

How do we express
narrative in games?



The background is a pixel art landscape. At the top, there are several pixelated clouds in shades of blue and purple. In the center, a bright yellow sun with a smiling face is visible. Below the sun, there are two green trees with brown trunks. To the right of the trees is a small brown house with a yellow thatched roof and a dark brown door. To the left of the house is a small yellow sunflower with a brown stem and green leaves. On the far right, there is a small green patch of ground with a brown base, topped with a silver flagpole and a blue flag. The entire scene is set against a light blue sky and a green ground plane with a brown base.

Competition Time!

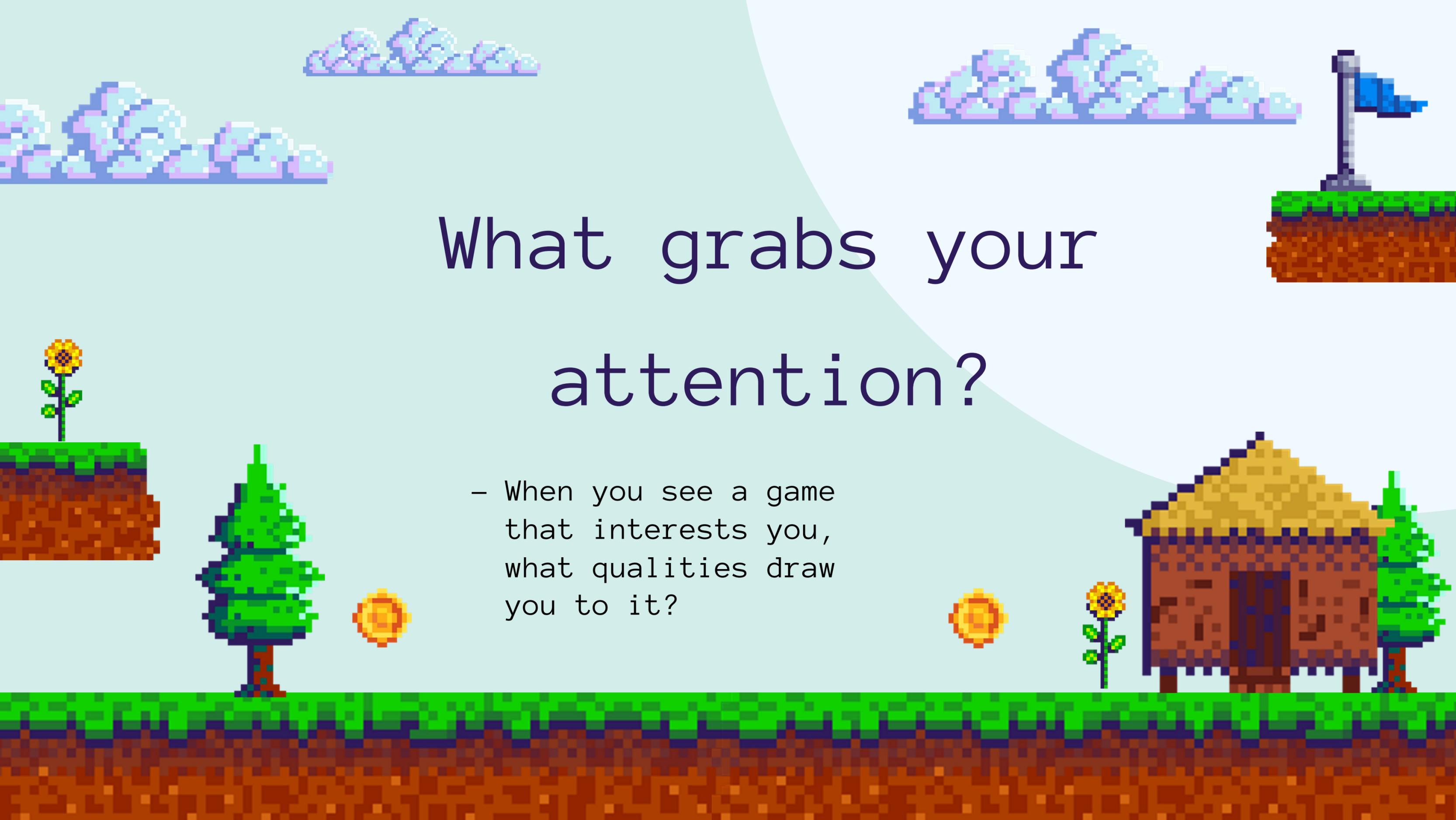
Using your phone or laptop, pull up the game Geometry Dash. We will play for about 10 minutes; after we will see who got the highest score.

Laptop WiFi Settings

Username	Password
pseed1	(Wifi5Access)
pseed2	(Speak2A11)
pseed3	[Access7Info]
pseed4	@Cats3See@
pseed5	77Chips#77
pseed6	^Light4A11^

What the heck is a game?



The background is a pixel art landscape. At the top, there are several pixelated clouds in shades of blue and purple. On the right side, a flag on a pole sits on a small patch of green grass and brown soil. In the lower left, a sunflower grows on a small platform of green grass and brown soil. In the lower center, a green tree with a brown trunk stands on the ground. To its right is a bright yellow sun. Further right, another sun is visible. On the far right, a small brown house with a yellow thatched roof and a dark doorway stands on the ground, with a sunflower and a green tree next to it. The ground is a mix of green grass and brown soil.

