

# CODING BY NIGHT

Videogame edition - Day 1



SCHOOL OF COMMUNICATION AND CULTURE

AARHUS UNIVERSITY

21 April 2026

VITTORIA FRAU  
PABLO VELASCO  
RIKKE HAGENSBY JENSEN



# LET'S MAKE GAMES!



# WHO ARE WE?

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Vittoria Frau

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# PROGRAM

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## Program – Day 1 (18.05.2026) Adorno 114B

Time	Topic
15:00	Welcome and introduction
15:10-17:30	Introduction to Unity
17:30-18.00	Challenge of the day
~18:00	Dinner
18:45	Wrap-up

## Program – Day 2 (26.05.2026) Adorno 138

Time	Topic
15:00	Welcome back
15:10-17:30	Coding within Unity
17:30-18:00	Challenge of the day
~18:00	Dinner
18:45	Wrap-up

<https://vittoriafrau.github.io/projects/codingbynight-videogame.html>



# REPOSITORY

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<https://github.com/VittoriaFrau/CodingByNightVideoGameEdition>



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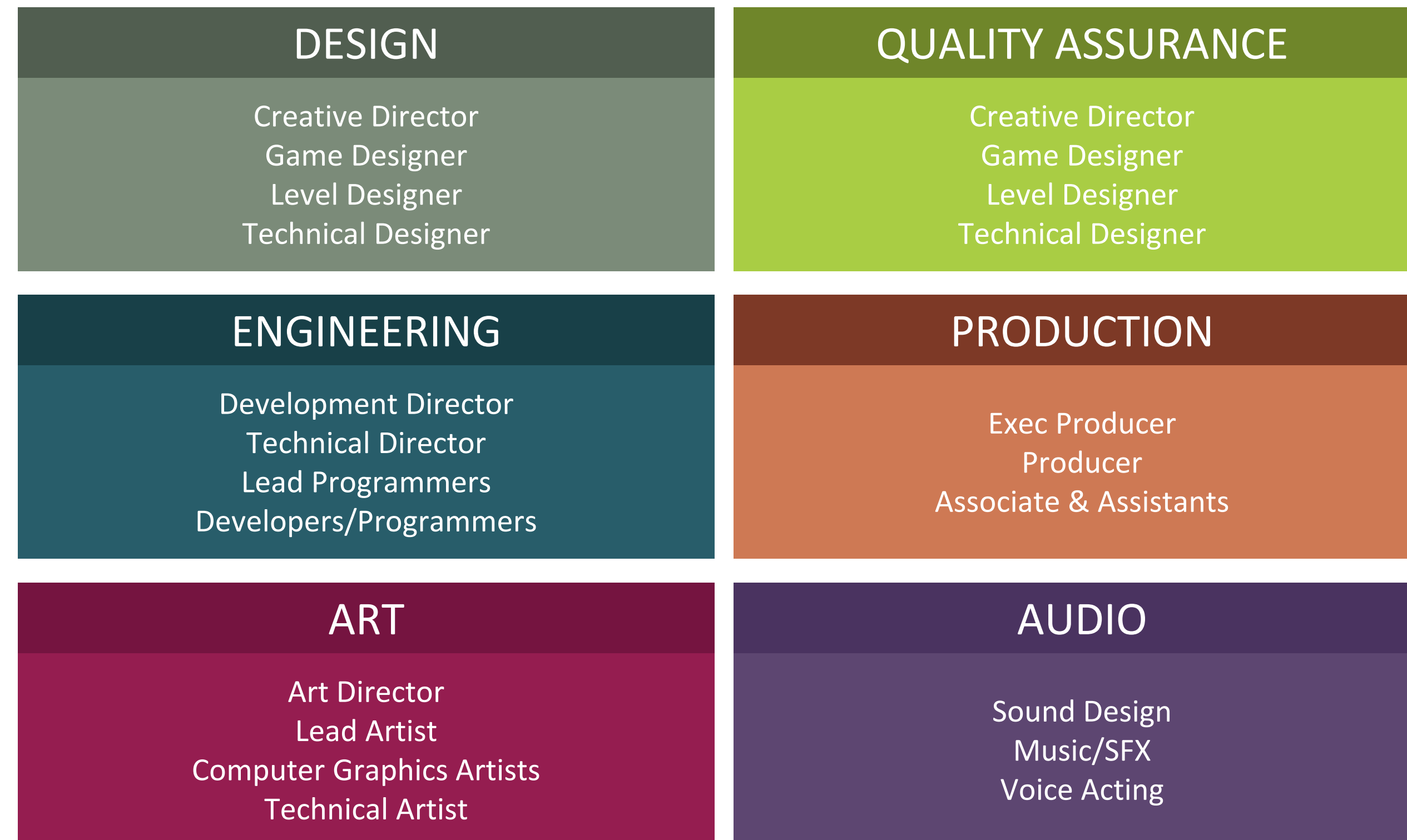


# GAME PLAYING ≠ GAME DEVELOPING

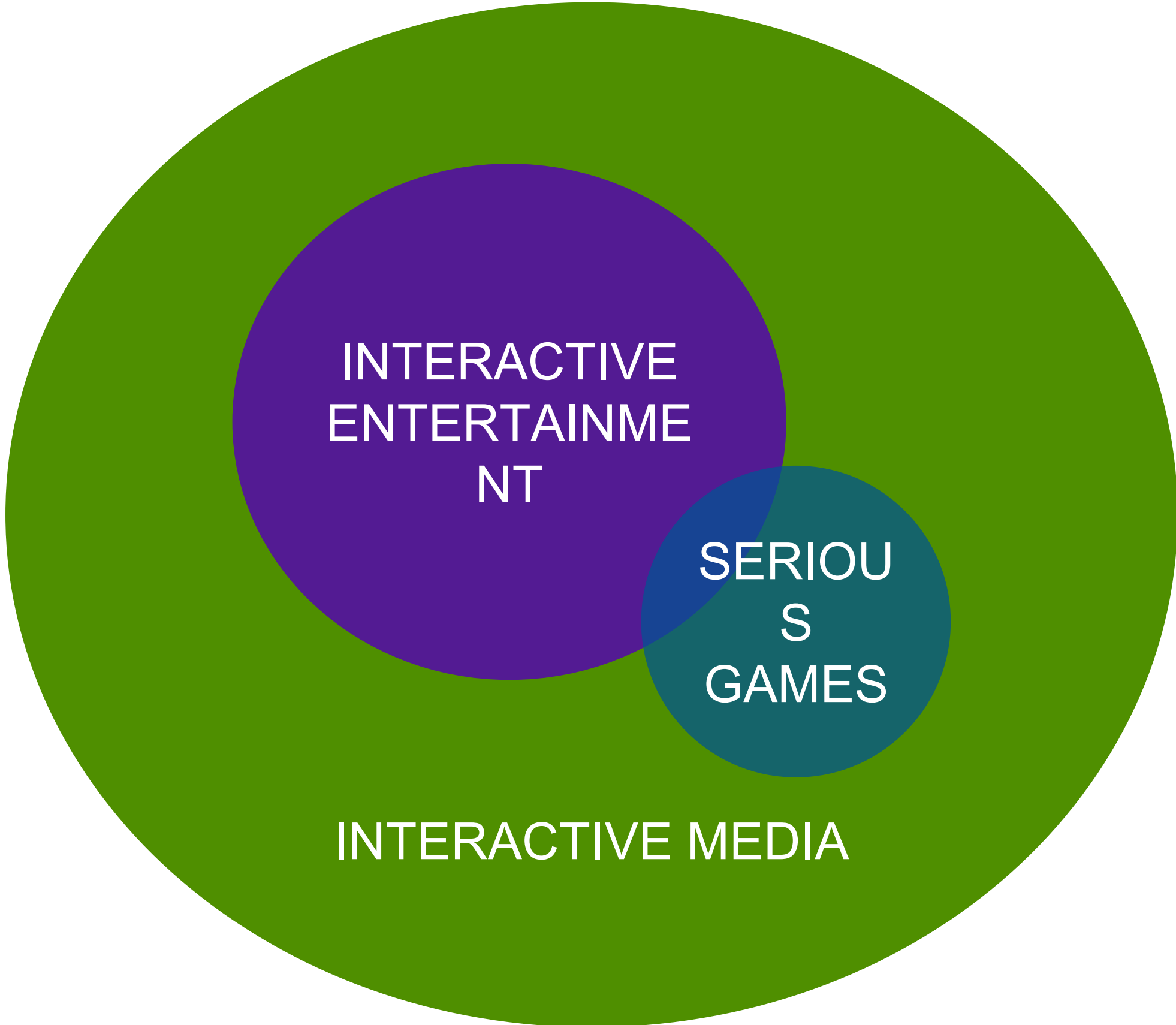


# MANY ASPECTS OF GAME DEV

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# GAME DEV CONCEPTS APPLY BEYOND GAMES



