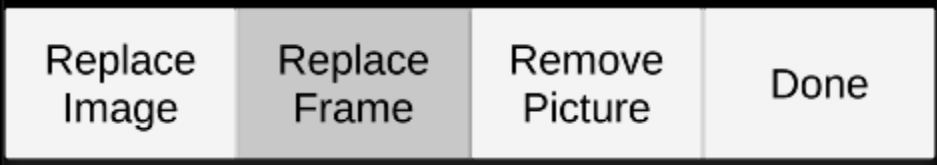
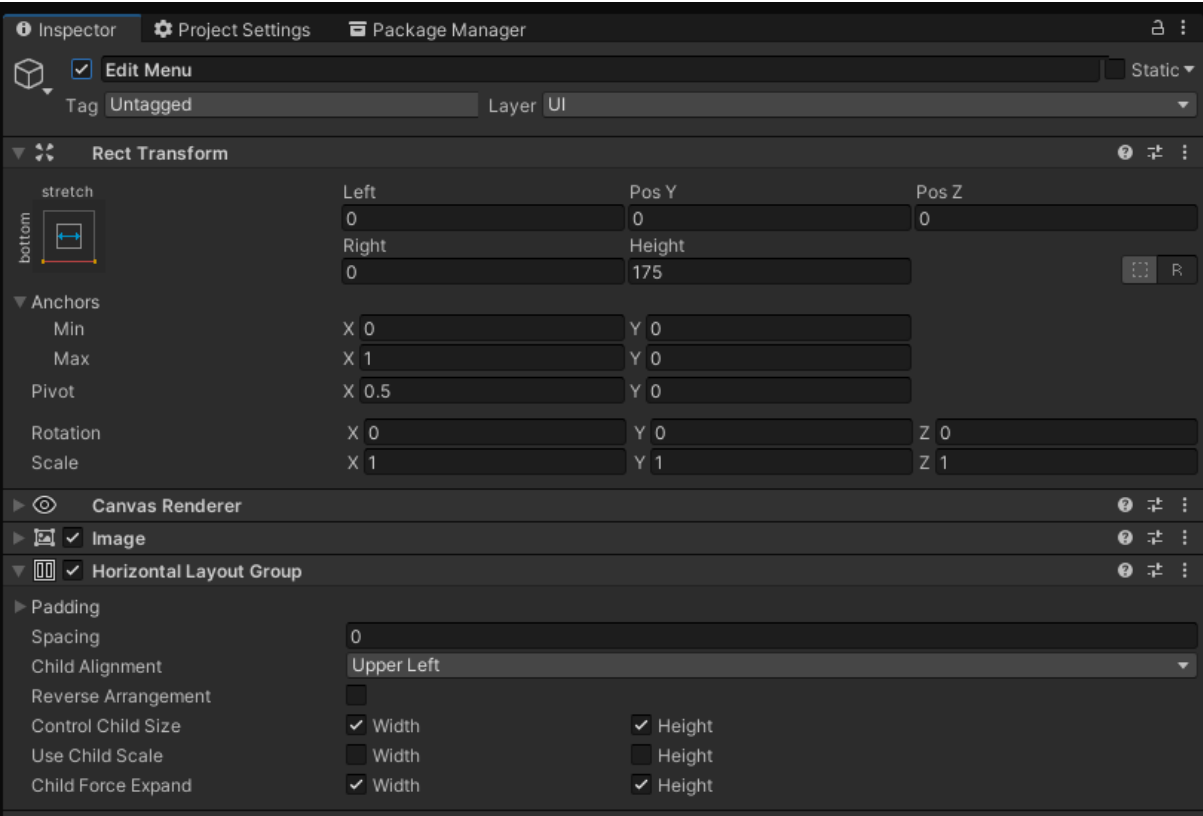