What grabs your attention?

- When you see a game that interests you, what qualities draw you to it?



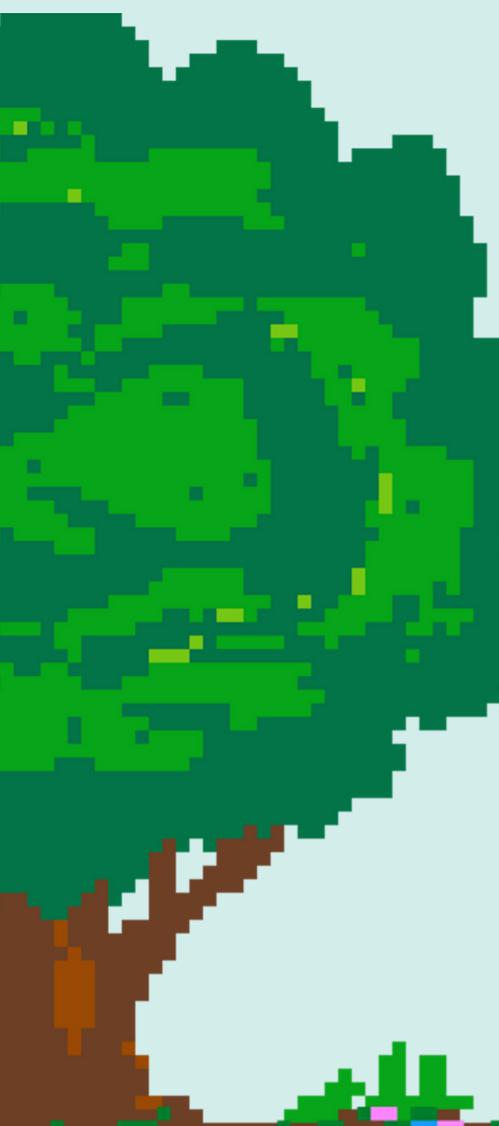
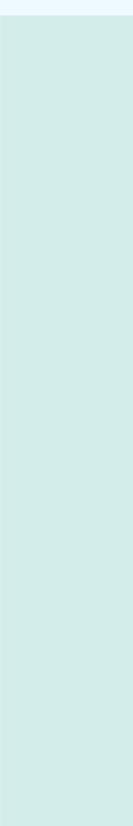
What keeps us engaged in a game?

- Do you know what game you have the most hours in?
- How do you play it?



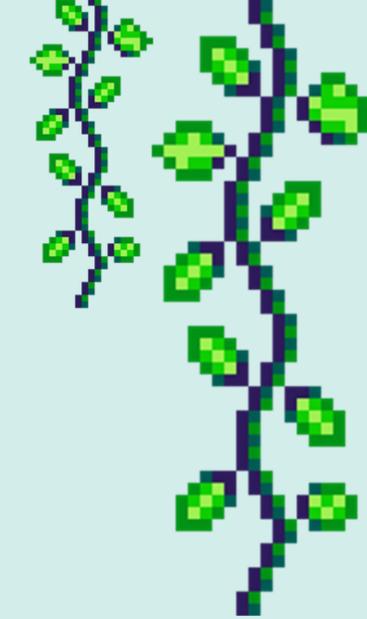
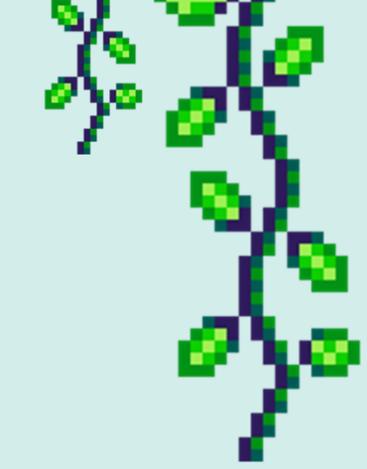
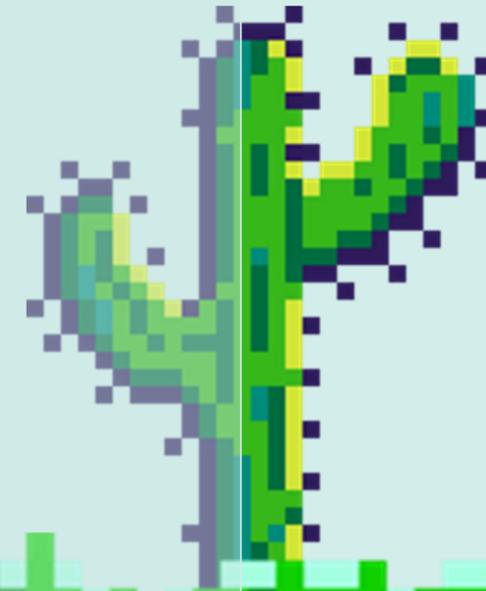
Useful Terms

In this workshop, we'll be using certain storytelling terms which may be unfamiliar to you—please use this slide for definitions. If an unfamiliar term isn't here, please ask!