“Games can make dreams real. This is the unique characteristic of interactive entertainment that sets it apart from other forms. Books and movies can take you away to wonderful places, but they can’t let you do amazing things”

Ernest Adams, Game Designer

# HOW ARE GAMES MADE?





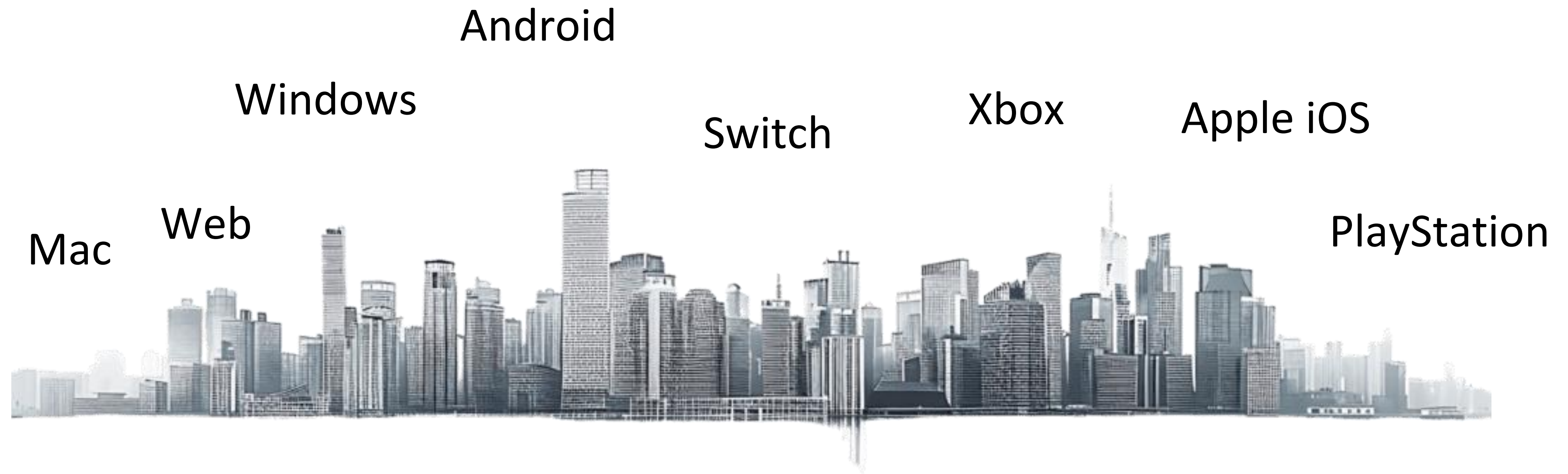
# TARGET AUDIENCE

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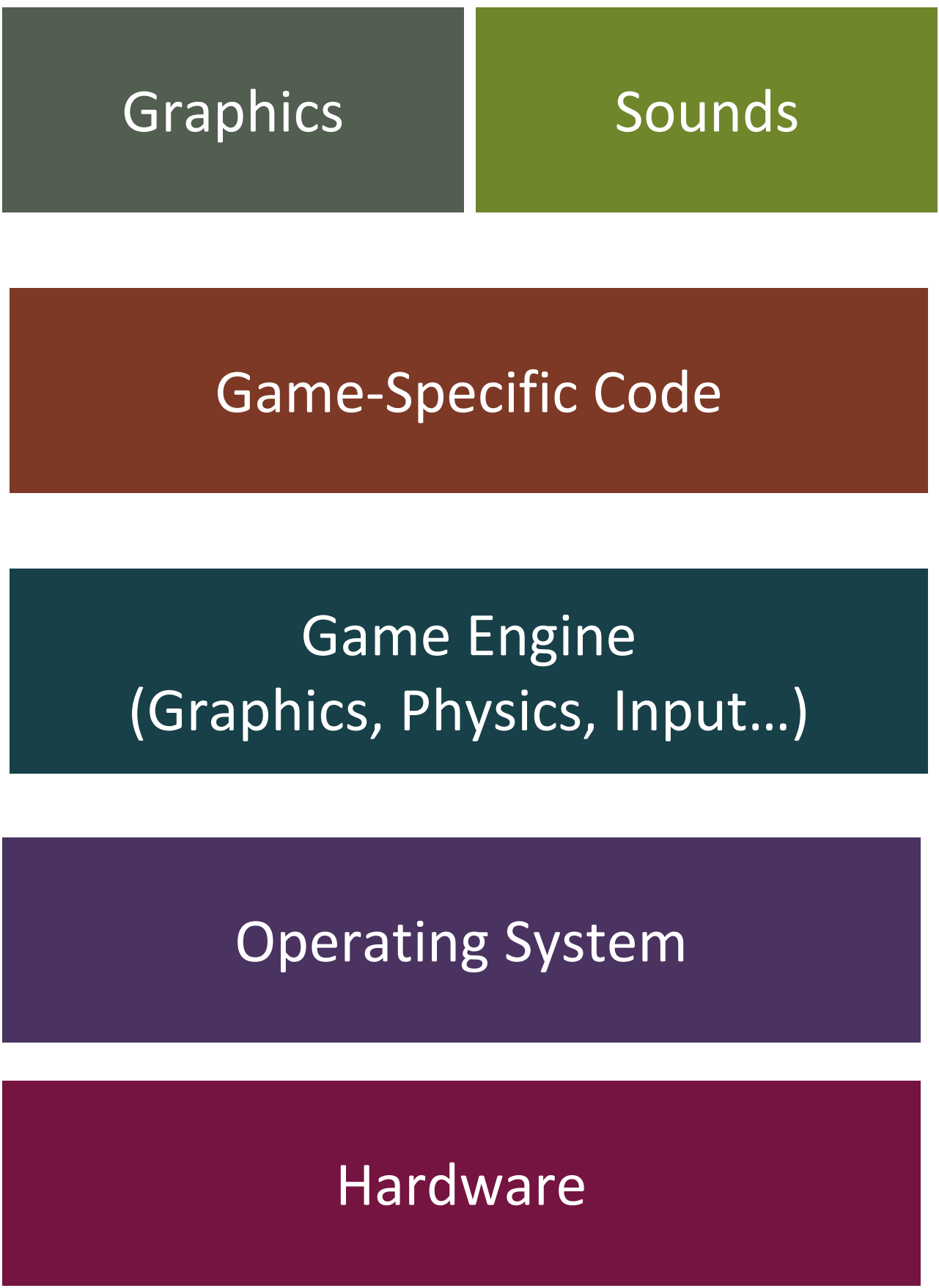


# NEIGHBORHOOD AKA GAME PLATFORM

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# GAME TECHNOLOGY “STACK”



# GAME ENGINES

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- Provides core game functionality
- Build on top of engine



