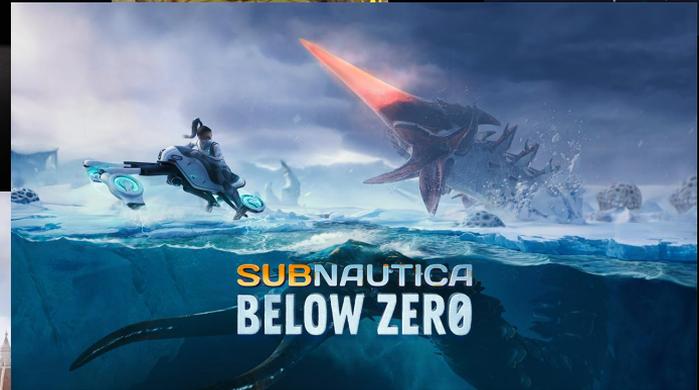
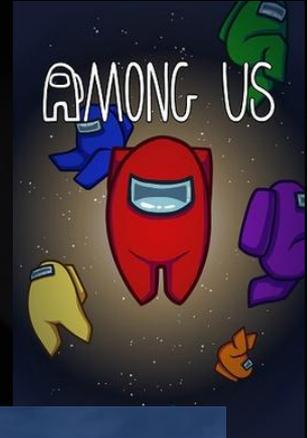
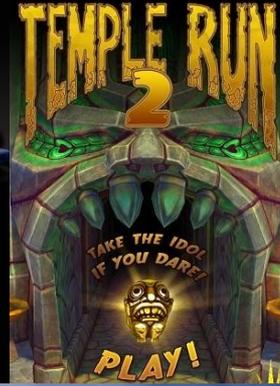




3D Game Development in Unity

Red Belt - Sprint 4 - Class 1

Major Games created using Unity



And many, many more....

History of Unity



Unity (commonly known as Unity3D) is a game engine and integrated development environment (IDE) for creating interactive media, typically video games.

The first version of Unity (1.0.0) was launched in June 2005 and created by developers Nicholas Francis, Joachim Ante, and David Helgason in Copenhagen. The gaming engine was created with the goal of giving creators an affordable game engine with professional tools for game development. Unity was originally available solely for Mac OS X, and developers could only deploy their creations to a few platforms. Currently, Unity is supported on both Windows and Mac platforms and targets over a dozen platforms from gaming consoles, mobile phone games, and TV/film.

Made with  **unity**

A short film created using Unity

<https://www.youtube.com/watch?v=Ha00WK14pgs>



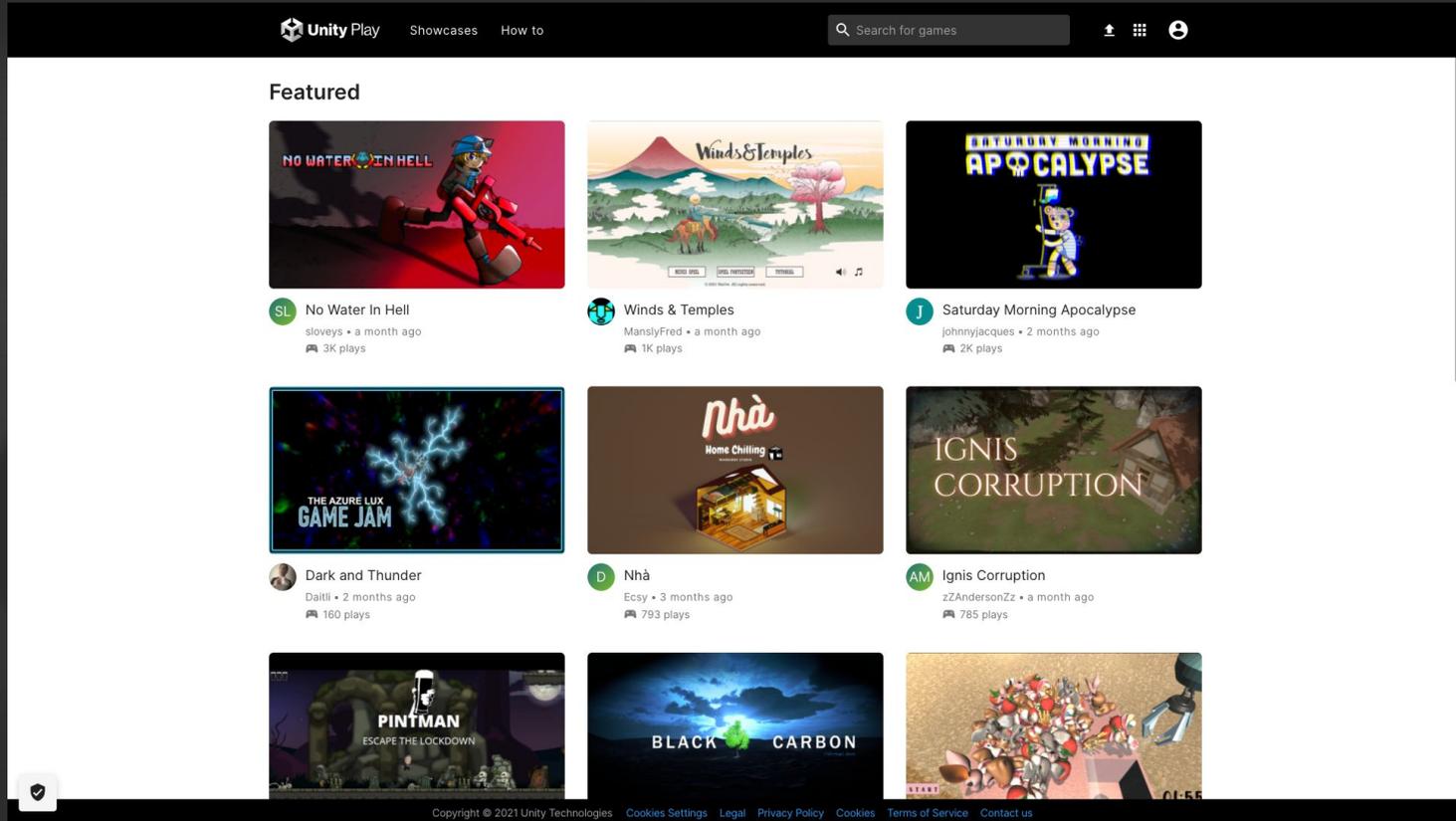
Monument Valley - iOS, android, Windows Phone

<https://apps.apple.com/us/app/monument-valley/id728293409>

Road 96 - on Steam

https://store.steampowered.com/app/1466640/Road_96/





The screenshot shows the Unity Play website interface. At the top, there is a navigation bar with the Unity Play logo, links for Showcases and How to, a search bar for games, and user profile icons. The main content area is titled "Featured" and displays a grid of game thumbnails. Each thumbnail includes a game title, a user profile icon, the user name, the time since the game was added, and the number of plays. The featured games are:

- No Water In Hell** by sloveys, added a month ago, 3K plays.
- Winds & Temples** by ManslyFred, added a month ago, 1K plays.
- Saturday Morning Apocalypse** by johnnyjacques, added 2 months ago, 2K plays.
- Dark and Thunder** by Daitili, added 2 months ago, 160 plays.
- Nhà** by Ecsy, added 3 months ago, 793 plays.
- Ignis Corruption** by zZAndersonZz, added a month ago, 785 plays.