Chapter 7: Gallery: Editing Virtual Objects



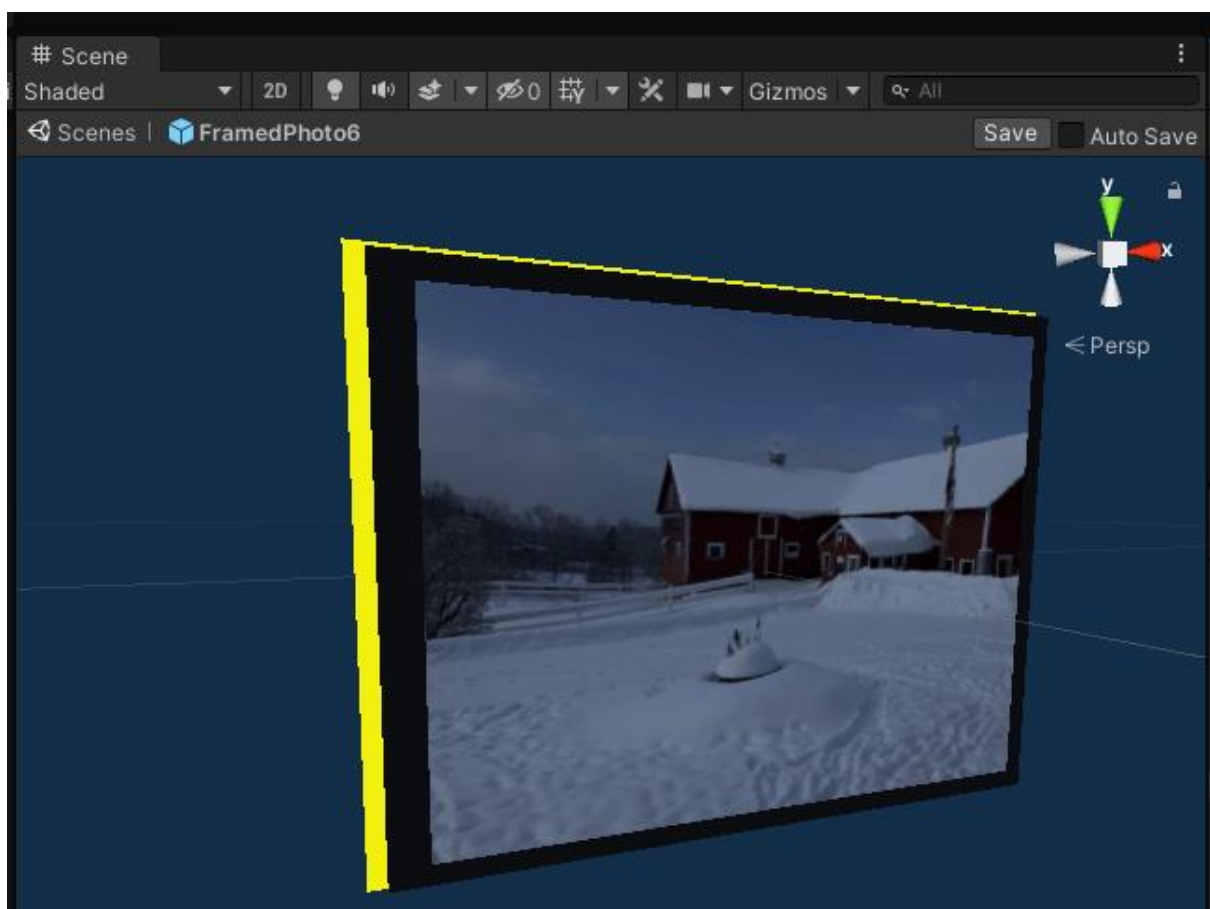