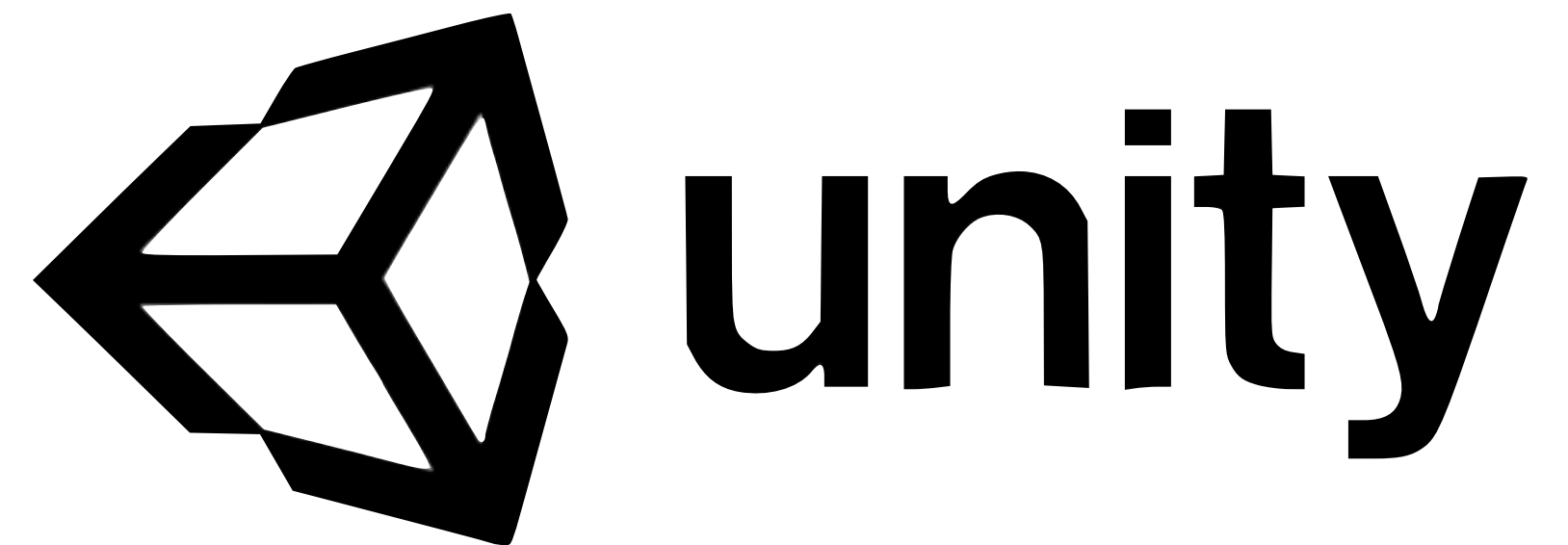


**Made with Unity**  
**Games 2025**

# UNITY?

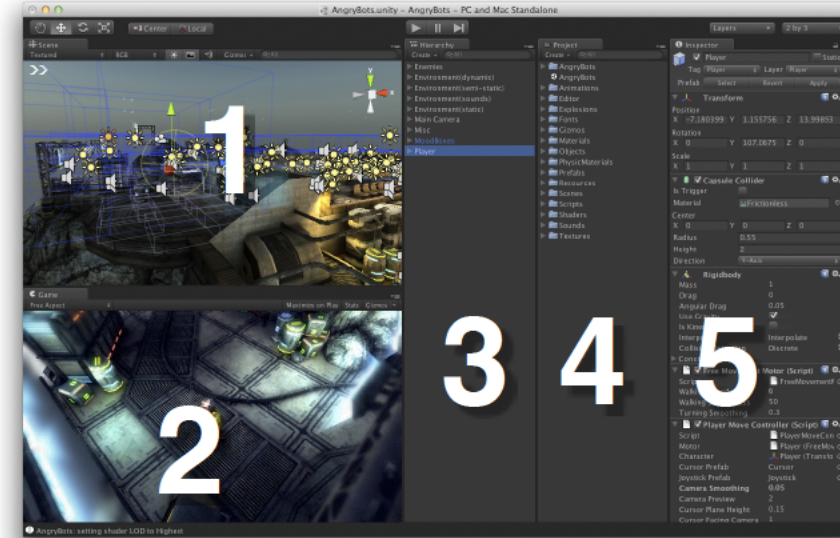
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- One of the most popular of them all
- Not game genre specific
- Feature rich game engine
- Easy to learn but deep feature set
- Great asset pipeline
- Good documentation and community
- Build to many game platforms



# UNITY EDITOR QUICK REFERENCE

## unity *Windows Editor Quick Reference*



**Standard Unity View** (Window > Layouts > 2 by 3)

- 1) Scene View = the editor view that allows you to navigate the 3D world, as well as select and move 3D assets in the world.
- 2) Game View = Upon hitting "play" in the top menu bar, you'll compile and preview the game in the Game View. By default the view shows the active camera's view.
- 3) Hierarchy Panel = This is a hierarchical list of all the objects in the game. You can select objects, rename them, and delete them (Shift-Delete).
- 4) Project Panel = This shows all the usable "assets" in the project's Assets folder.
- 5) Inspector = Allows you to view and edit the component settings for the selected object in the Scene View, Hierarchy, or Project Panel.

### Scene View Controls

- Toggle Full Screen Panel = Shift + Spacebar
- Rotate = Alt + Left Mouse Button
- Panning = Alt + Middle Mouse Button
- Zooming = Alt + Right Mouse Button

### Camera Manipulation

- Move scene to desired view.
- Select camera.
- Choose GameObject->Align with View
- Also can move camera like an object

### Essential Unity Concepts

- **Project** = a folder that contains your entire game and all its assets (contains a library and assets folder)
- **Assets** = Items used to make your game including models, images, sounds, scripts, and prefabs.
- **Packages** = A precompiled group of game assets. Unity

## Resources

## Selected Links

- [Unity Editor Quick Reference](#) ←
- [Slides \(Coming\)](#)
- [Before you arrive - setup guide Day 1](#)
- [Before you arrive - setup guide Day 2 \(COMING\)](#)



Let's jump into the editor

### Hub

- Get set up
- Projects
- Installs
- Learn
- Resources
- Licenses

## New project

### Templates

Select an Editor version, then choose a template to start your project.


Editor version \*

6000.3.9f1 Silicon LTS

- All
- Core
- Sample
- Learning

Search


**Core**



**Universal 2D**  
This is an empty project configured for 2D apps. It uses Unity's Universal Render Pipeline pre-configured with 2D Renderer.

[Read more](#)


**Core**



**Universal 3D**  
The URP (Universal Render Pipeline) blank template includes the settings and assets you need to start creating with URP. Equipped...

[Read more](#)


**Core**



**High Definition 3D**  
The HDRP (High Definition Render Pipeline) blank template includes the settings and assets you need to start creating with HDR...

[Read more](#)


**Learning**



**Get Started With Unity**  
In this brief guided tour, you'll learn about the core parts of the Unity Editor and build your first 3D scene.

[Read more](#)


**Core**



**3D (Built-In Render Pipeline)**  
Optimized for 3D applications developed with the Built-in Render Pipeline.

[Read more](#)


**Learning**



**Essentials Pathway**  
In this Learning Pathway, you'll learn the essentials of 2D, 3D, Audio, and Programming. Acquiring these skills will give...

[Read more](#)


**Sample**



**Universal 3D sample**  
These four environments showcase the versatility, scalability, and customizability of the Universal Render Pipeline (URP). The...

[Read more](#)


**Sample**



**High Definition 3D sample**  
Walk through a High Definition Render Pipeline (HDRP) demo and learn how to develop state-of-the-art graphics on high-...

[Read more](#)


**Core**



**Mixed Reality (MR)**  
Unity's Mixed Reality (MR) Template provides a starting point for mixed reality development in Unity. The template configures project...