At the bottom of the page, there is a footer with copyright information and links for Cookies Settings, Legal, Privacy Policy, Cookies, Terms of Service, and Contact us.

Indie Games are games created by independent creators typically by either one person or a small group of people.



[Faerie Afterlight](#)



[Vapor Trails](#)

Made with  **unity**



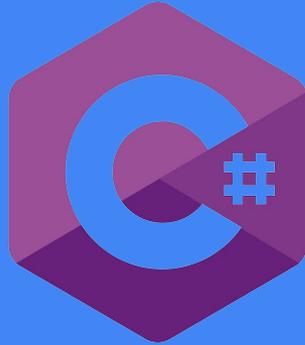
Activity 2 - Getting Started with Unity

Getting started with  **unity**

Unity uses the
programming language

C#

Fear not...with game development comes programming!



Inspired by the musical note, C# is the most commonly used programming language that developers use in Unity. Unlike Unreal Engine, that uses C++.

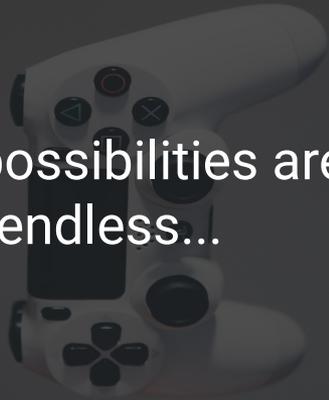
(Fun fact, the Unity engine itself, was written in C++)

You can also use languages like C++ and JavaScript in Unity as well.

Both Unity and Unreal Engine uses an intermediate level of object-oriented programming for its games.

Getting started with  **unity**

The possibilities are
endless...



Made with  **unity**

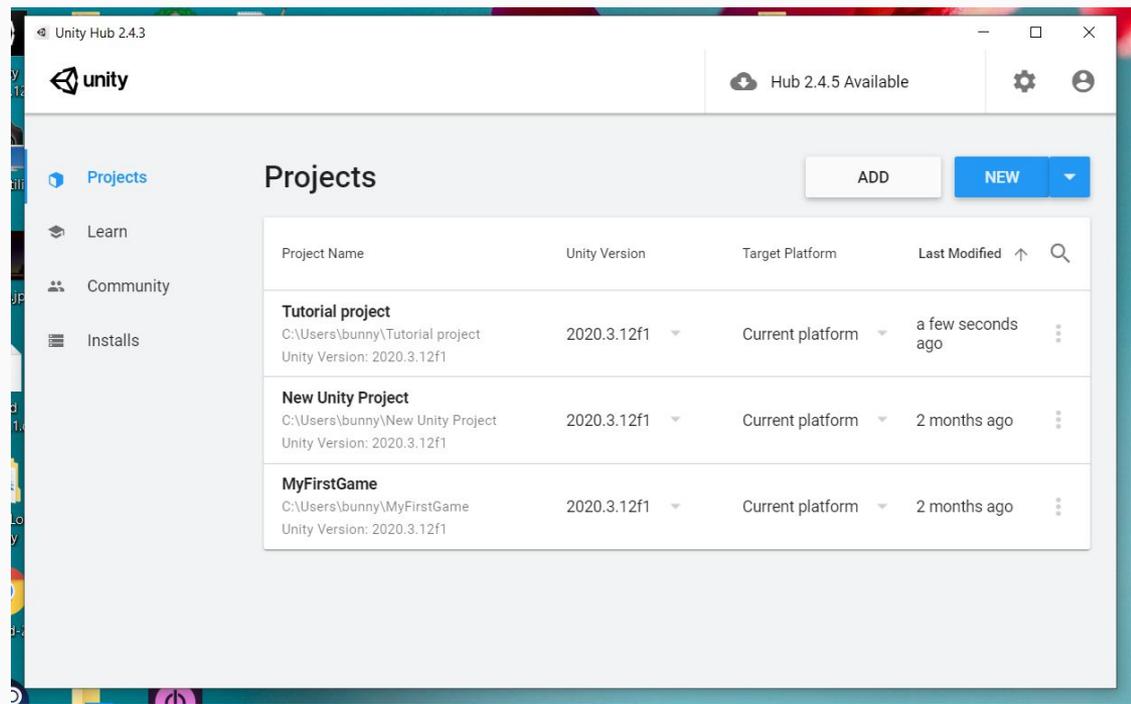


The User Interface

Let's take a look at the layout of Unity.

Step 1:
Go to Unity on Mac.

Step 2:
In Unity hub, you will see a list of previous projects. To start a new project, click on the "New" button in blue.



Let's take a look at the layout of Unity.

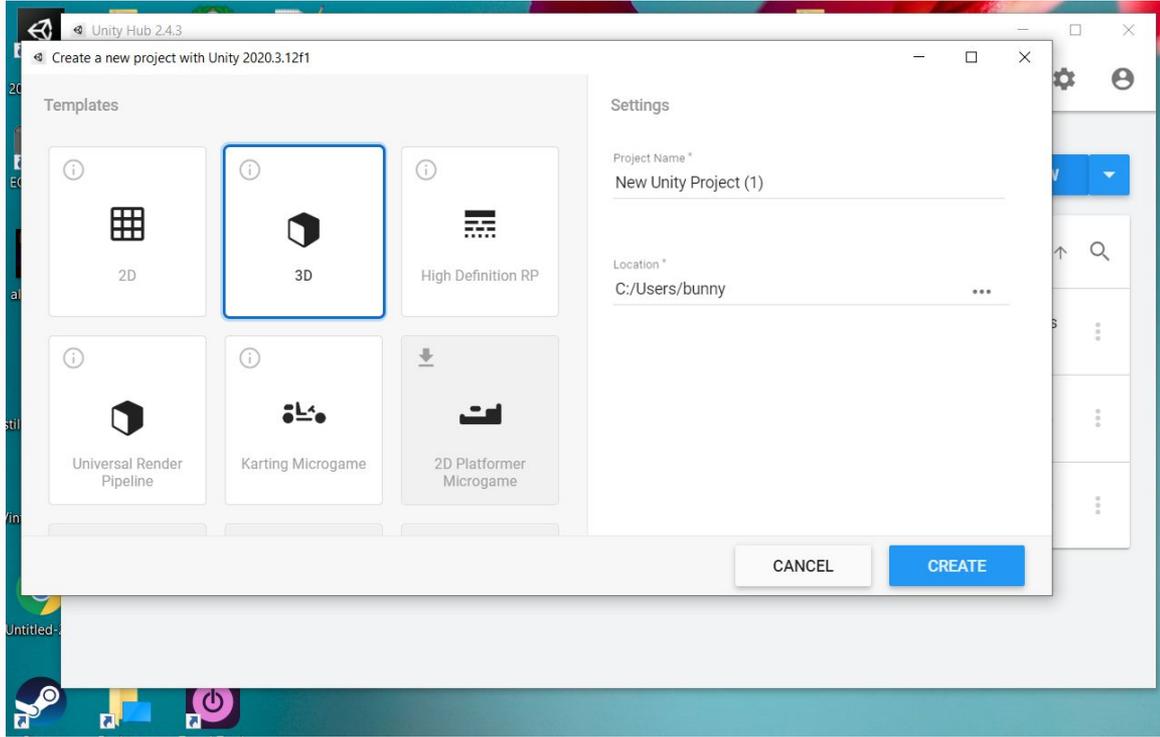
Step 3:

In the "create a new project" window, select from the template options. There are a ton of awesome options from VR to mobile 3D and even a Lego Minigame. But for this sprint, we'll be selecting "3D".

Step 4:

In the "settings" area, name your project. You can also select the location of where you want to save your project file. Please save in the documents folder.

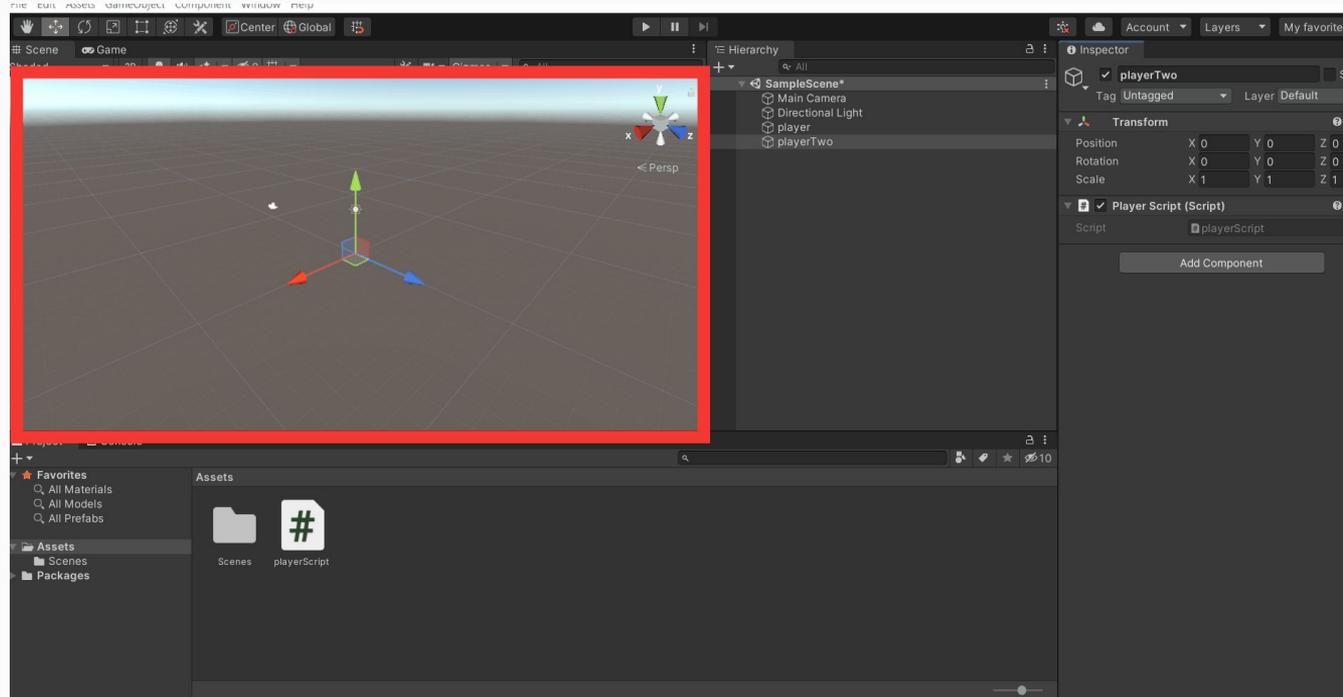
Once done, click "create" in blue.



The User Interface - The scene view

First, we have the Scene View.

The entire view - from the camera, the lighting, the actors, the scene...Everything is in this shot.

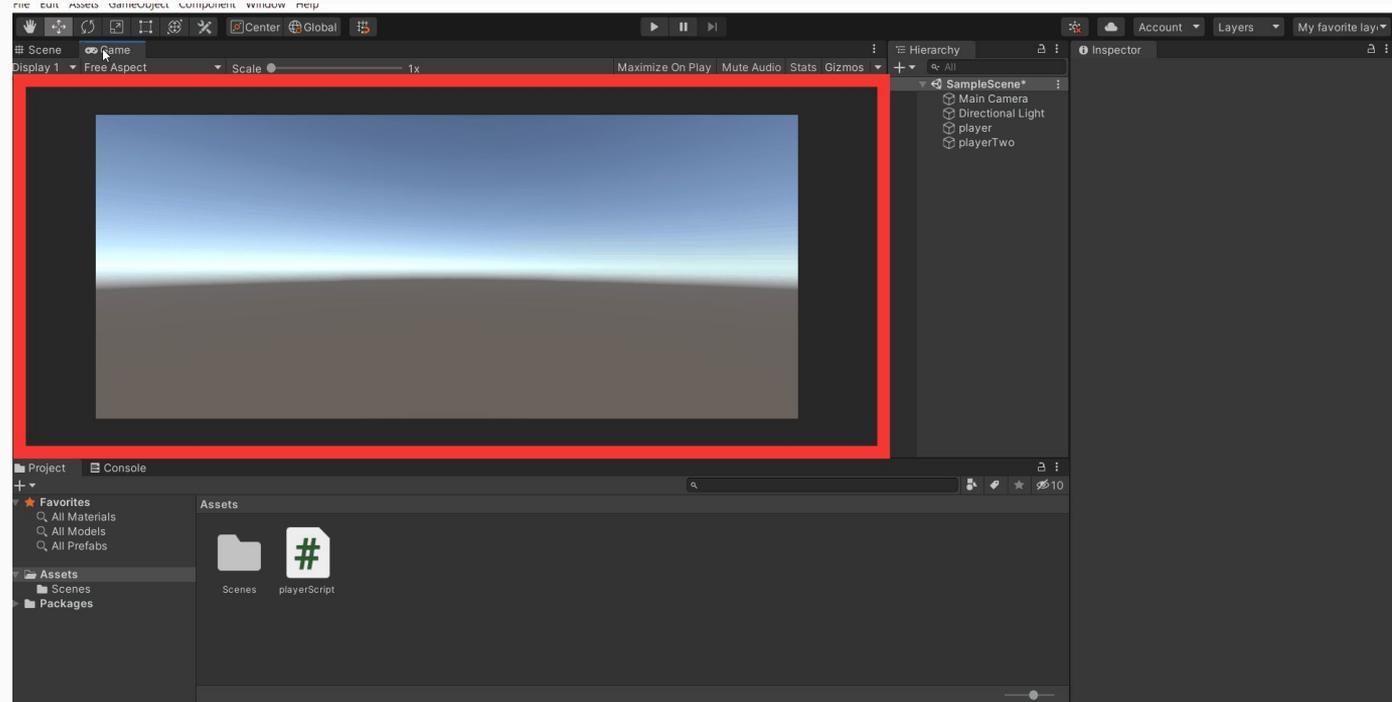


Next, we have the Game View.