- Diegetic/Diegesis: Everything existing in the world of the story. (Ex. The characters are diegetic, the character creator is not.)
 - Emergent Narrative: A style of narrative in which the story develops as a result of player action
 - Embedded Narrative: A narrative style in which a player interacts with a set, linear story.
 - Nonlinear Narrative: The narrative does not follow chronological order, interacting with different pieces of the narrative at different times.
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Plot v.s. Story

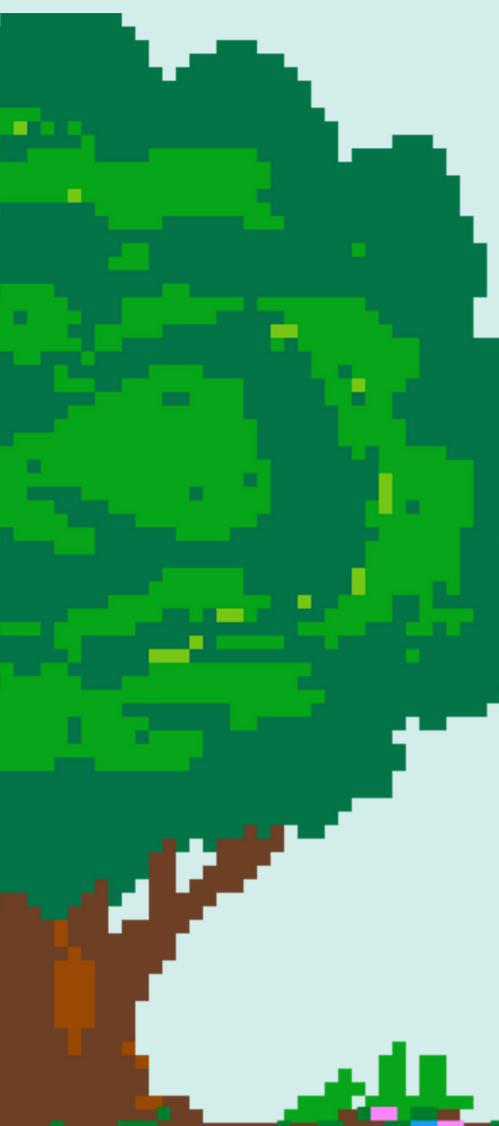
- Plot: The series of events which the player experiences throughout the course of the game.
 - A traditional plot structure is Beginning, Middle, and End, but is this standard in a video game?
- Story: All of the details (character, world, themes, emotions) which immerse the user in the tale told by the game.
 - How does the narrative of almost every game begin?







What is Narrative?

- 
- How does narrative differ from plot? From story?
 - How do we express narrative?
 - What are some differences between a book, movie, and video game?

- 
- What are some ways in which your story will surround players?

The background is a pixel art landscape. At the top, there are several fluffy, light blue and purple clouds. In the upper right, a bright yellow sun with a smiling face is visible. On the right side, there is a large, dark green tree with a brown trunk. The ground is a vibrant green field with small pink and blue flowers scattered throughout. In the bottom left, a young girl with brown hair, wearing a cyan shirt and pink pants, stands next to a small brown dog. A white speech bubble with a tail pointing to the girl contains the text.

Visualization Exercise

Think about stories that mean something – stories of your neighborhood, your parents, your community, or something that may be related to your hobby. Using the storyboard given, sketch out this idea.



Code can be a unique way to express a narrative.





Who are the aliens?



Are the aliens actually attacking?



Why are they attacking?



Who is the defender? Why is there only one?





The Mechanic Is The Message

Space Invaders has no dialogue or displayed written narrative. However, we can still understand the narrative of Space Invaders--Why?

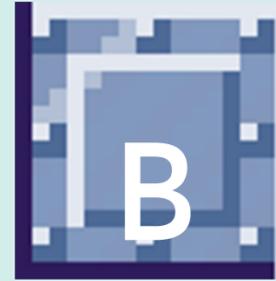
How about the game Dark Souls? Are there games considered "Dark Souls games" simply because of their mechanics?



Examples of Video Game Mechanics:



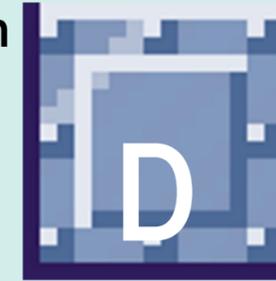
Player Movement,
Character Creation



Rulesets



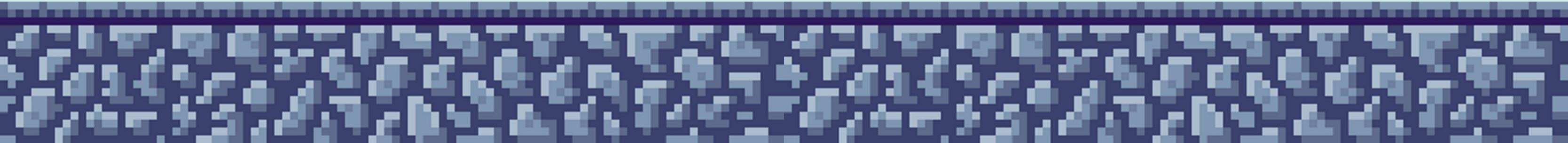
Boundaries



Inventory &
Collection



Opponents,
Health & Death



Artificial Intelligence in Narrative

- Creating NPCs; generative and responsive dialogue (Great if you don't want your NPC to say the same things over and over!)
- ChatGPT's information database cuts off in 2021. How can you responsibly use AI for your project to deter effects of possible misinformation?
- Originality; AI can be used to enhance, not reproduce