[Read more](#)


**Sample**



**MR Multiplayer Tabletop Template**  
The MR Multiplayer Tabletop Template combines XRI, ARF, NGO, and UGS to create a starting point for Tabletop MR Multiplayer...

[Read more](#)

**Sample**




**VR Multiplayer**  
The VR Multiplayer Template combines XRI,

**Core**



**VR**  
Quickstart your Virtual Reality (VR)

**Core**



**AR Mobile**  
The AR Mobile Project Template configures

**Sample**



**Multiplayer FPS**  
A Multiplayer FPS template sample that uses

**Sample**



**Multiplayer Third Person Gameplay**  
A Multiplayer Third Person Gameplay

**3D (Built-In Render Pipeline)**  
Optimized for 3D applications developed with the Built-in Render Pipeline.

[Read more](#)

Unity organization

vittoriafrau

Project name \*

My project

Location \*

/Users/au758864/Visual Studio Code Pr...

Use Unity Version Control

+ Create project

Settings

Unity

Hierarchy

- New Scene\*
  - Main Camera
  - Directional Light
  - Cube

# Scene

Center Local | 1 | Grid | Grid | Rotate | Rotate | Rotate | Rotate | Rotate | Rotate

Scene editor view showing a 3D grid with a camera and a cube. The camera is in perspective view, and a small cube is visible on the grid.

Scene editor

Game

Game | Display 1 | Free Aspect | Scale

Game preview view showing a rendered scene with a blue sky and a grey ground plane. A small cube is visible in the distance.

Game preview

Inspector

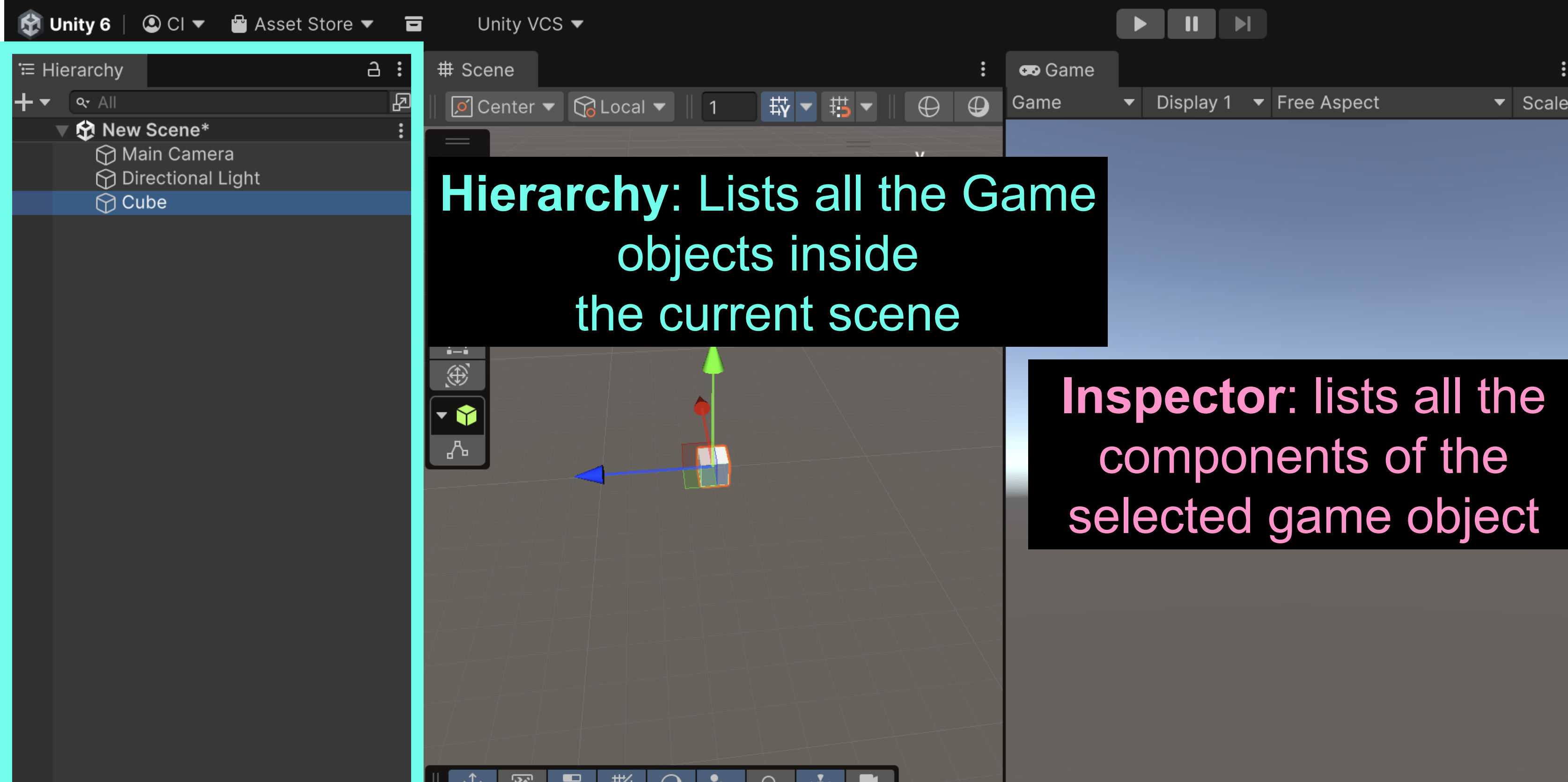
Project | Console

Assets

- Materials
- Scenes
- Supercyan Free Forest Sa
  - Materials
  - Models
  - Prefabs
  - Scenes
  - Shaders
  - TerrainLayers
  - Terrains
  - Textures
- unity-chan!