The Game window is only what the camera sees.

Notice, in Game view you see a horizon, a sky, and the ground. This is what the camera is viewing.

If you toggle back to the Scene view, you'll notice a tiny camera showing you what it is viewing.



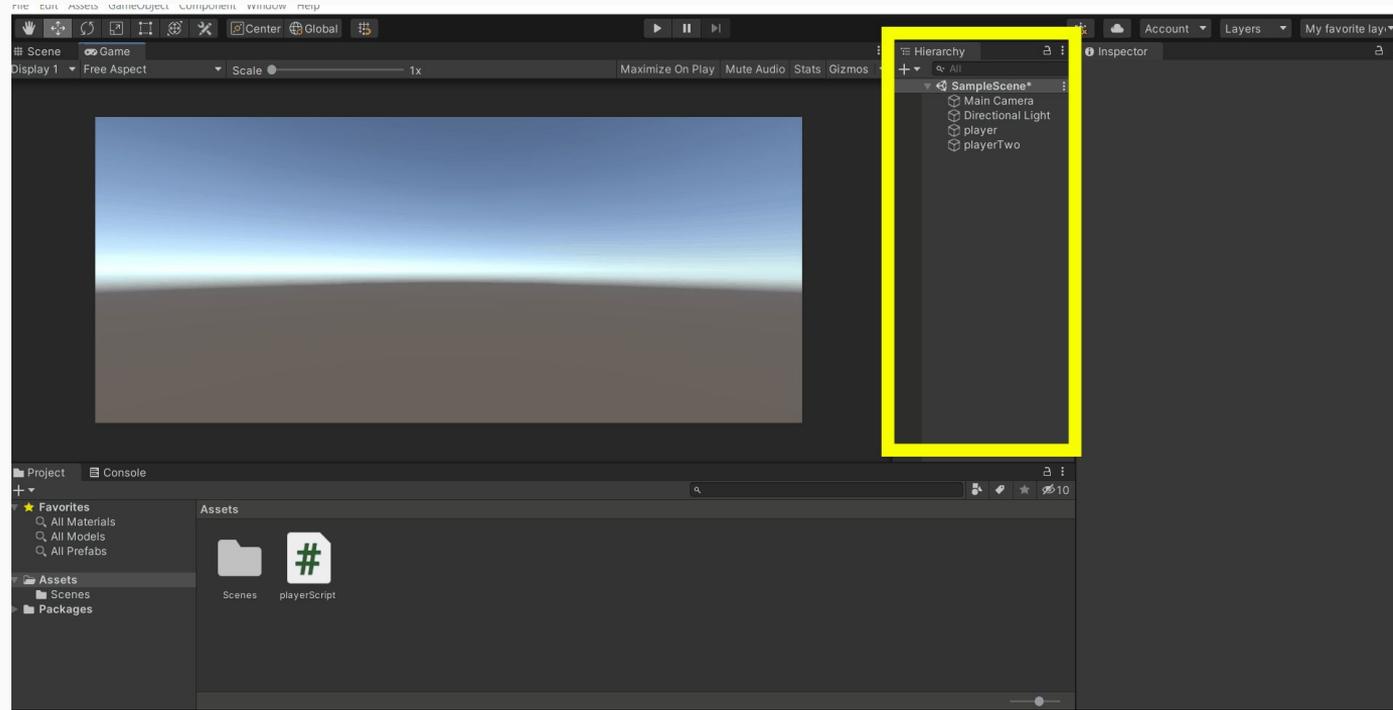
The User Interface - The Hierarchy Tab

Next, we have the Hierarchy Tab.

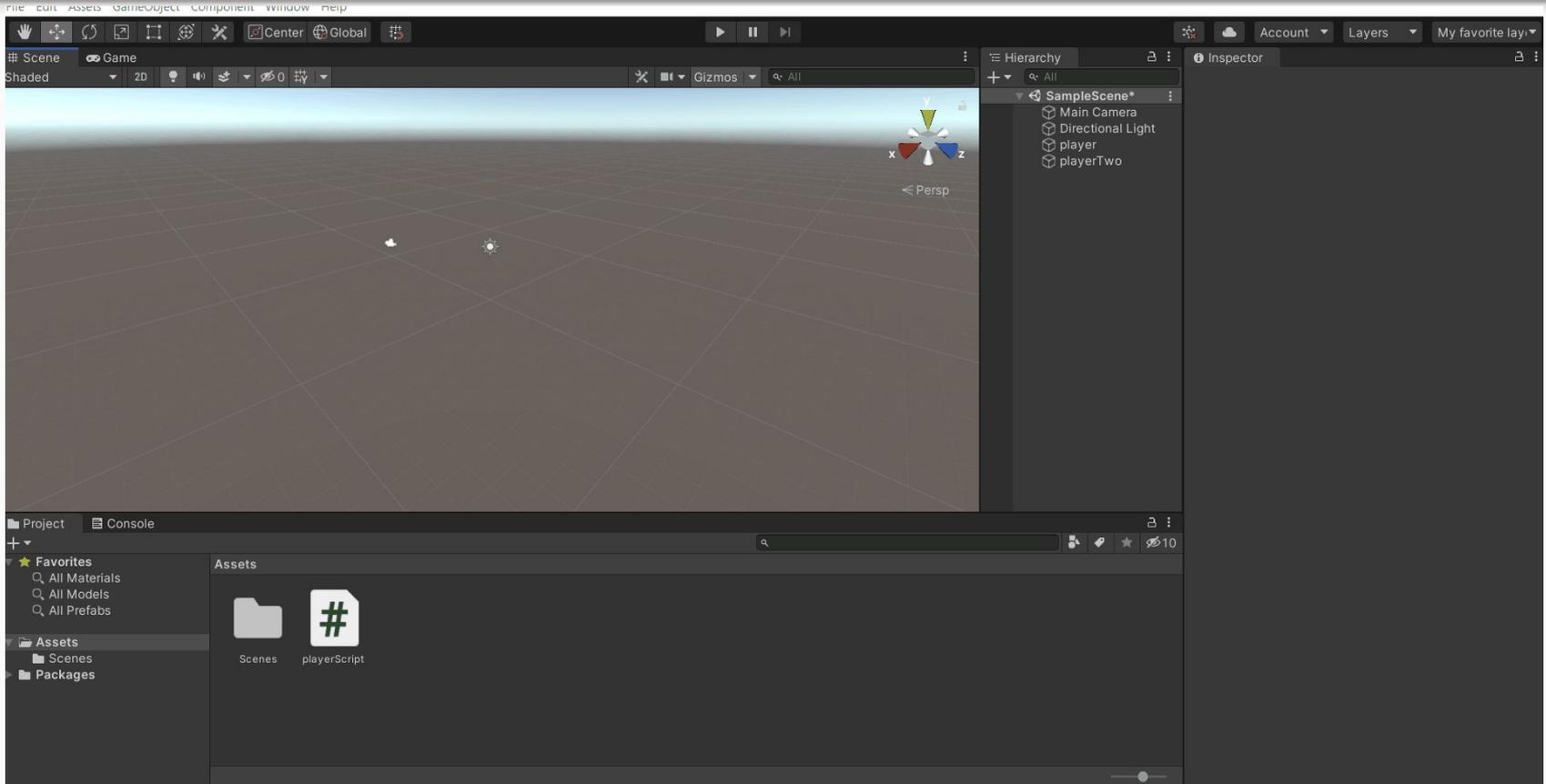
Think of the Hierarchy tab as the inventory list of all the components of your game.