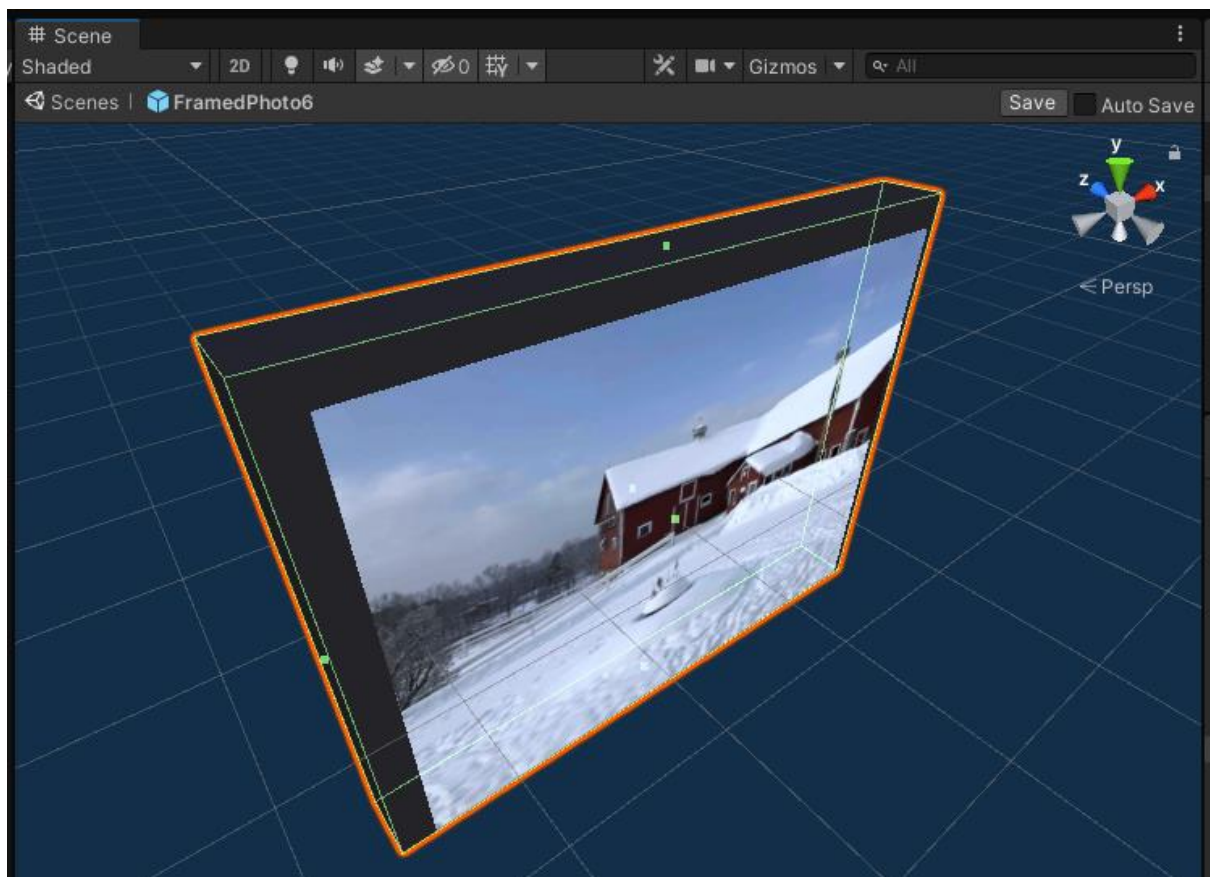
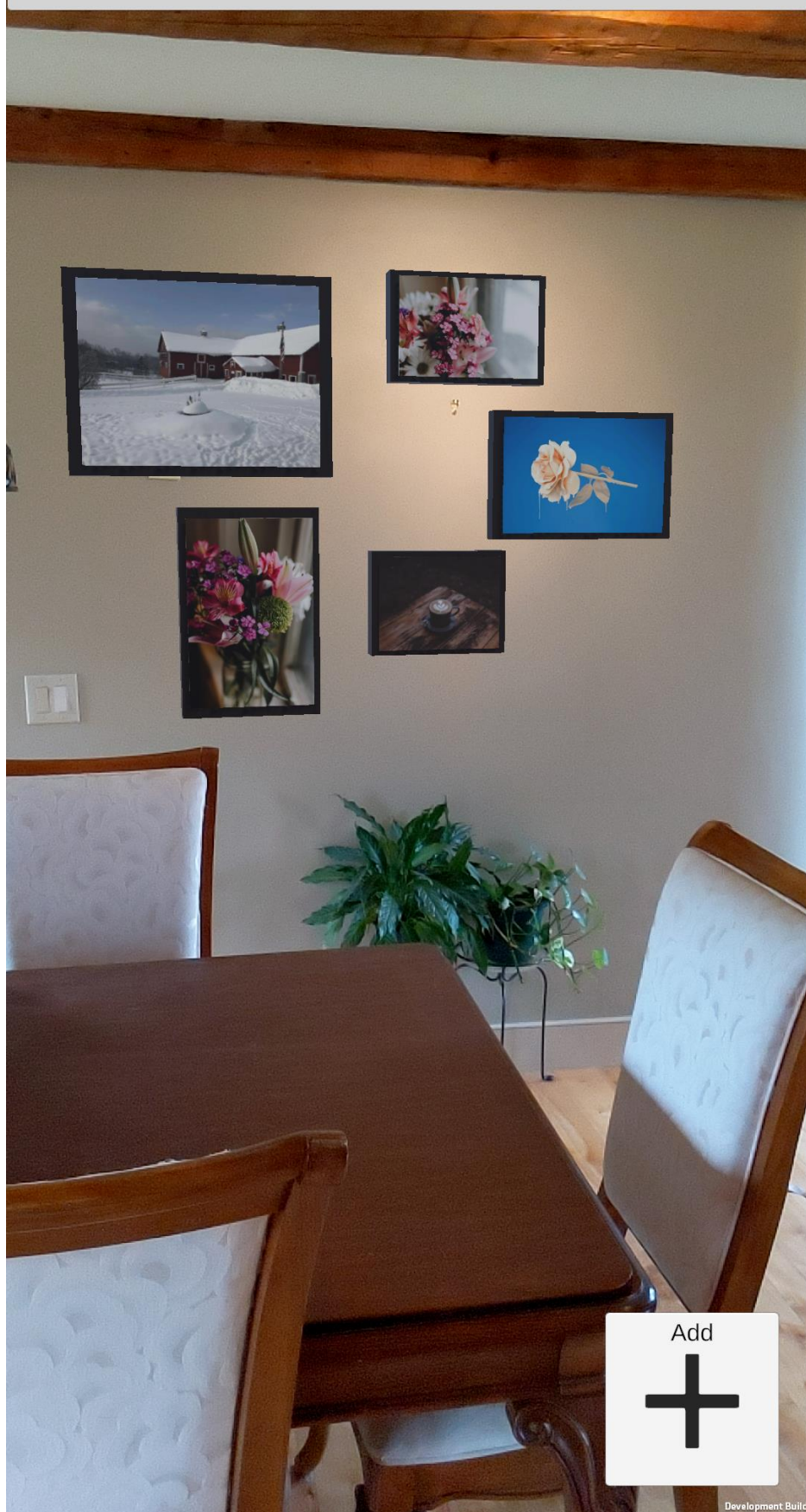
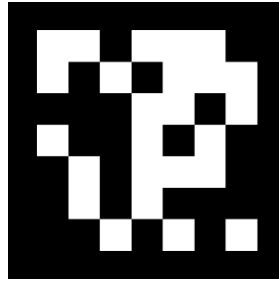