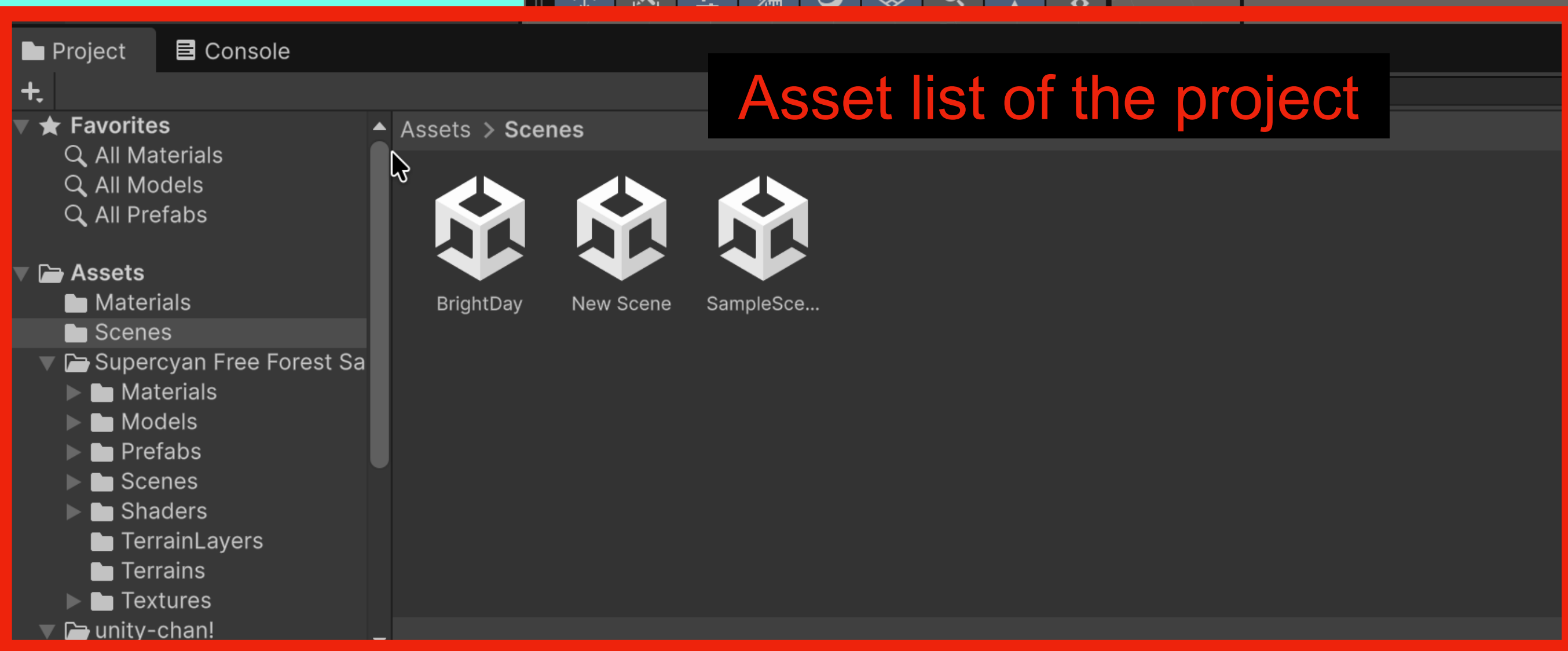
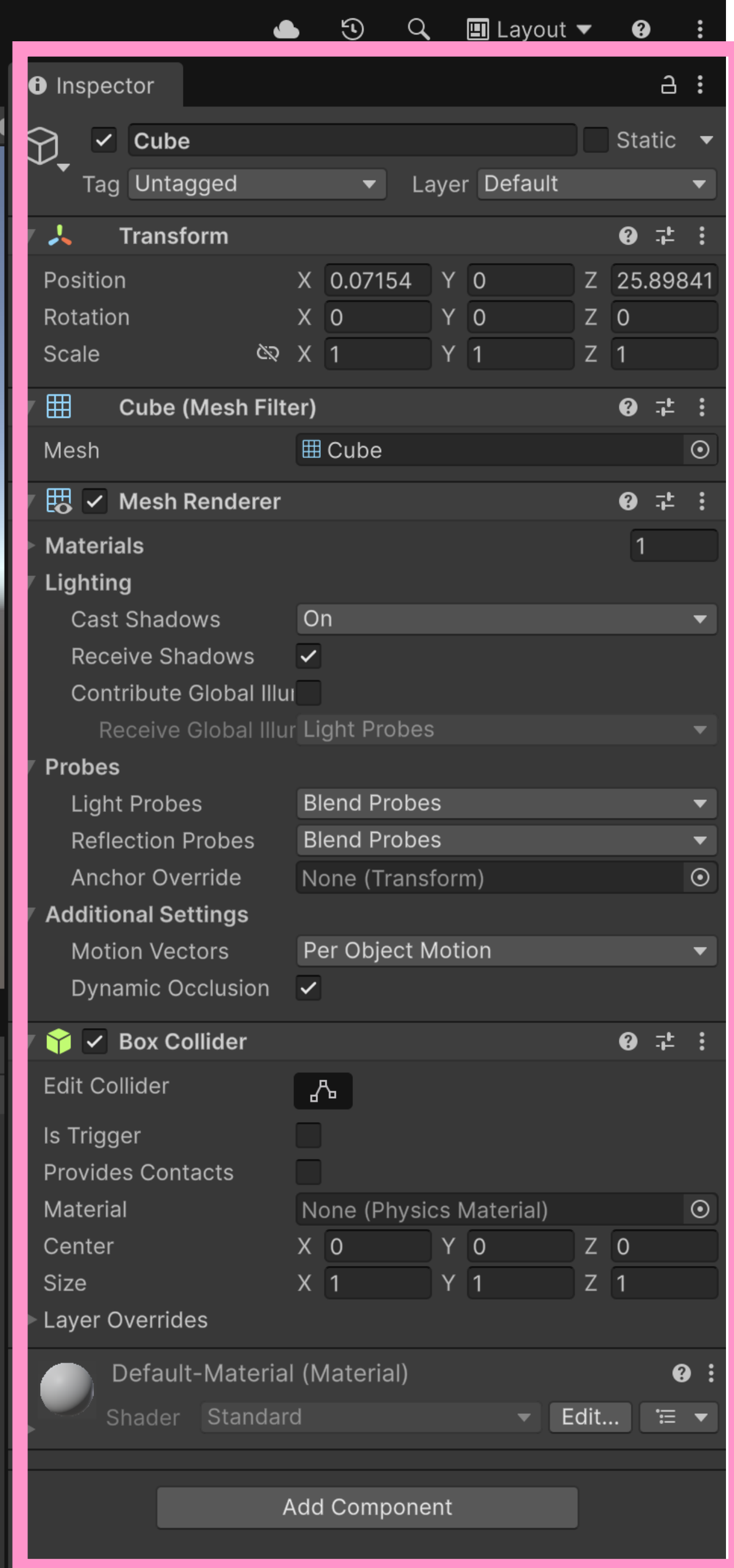
Assets > Scenes

Assets panel showing scene thumbnails: BrightDay, New Scene, SampleSce...

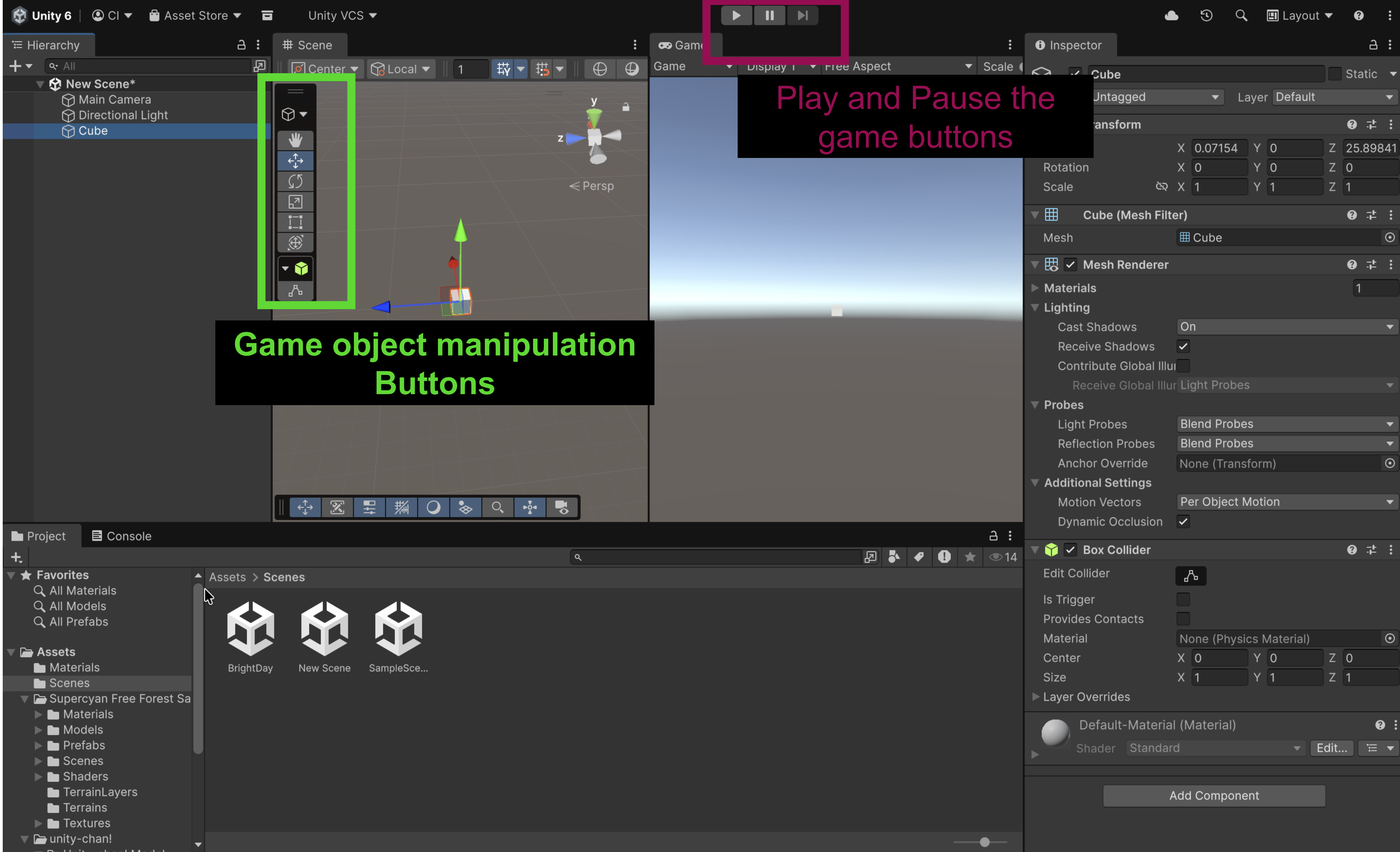


**Hierarchy:** Lists all the Game objects inside the current scene

**Inspector:** lists all the components of the selected game object



**Asset list of the project**



Game object manipulation  
Buttons

Play and Pause the  
game buttons

If you make changes in play mode,  
they are not going to be saved!!