E.g.

- Main Camera
- Directional Light
- Player
- playerTwo



The User Interface - The Hierarchy Tab cont.

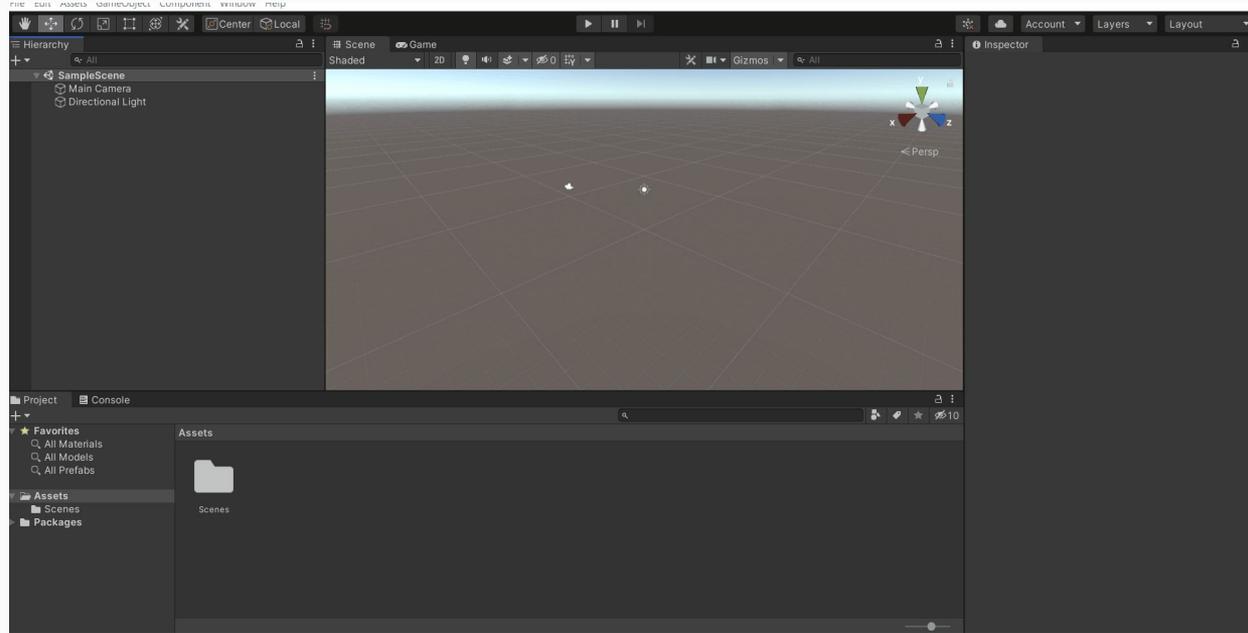


If you select a component in the hierarchy, it will also select it within the scene view.

Drag-and-drop customizable layout

Every aspect of the software is broken up into tabs.

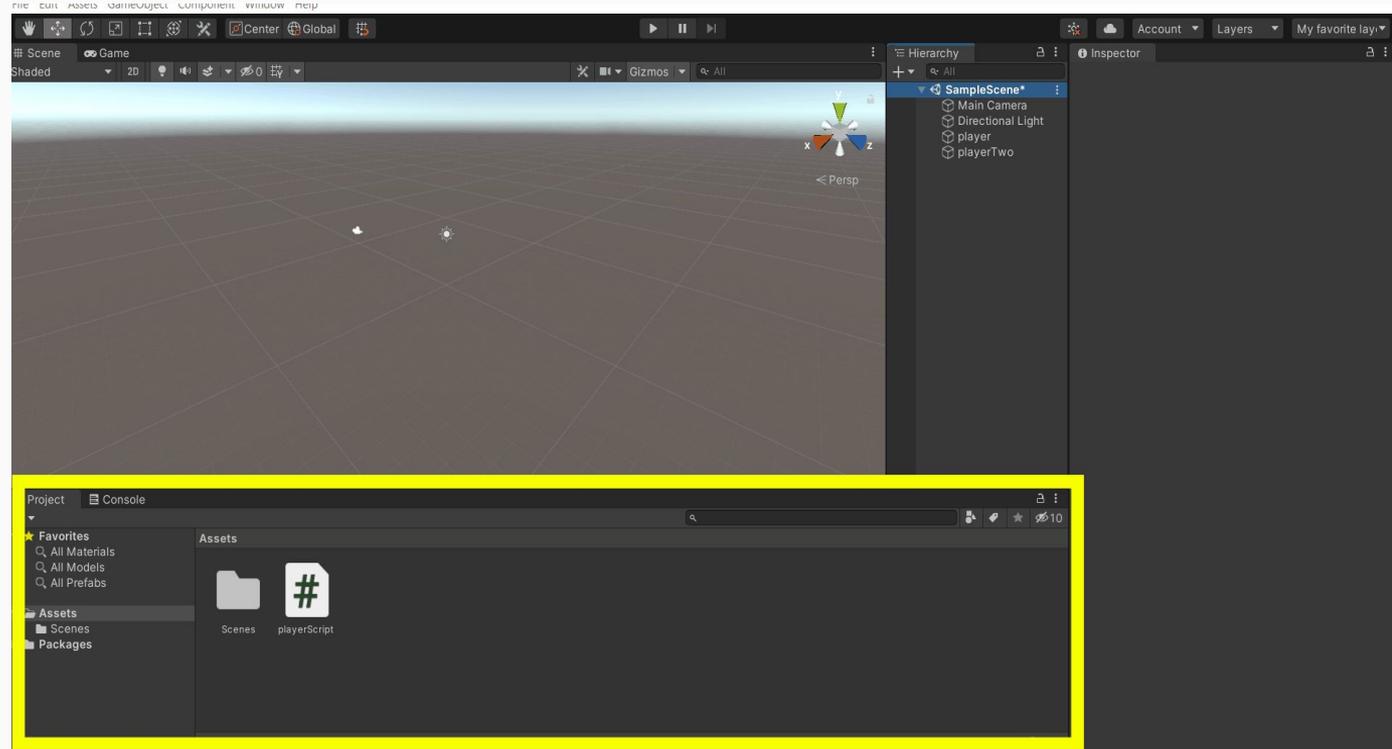
As you continue using Unity, you may want to move things around to your liking. You can simply do that by dragging the tabs, where you want them.