Exercise: A.I. & Narrative Generation

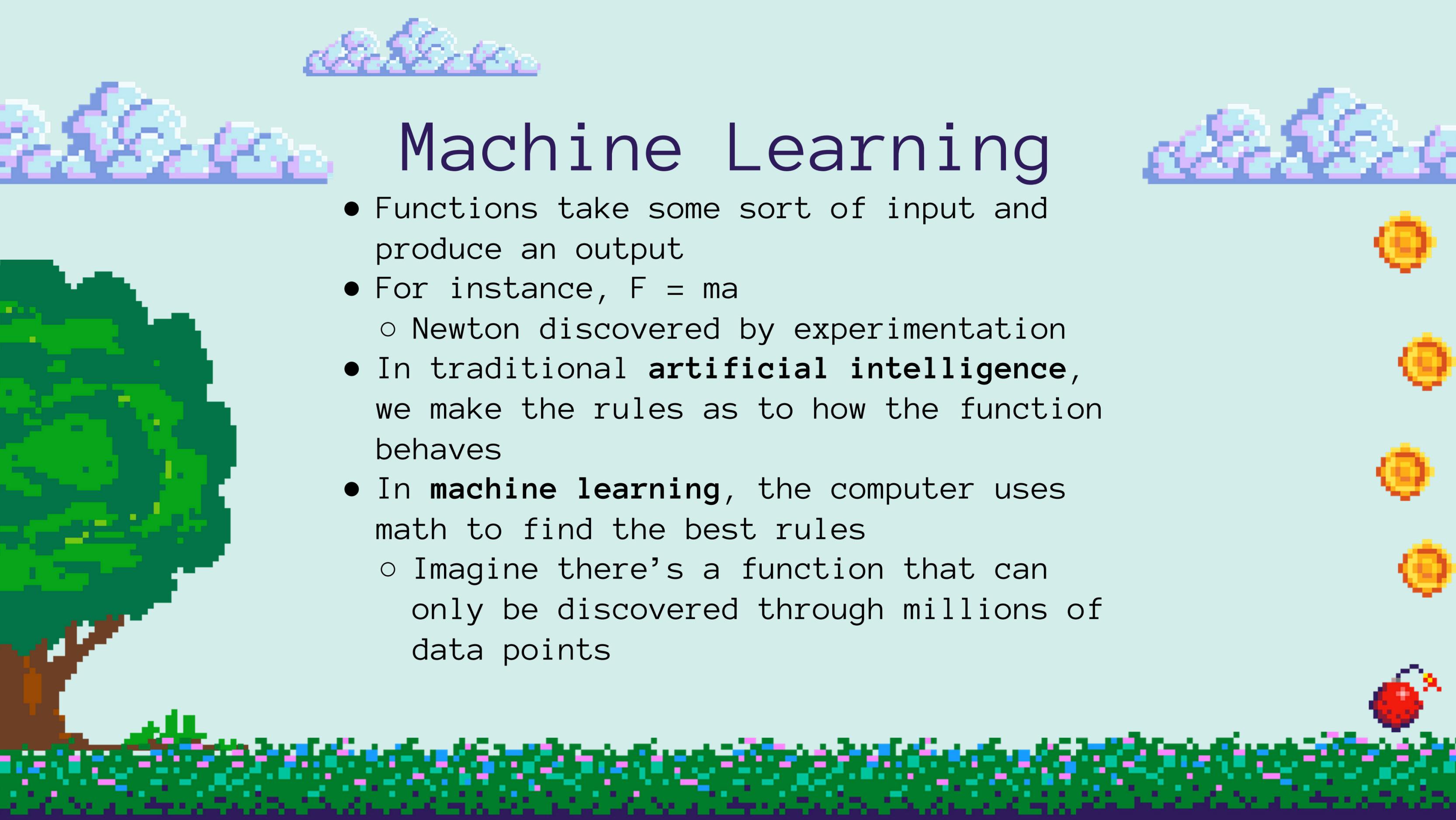
- Using ChatGPT, feed it buzz words or phrases that contain concepts you would like your game to have.
- Ask it to produce three different narratives (remember, be specific! LLMs only know as much as you tell them!)
- After producing and reading them independently, share some of your favorite ones.
 - Are you going to continue with this idea? If so, how will you make it your own?



give me 3 different starter narratives for a video game based off of these concepts; horror, psychological, commentary on male gaze, woman protagonist, no paranormal



Certainly, here are three starter narratives for video games based on the concepts of horror, psychological elements, commentary on the male gaze, featuring a woman protagonist, and without paranormal elements:

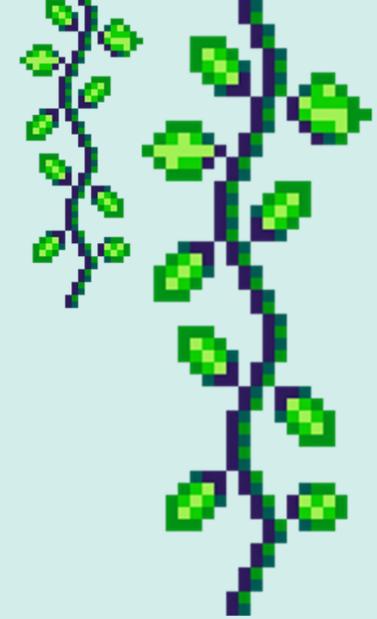
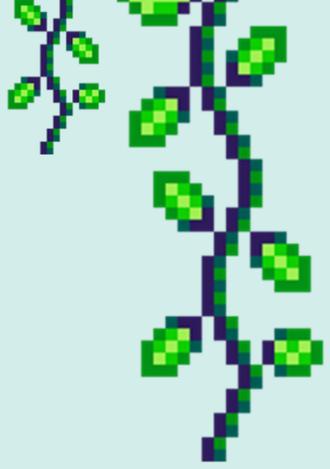
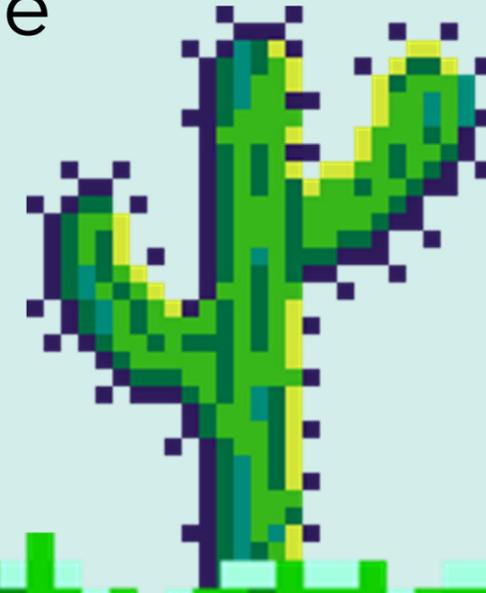
The background is a pixel art landscape. At the top, there are several pixelated clouds in shades of light blue and purple. On the left side, there is a large, pixelated green tree with a brown trunk. At the bottom, there is a field of green grass with small pink and blue flowers. On the right side, there are four pixelated yellow suns and one pixelated red bomb with a lit fuse.

Machine Learning

- Functions take some sort of input and produce an output
- For instance, $F = ma$
 - Newton discovered by experimentation
- In traditional **artificial intelligence**, we make the rules as to how the function behaves
- In **machine learning**, the computer uses math to find the best rules
 - Imagine there's a function that can only be discovered through millions of data points