**Hint: change the color of the background in play mode**

Unity -> Preferences -> Colors -> Play Mode tint



# Exercise: Extend the playground

Use the scene you already made and add the following:

- 1. Rename your objects** in the Hierarchy: Ground, Light, Cube, Sphere, Capsule.
- 2. Duplicate the sphere 3 times** and place the copies as platforms across the plane. Use the inspector to change the scale to: 5,5,5 (sphere1); 0.3, 0.3, 0.3 (sphere2), 10,10,10 (sphere3). Add a Rigidbody component to each of them.
- 3. Create one parent object** called Arch, then make 3 cubes as children: Left, Right, Top. Drag them under Arch in the Hierarchy.
- 4. Select the capsule** and add a **player tag** in the Inspector.
- 5. Create some walls** at the edge of the plane.


Shop 250+ top new assets — all 50% off

AssetStore Search for assets

3D 2D Add-Ons Audio AI Decentralization Essentials Templates Tools VFX **Sale** Sell Assets

Over 11,000 five-star assets | Rated by 85,000+ customers | Supported by 100,000+ forum members | Every asset moderated by Unity

Home > 3D > Vegetation > Environment Pack: Free Forest Sample



### Environment Pack: Free Forest Sample

Supercyan ★★★★★ (18) | ❤️ (2661)




**FREE**

👁️ 536 views in the past week

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License agreement Standard Unity Asset Store EULA  
 License type Extension Asset  
 File size 19.7 MB  
 Latest version 2.0.1  
 Latest release date Oct 2, 2024  
 Original Unity version 2022.3.32  
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**Render pipeline compatibility**  
 The Built-in Render Pipeline is Unity's default render pipeline. It is a general-purpose render pipeline that has limited options for customization. The Universal Render Pipeline (URP) is a Scriptable Render Pipeline that is quick and easy to

Overview Package Content Releases Reviews Publisher info [Asset Quality](#)

Colorful hand painted Free Forest Sample includes a ready to use demo scene with free assets to play with! Excellent for testing out assets and physics!

<https://assetstore.unity.com/packages/3d/vegetation/environment-pack-free-forest-sample-168396>

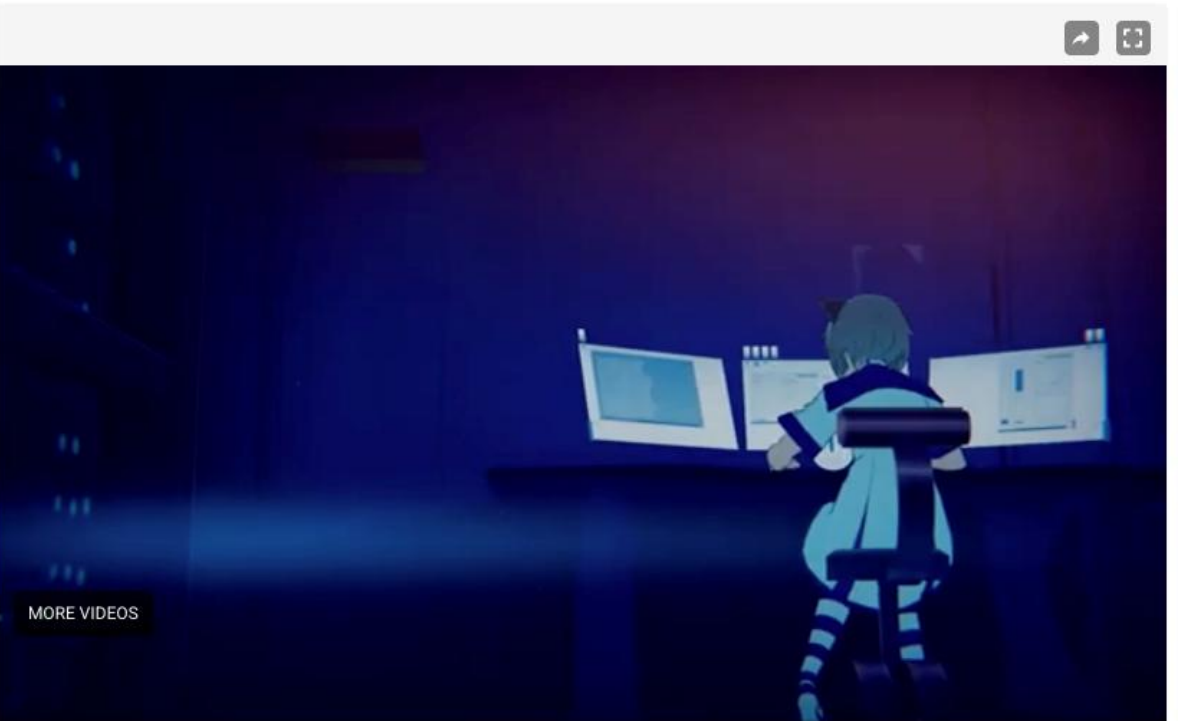
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Home > 3D > Characters > Unity-Chan! Model



### Unity-Chan! Model

unity-chan! ★★★★★ (2889) | ❤️ (26880)




**FREE**

👁️ 1307 views in the past week

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License agreement Standard Unity Asset Store EULA  
 License type Extension Asset  
 File size 106.1 MB  
 Latest version 1.2.2  
 Latest release date Jun 12, 2020  
 Original Unity version 2018.4.0  
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Overview Package Content Releases Reviews Publisher info [Asset Quality](#)

The 3D model girl "Unity-chan!" (Kohaku Ootori) has come from the Japanese game scenes!  
 Enjoy making games with her!