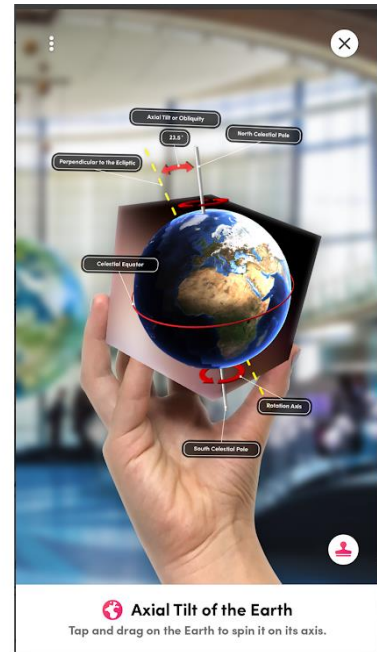
Photo Gallery



Chapter 8: Planets: Tracking Images



MERGE
Cube






Inspector

Reference Image Library (XR Reference Image Library)

Open

☐ Addressable



Select

Name

Earth-MarkerCard

Specify Size

☒

Texture Size (pixels)

X 475 Y 680

Physical Size (meters)

X 0.08 Y 0.1145263

Keep Texture at Runtime

☒

AR Tracked Image Manager (Script)

Script

ARTrackedImageManager

Serialized Library

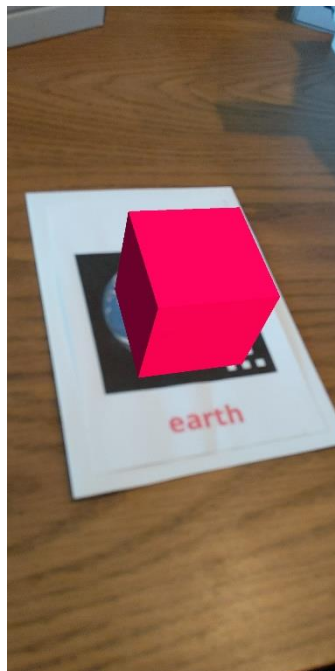
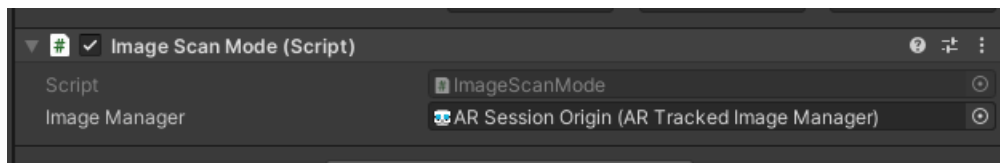
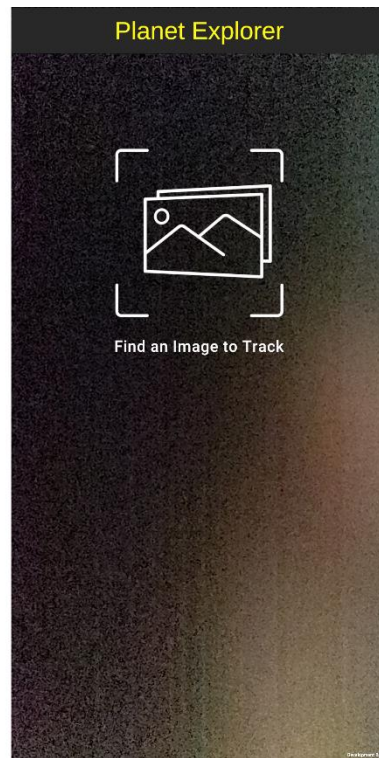
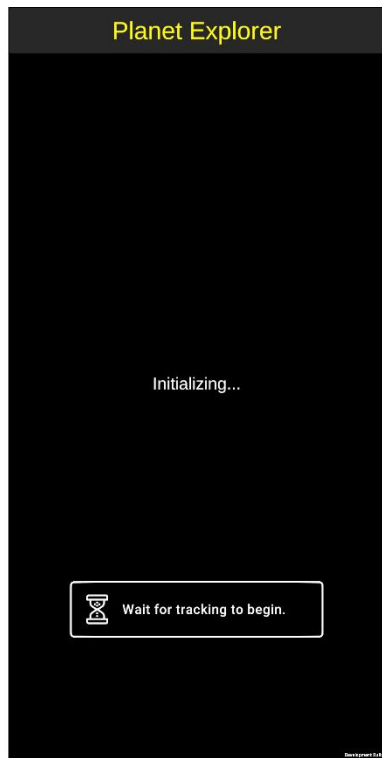
ReferenceImageLibrary (XR Reference Image Library)

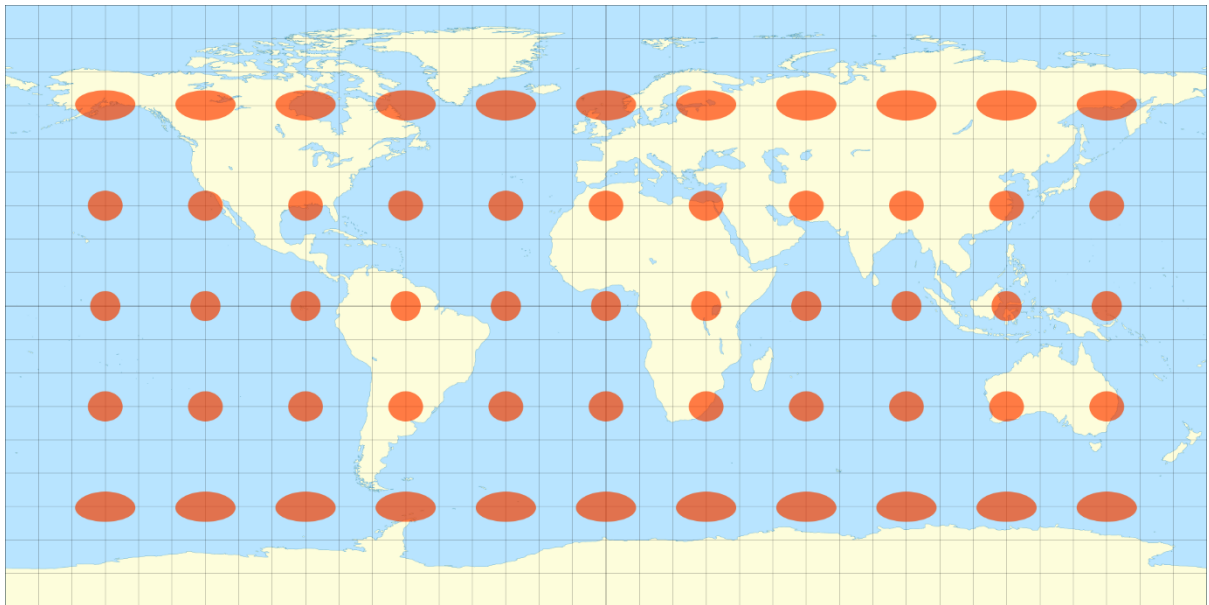
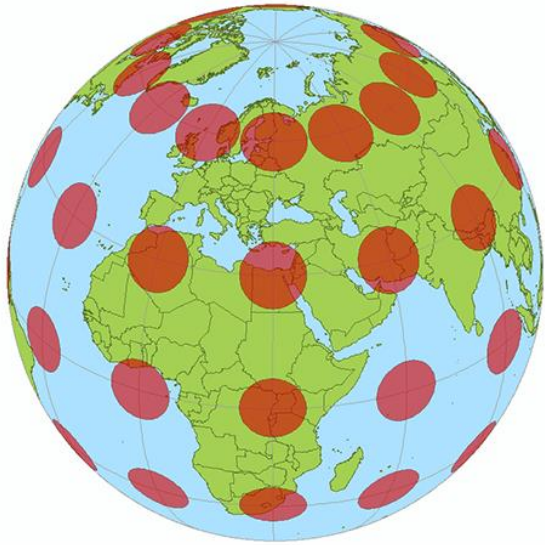
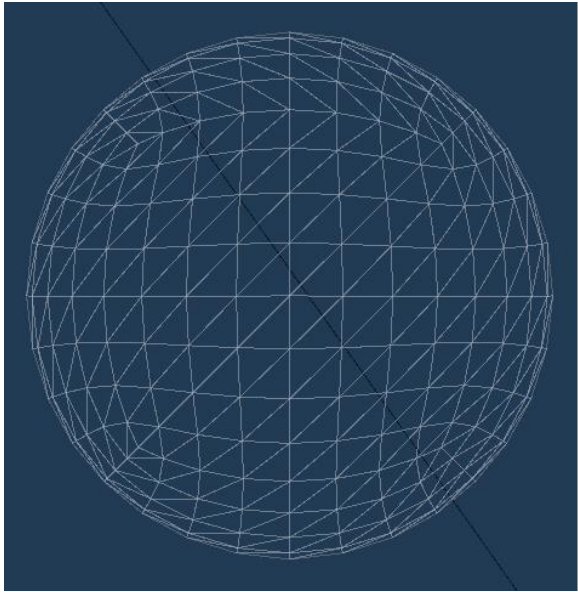
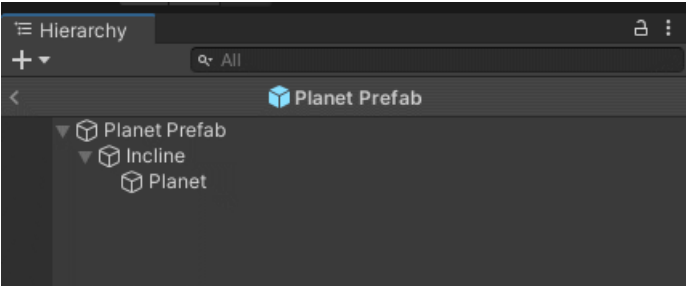
Max Number Of Moving Images