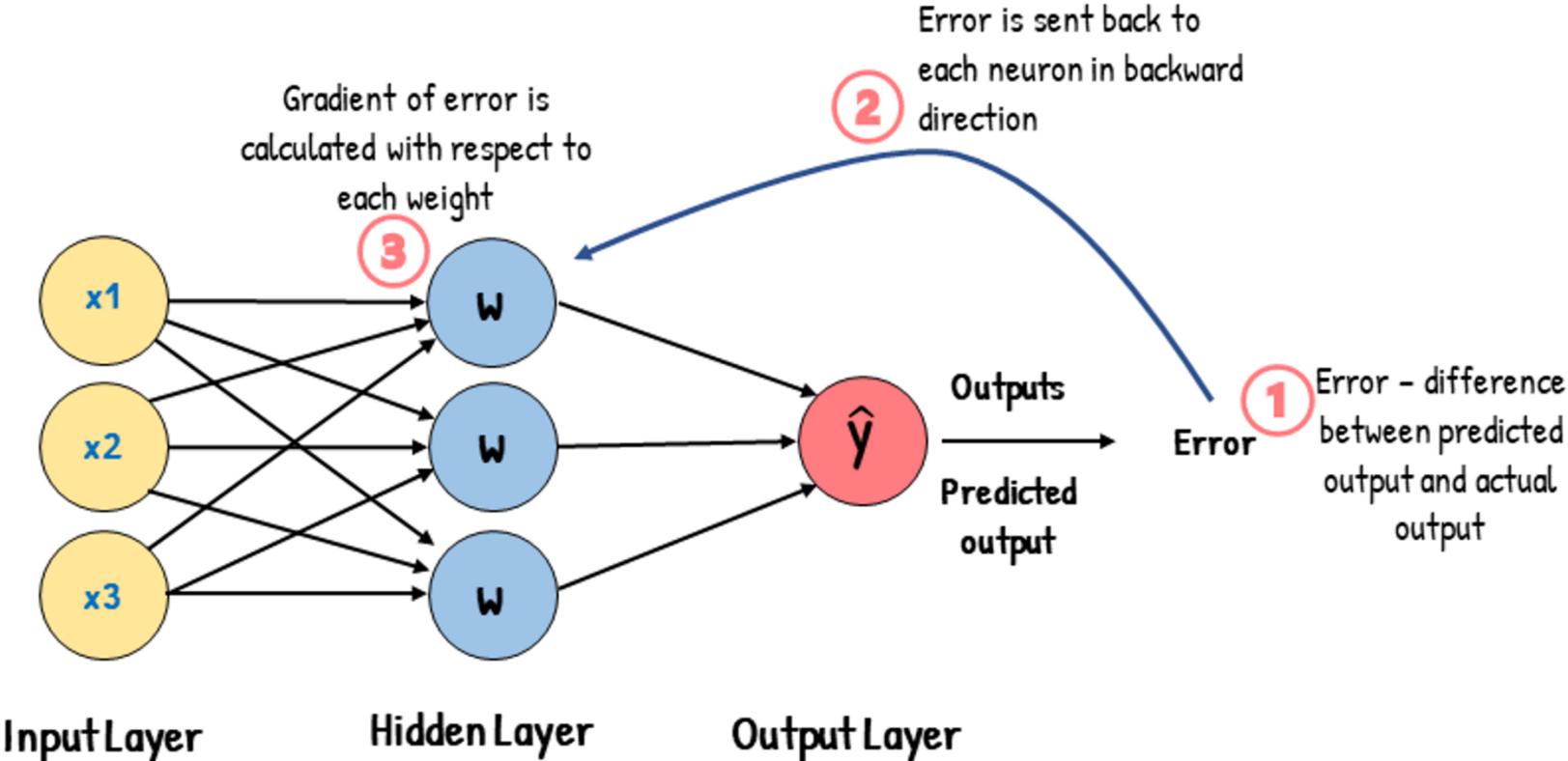
How machines learn

- How do machines actually learn?
- We do this through a process called **back propagation** with **gradient descent**.
 - Determine how a specific parameter of the network affects the output and move it slightly to make the network more accurate



How machines learn

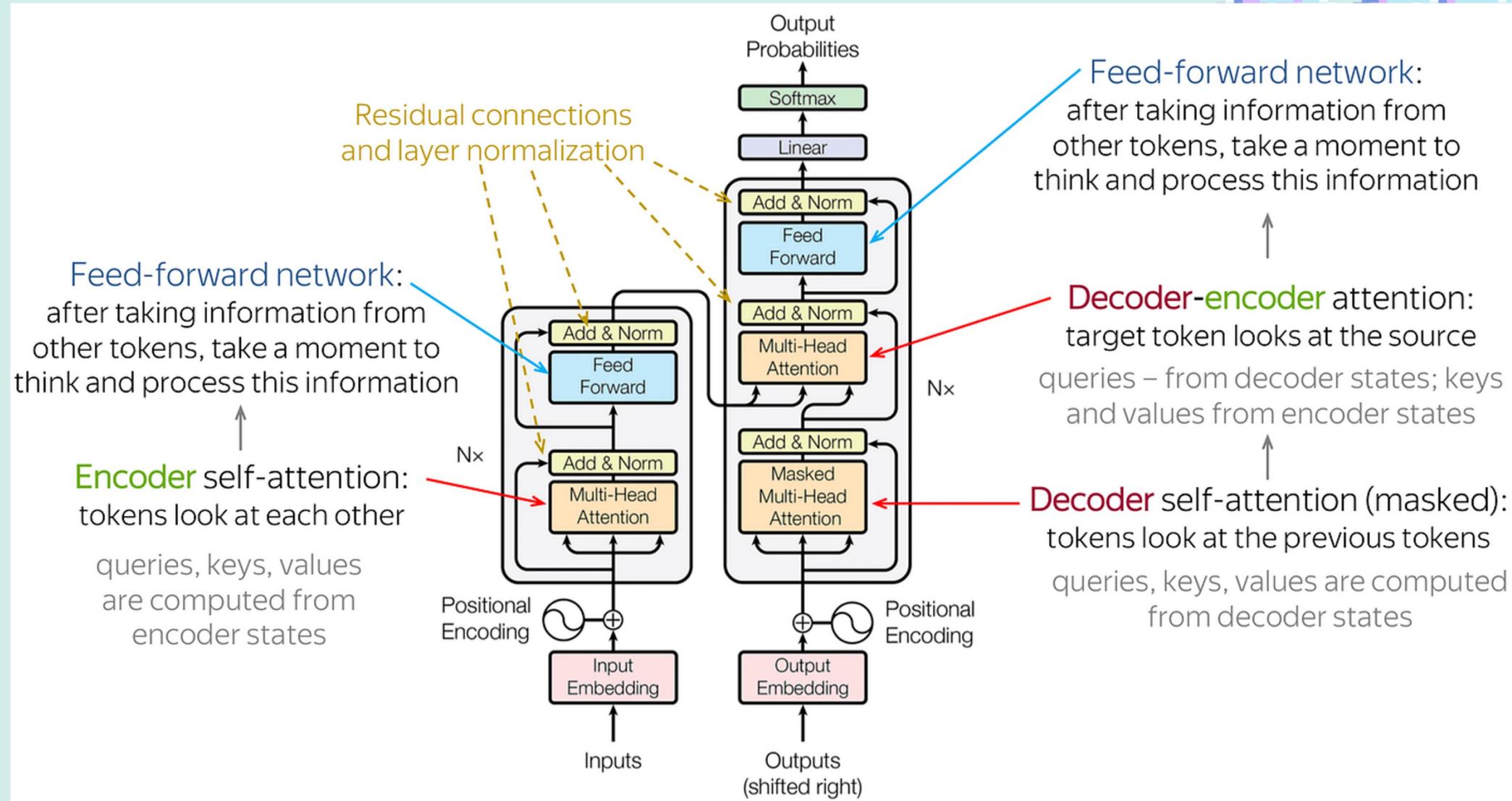
Backpropagation



Transformer Networks

- ChatGPT uses machine learning with a **transformer** network
 - “**Generative Pre-Trained Transformer**”
- Older machine learning networks looked at input without order or one item at a time
- Transformer networks use **self-attention** to look at several previous words at the same time and guess what the next word will be