The Project Tab -

Broken up into 2 sections -
“Favorites” and “Assets”.

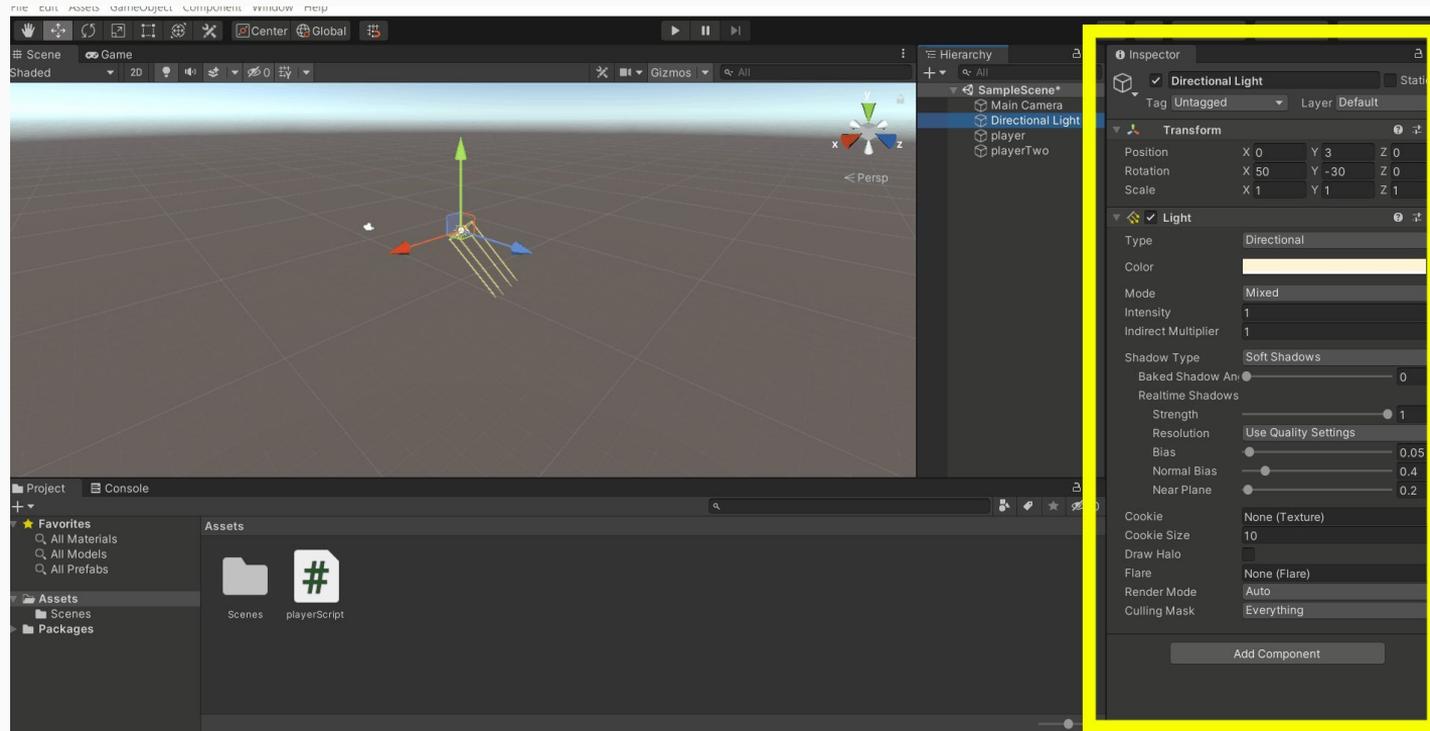
This area will store all of the
files associated with your
game project.



The Inspector Tab -

When something is selected within your scene or within your “Hierarchy” list, you will notice a ton of information regarding it show up in the inspector tab.

This gives more information on the object selected and allows you to make specific changes.



Let's take a look at the layout of Unity.

The User Interface - Build Settings

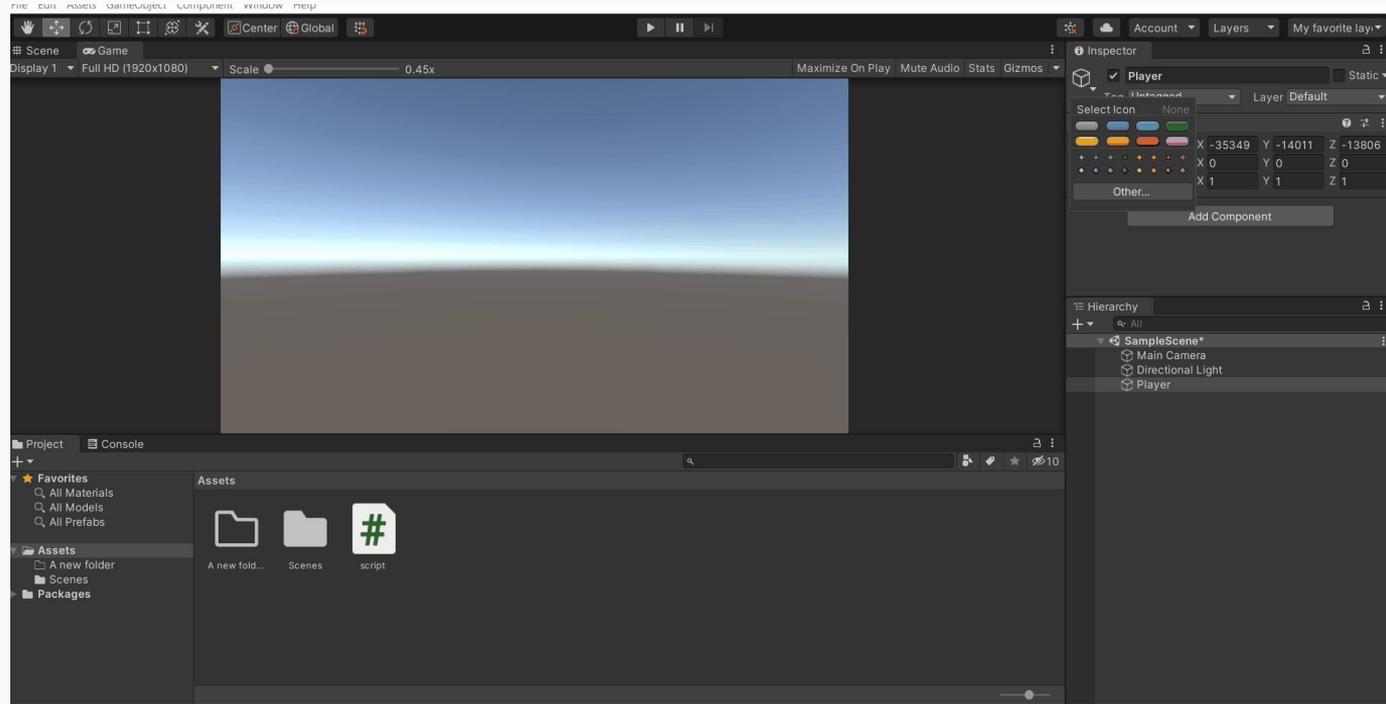
Your games setting will also depend on what you have set as your "Build settings".