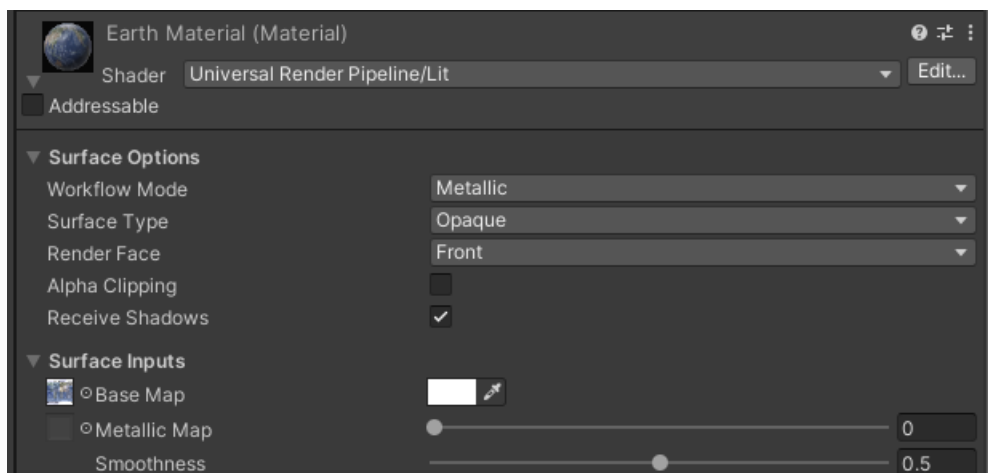
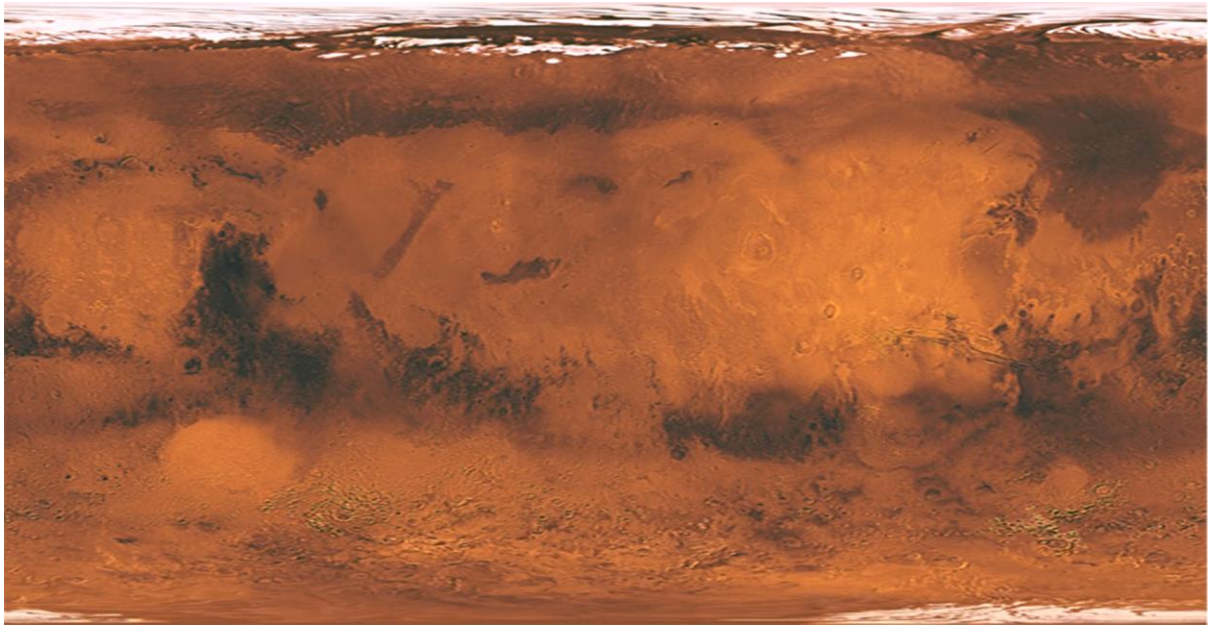
1