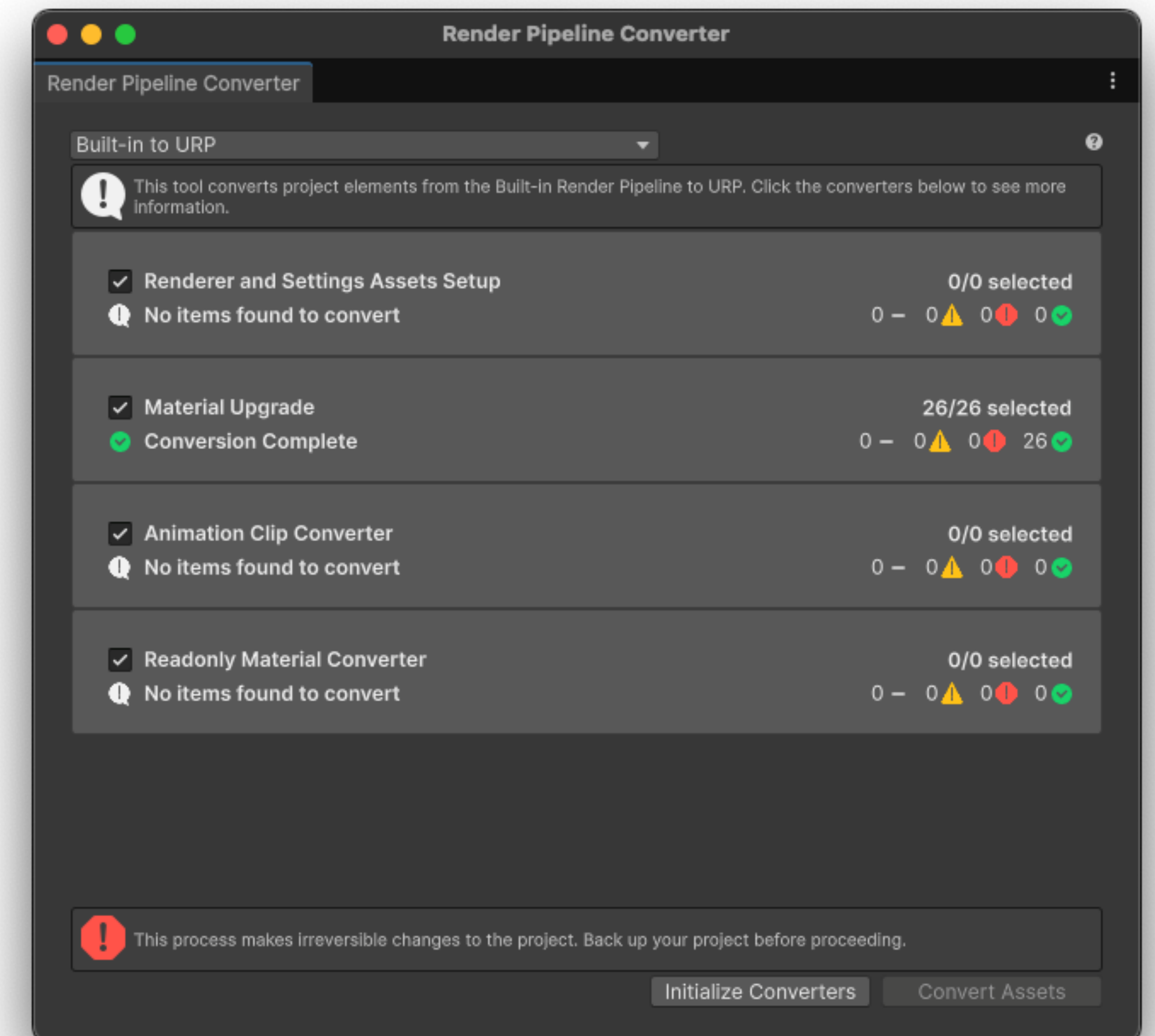
[Official Website](#)

**What is included:**

<https://assetstore.unity.com/packages/3d/characters/unity-chan-model-18705>

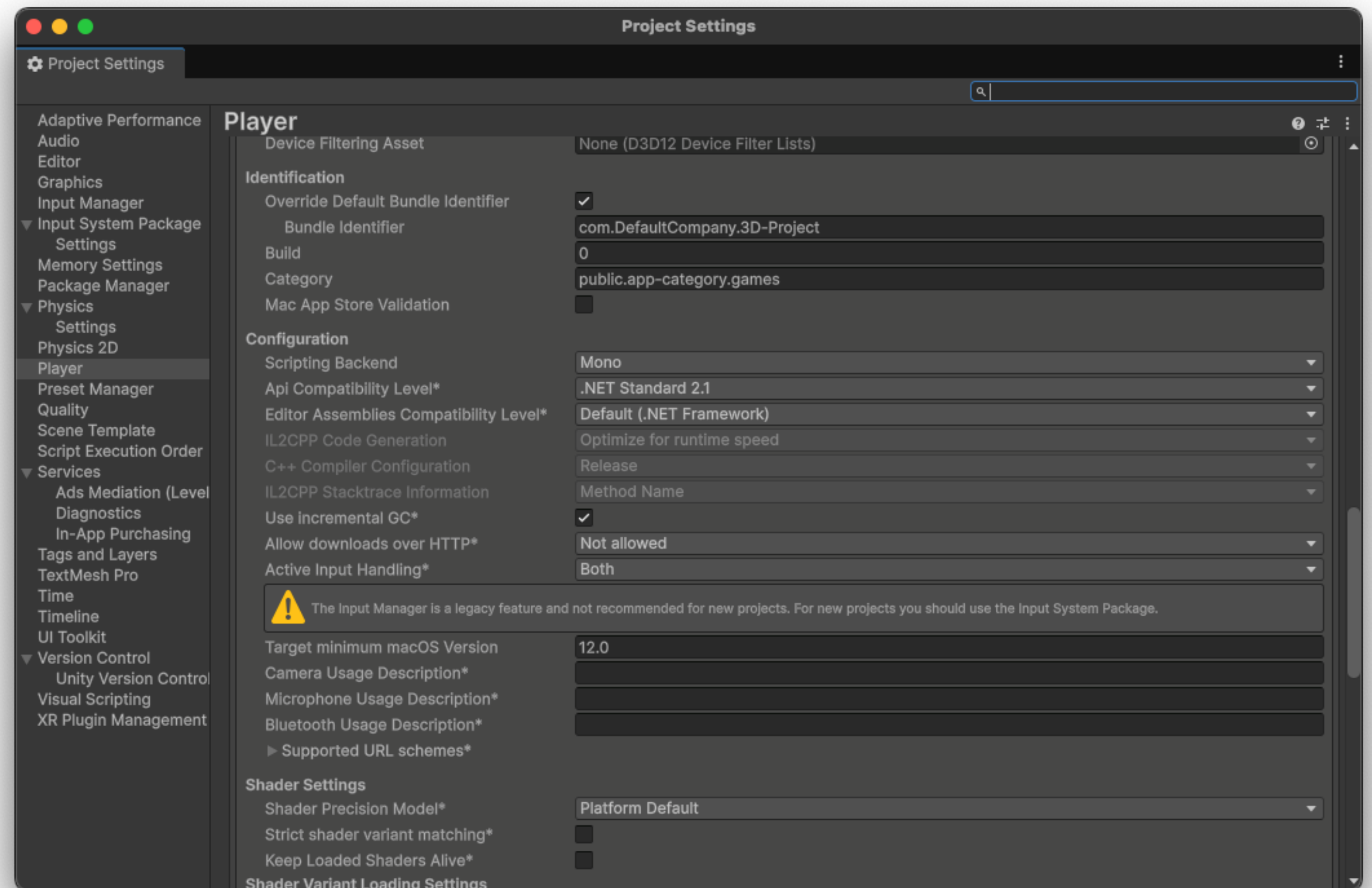
# All pink? Don't worry

- Window -> Rendering -> Render Pipeline Converter
- Select all -> Initialize Converters
- Convert assets