If you go to File > Build settings

You can choose the actual device type you want your game to be made on.

If you make a game on pc and want to switch it to an Android device or iOS, you would click the device and then click "switch platform".

Depending on the amount of files in your project and how large your game is, will determine how long it will take to render to the new platform.



Let's take a look at the layout of Unity.

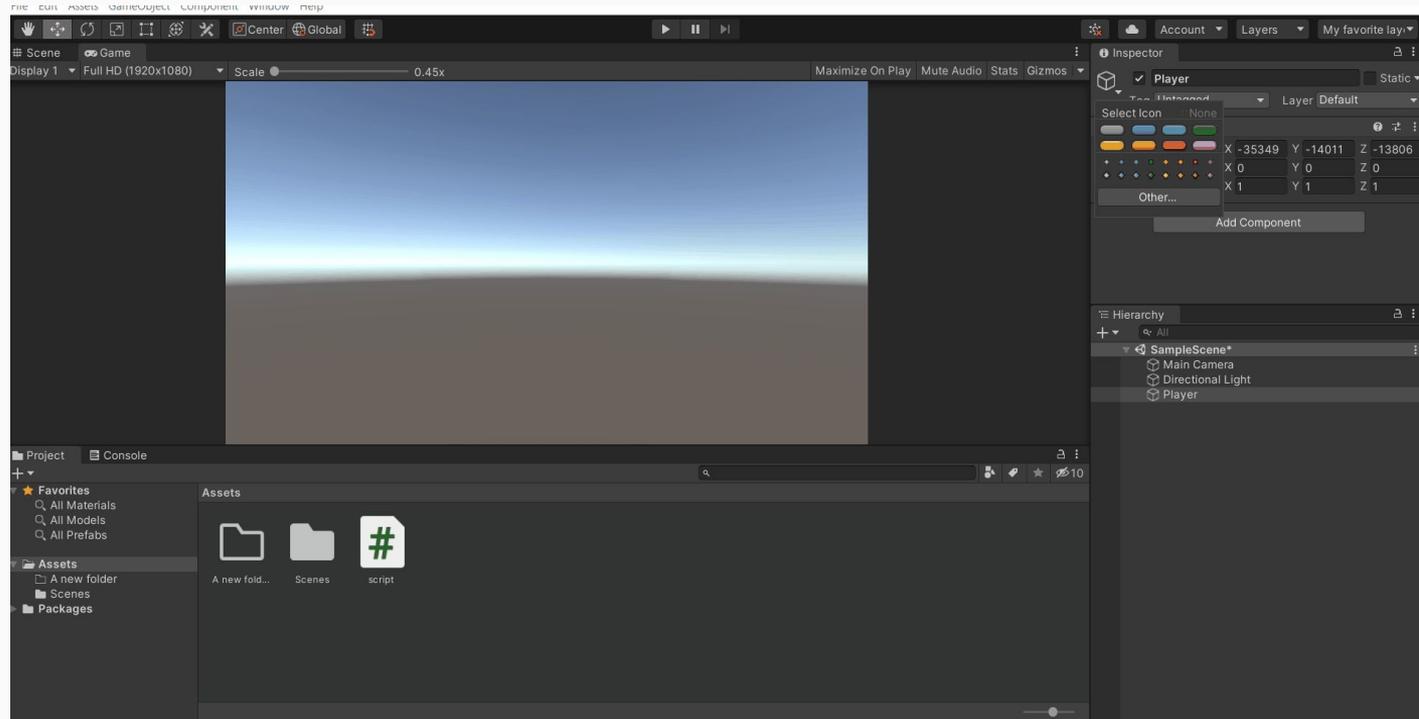
The User Interface - The Console Tab

Step 12: The Console Tab

The Console Tab - by default is located at the button panel, right next to the project tab.

The console, much like the console in any other IDE, is used to help you locate and find errors within your game.

Also, when you do your print debugging like `debug.log` or `console.log`, it will show within the console. We will go into more detail on that in another class.



Let's take a look at the layout of Unity.

The User Interface - The Animator and Animation tab

Step 13: Adding more tabs!

We're going to add two more very important tabs to our workspace that will help us during game creation.

1. The Animator tab

This tab is where you would connect the animations together.

2. The Animation tab

This tab is where we create animations.