Tracked Image Prefab

AR Placed Cube



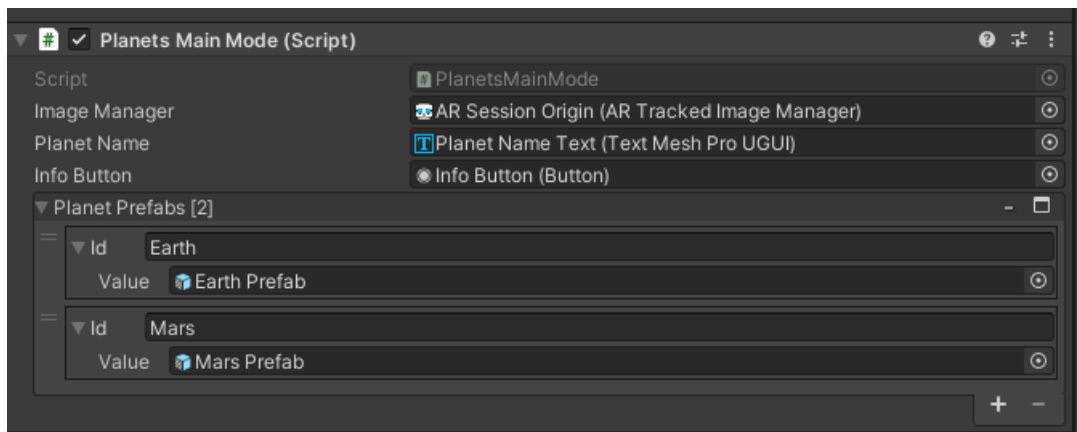
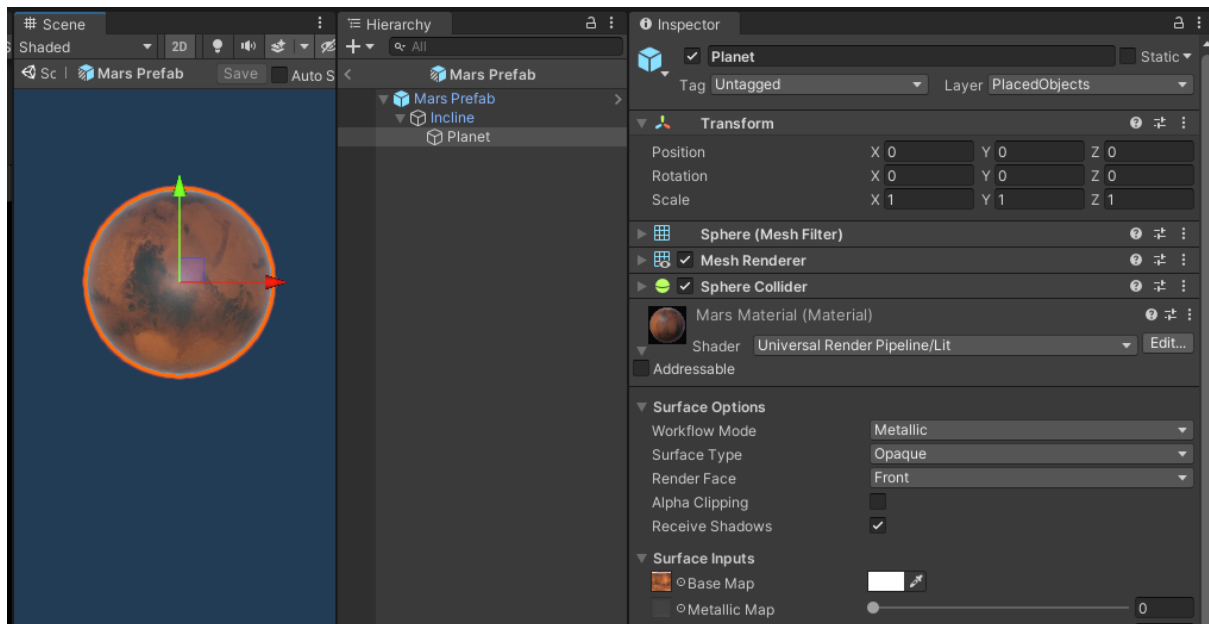
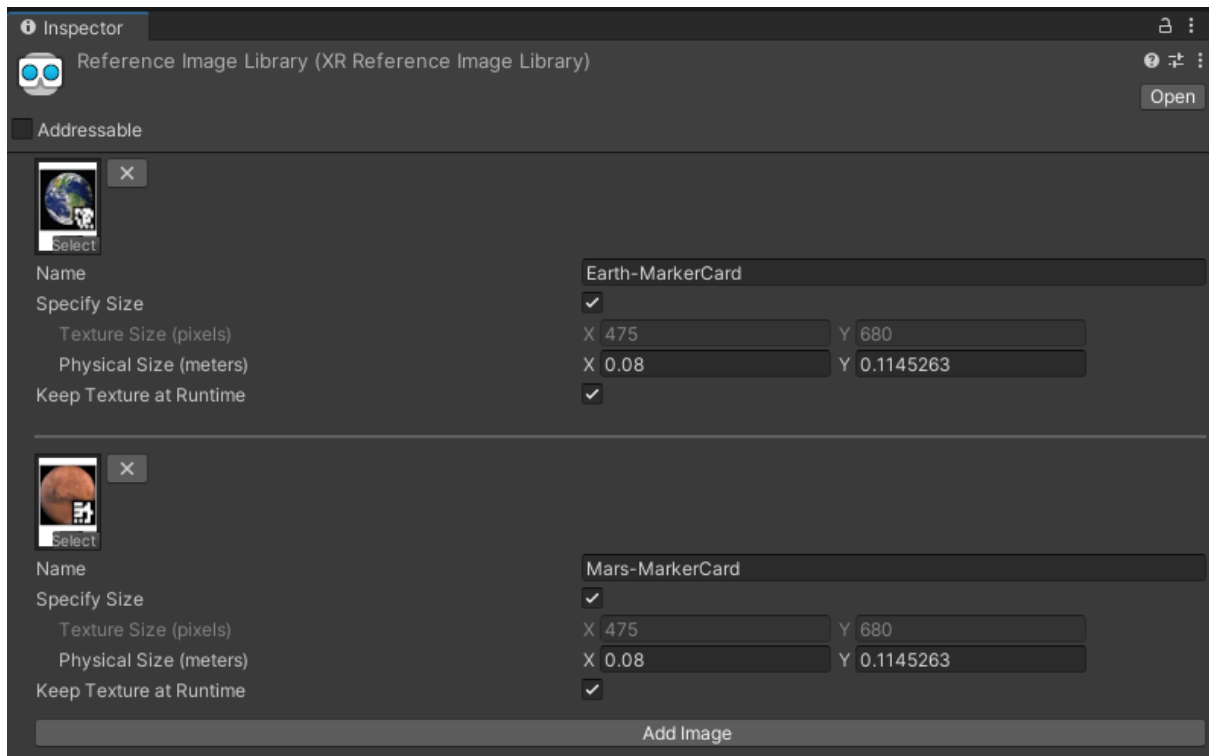