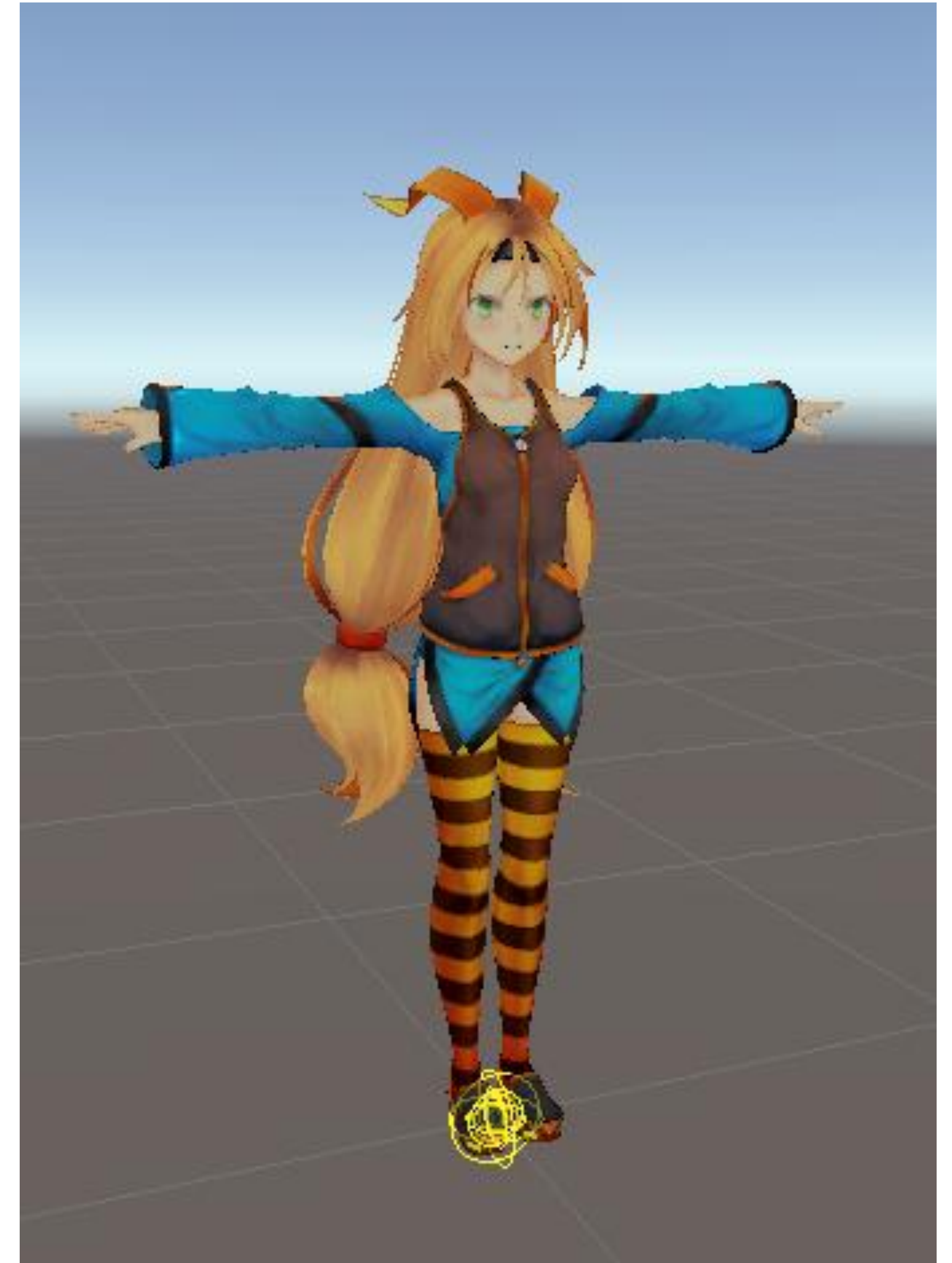
# Trust me on this

Edit -> Project Settings ->  
Player -> Active Input  
Handlig -> Both + Restart



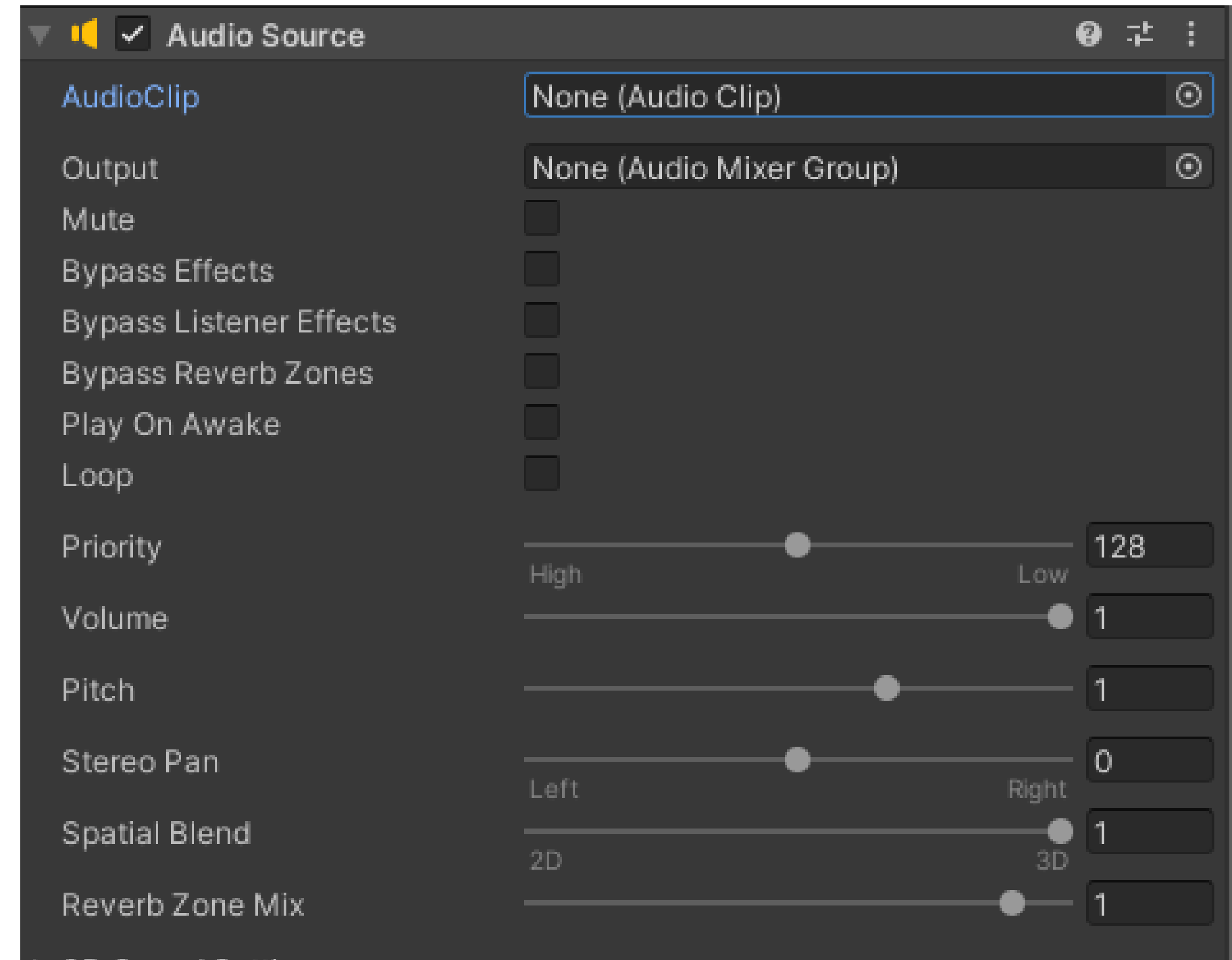
# Our character

Assets -> unity-chan -> Unitychan! Model —>  
Prefabs -> for locomotion ->  
unitychan\_dynamic\_locomotion



# Sound in Unity

- An **Audio Clip** is the sound file, such as music or ambience.
- An **Audio Source** is the component that plays that clip.
- An **Audio Listener** is the “ear” of the scene, usually attached to the camera.



# Useful Unity Resources

- Unity manual: <https://docs.unity3d.com/Manual/index.html>
- Brackeys: <https://www.youtube.com/Brackeys> High-quality tutorials on Unity
- Unity asset store: <https://assetstore.unity.com/>
- Turbo Squid: <https://www.turbosquid.com/>
- Mixamo: <https://www.mixamo.com/>
- Sketchfab: <https://sketchfab.com/>

# Challenge of the day

- Look in the Asset Store for free assets to import into your project and customize your forest!
- Add a nice **soundtrack** to your game
- Modify the **skybox** of your game
- Add and modify the **lights** of the forest
- Place 5–10 collectible objects in the map, hide them with the inspector, and add **particle effects** to make them noticeable
- (Advanced) Create simple **animations** with animator