Transformer Networks



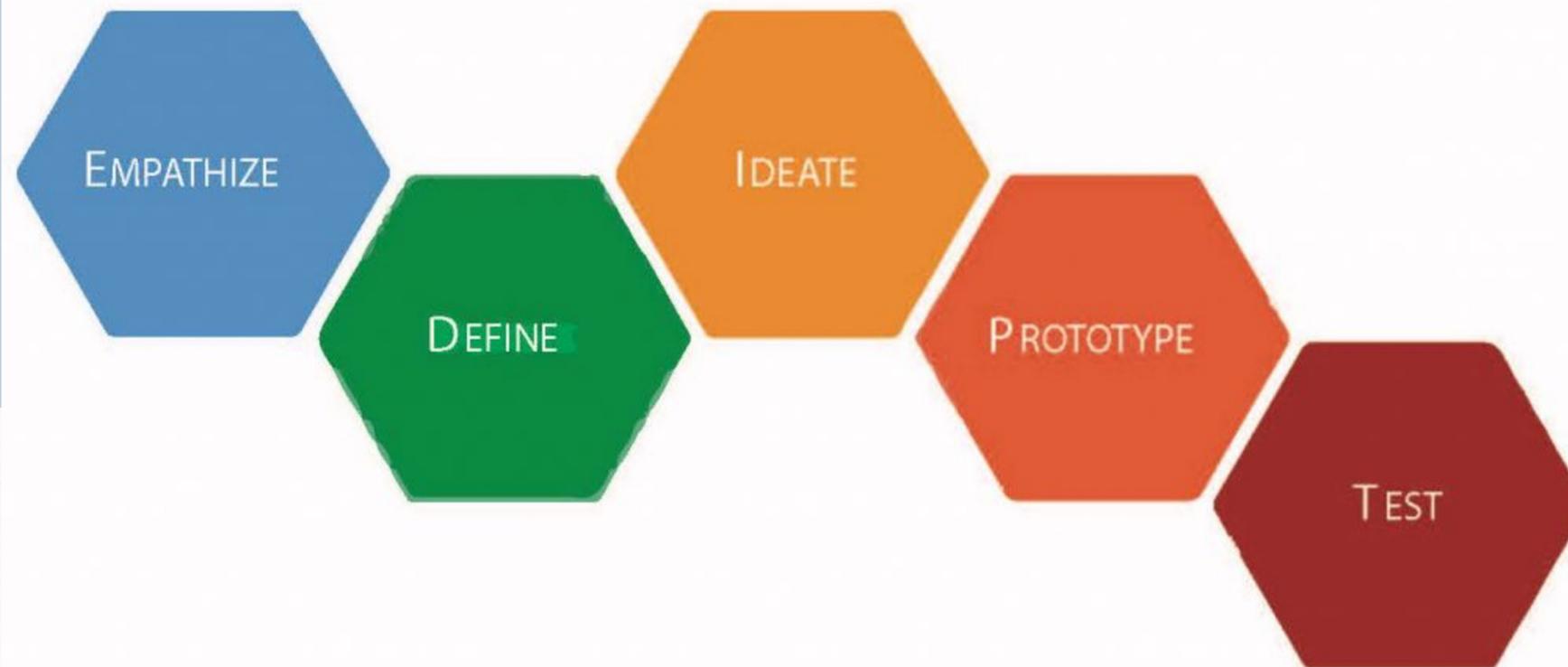
The background is a light-colored, textured surface with various watercolor-style illustrations. There are several large, soft-edged shapes in shades of orange, pink, and blue. Some shapes resemble abstract flowers or leaves. There are also smaller, more delicate drawings, including a blue swirl, a blue wavy shape, and a series of orange lines that look like a handprint or a fan. The overall aesthetic is soft, artistic, and hand-drawn.

Introduction to Storyboarding

Design Thinking

Design Thinking is a process that all designers use to create and implement creative projects.