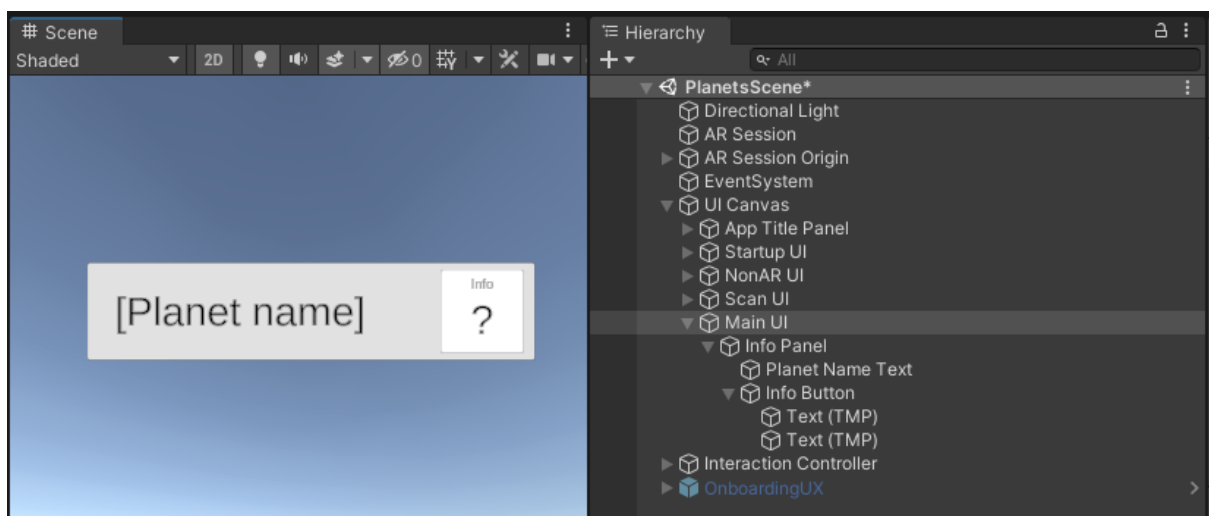




Planet (Script)	
Script	Planet
Planet Name	Earth
Description	Earth is the third planet from the Sun and the only astronomical object know
Incline Degrees	23.4
Rotation Period Hours	24
Incline	Incline (Transform)
Planet	Planet (Transform)
Animation Hours Per Second	1

AR Tracked Image Manager (Script)	
Script	ARTrackedImageManager
Serialized Library	ReferenceImageLibrary (XR Reference Image Library)
Max Number Of Moving Images	0
Tracked Image Prefab	None (Game Object)





Planet Explorer

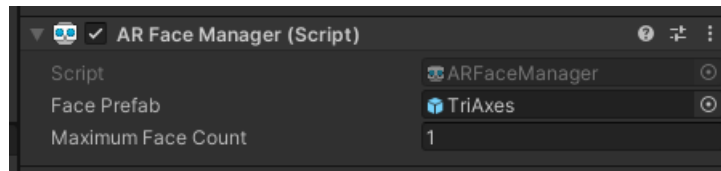
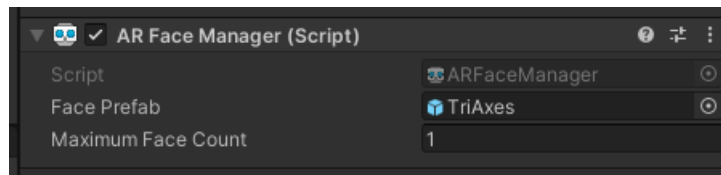
Mars is the fourth planet from the Sun and the second-smallest planet in the Solar System