Made with  unity



Let's Create our first Game objects

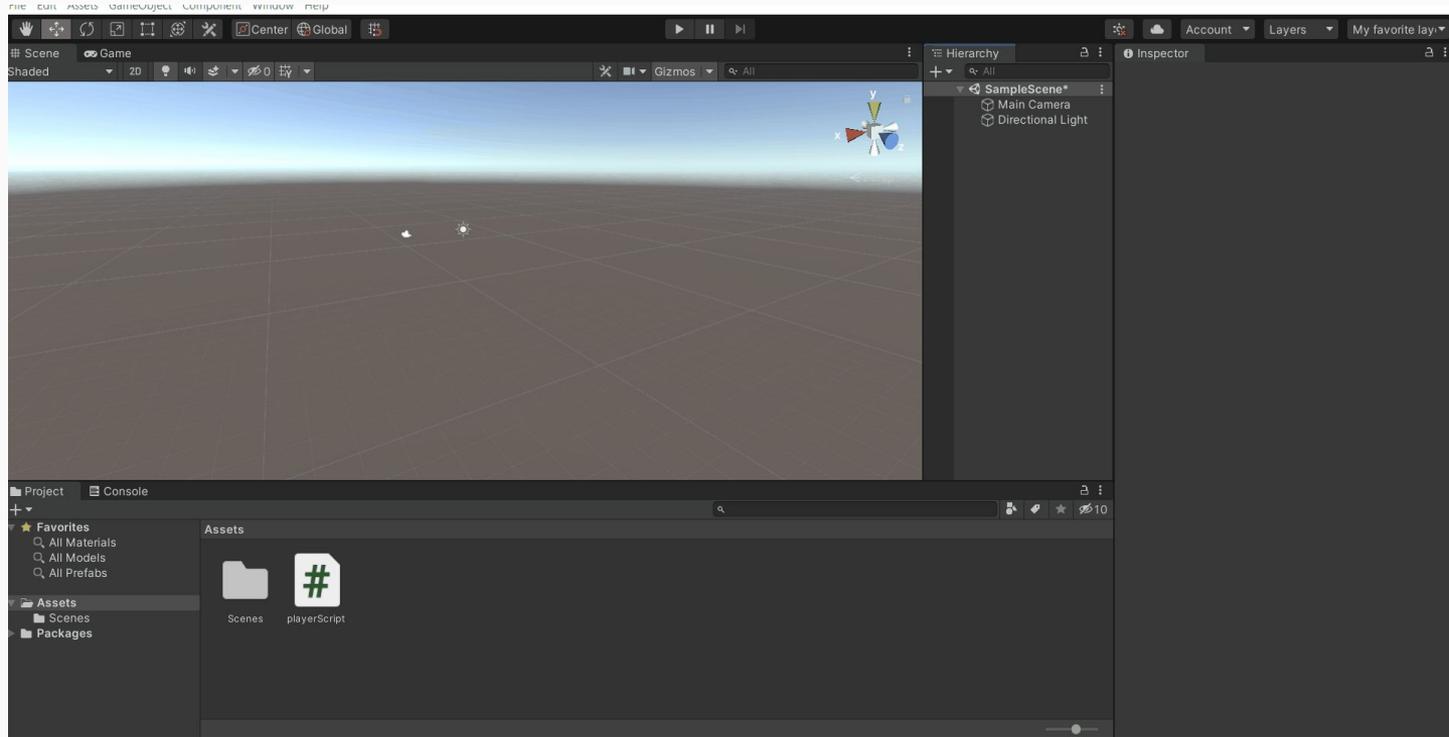
Let's Start!

We are going to start making a platform for a platform game.

In the Hierarchy Tab, right-click in an empty space click 3D Object > Cube.

We have here a game object.

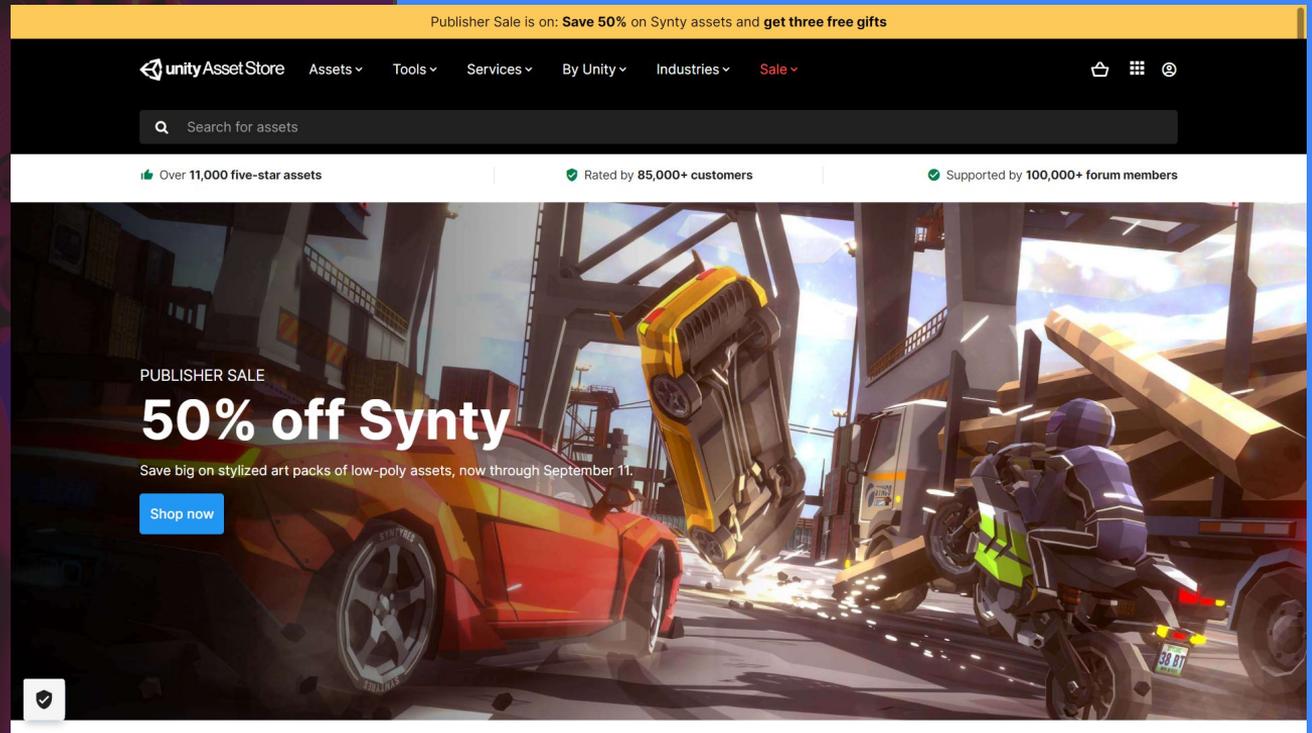
You can rotate the view by hitting the alt key and left click to rotate around and view the object from different angles.



Activity 3

Take a look at the Unity Asset Store!

Get both paid and free assets from the Unity Assets store! These assets help you build your game faster and may add more awesomeness to your game project!



The screenshot shows the Unity Asset Store website interface. At the top, a yellow banner reads "Publisher Sale is on: Save 50% on Synty assets and get three free gifts". Below this is a navigation bar with the Unity Asset Store logo and menu items: Assets, Tools, Services, By Unity, Industries, and Sale. A search bar is positioned below the navigation. Three status indicators are displayed: "Over 11,000 five-star assets", "Rated by 85,000+ customers", and "Supported by 100,000+ forum members". The main content area features a large promotional banner for a "PUBLISHER SALE" with "50% off Synty" in large white text. Below the text, it says "Save big on stylized art packs of low-poly assets, now through September 11." and includes a blue "Shop now" button. The background of the banner is a stylized, low-poly 3D scene with a red sports car, a yellow car flipped upside down, and a motorcycle.

Publisher Sale is on: **Save 50%** on Synty assets and **get three free gifts**

unity Asset Store Assets Tools Services By Unity Industries Sale

Search for assets

Over 11,000 five-star assets

Rated by 85,000+ customers

Supported by 100,000+ forum members

PUBLISHER SALE

50% off Synty

Save big on stylized art packs of low-poly assets, now through September 11.

Shop now

A hand holding a game controller is shown in silhouette against a dark purple background. The controller has several buttons visible on its face. The overall scene is dimly lit, with the hand and controller being the primary focus.

Adding a text editor to Unity

That's it for today!



**Next Class:
Game Building -
Building our first Game Objects**