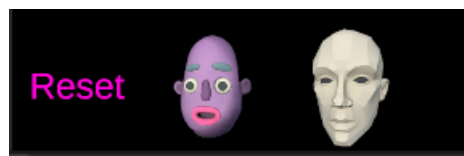
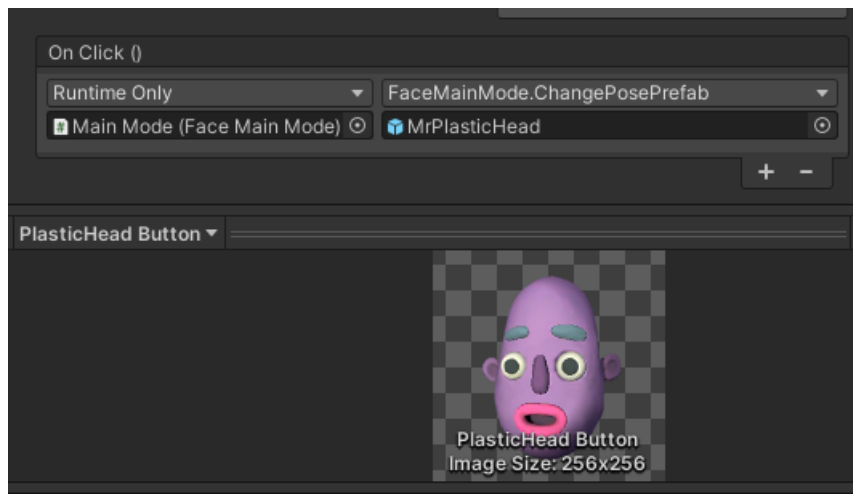
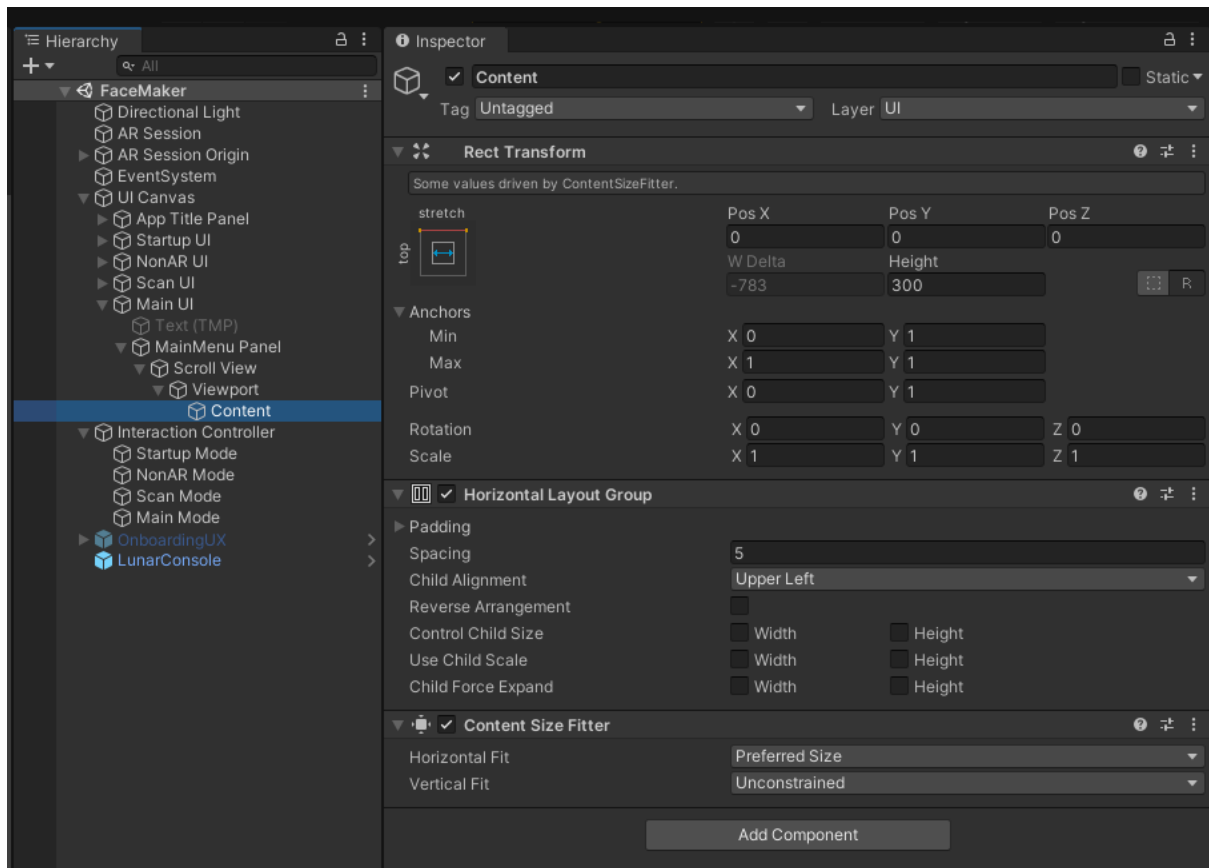
Mars

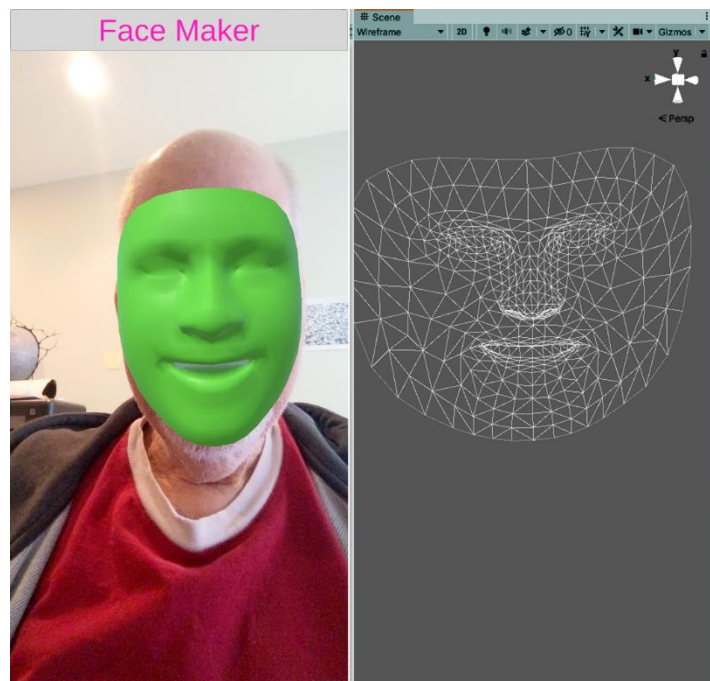
Info

?

Chapter 9: Selfies: Making Funny Faces









On Click ()

Runtime Only	FaceMainMode.SetForeheadLeftAttachment
Main Mode (Face Ma	Eye brow Left Prefab
Runtime Only	FaceMainMode.SetForeheadRightAttachment
Main Mode (Face Ma	Eye brow Right Prefab

+ -