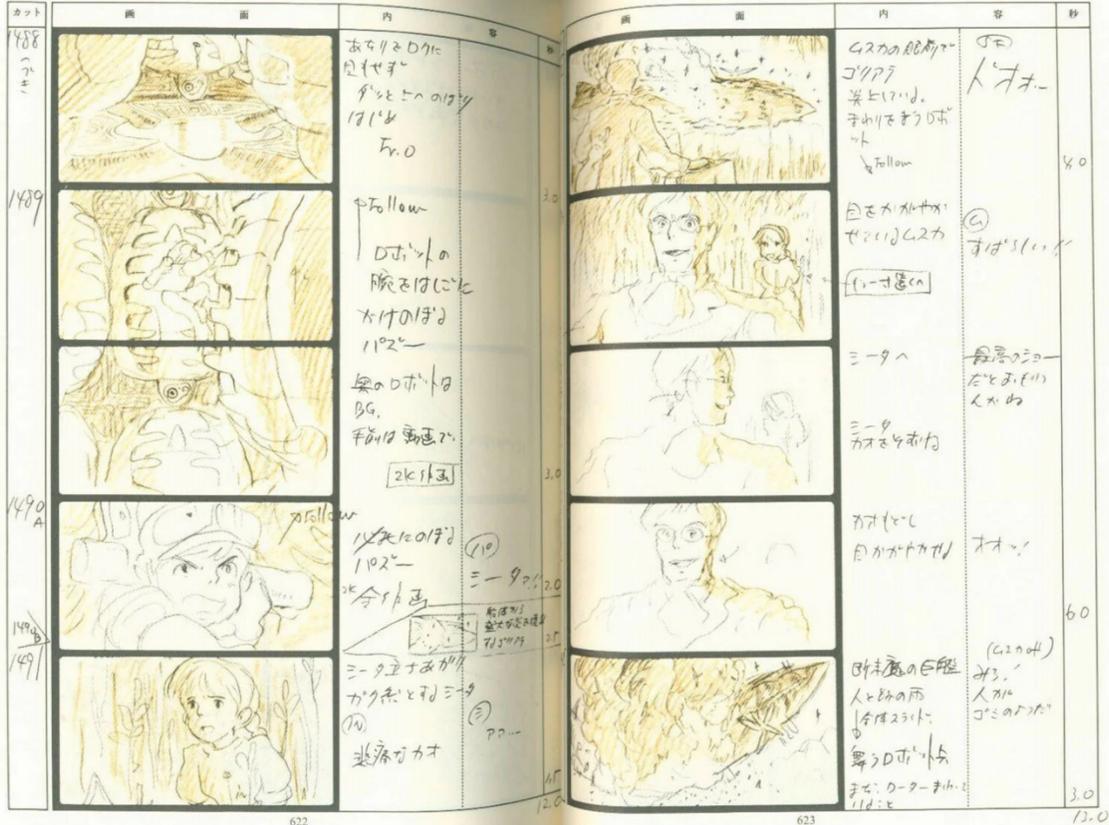
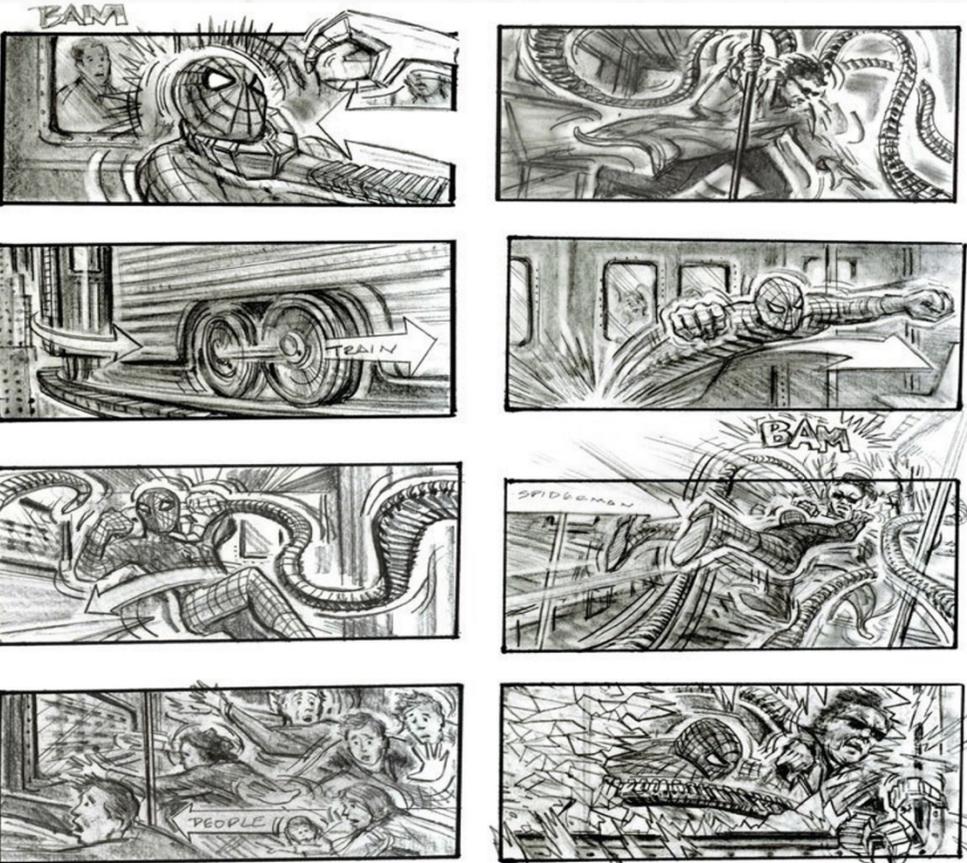
IDEO DESIGN THINKING PROCESS SPACES



Source: IDEO.com

What is a storyboard?

A Storyboard is a **low-fidelity** prototype that serves to help you sequentially plan out a scene. It is a way to create visual notes that aids you in understanding how your story will play out.



How Storyboarding Helps

VISUALS

- By drawing out your ideas, you have a better picture of the game in your head. The quality of the drawings to a storyboard doesn't matter, the purpose is to provoke visual thought.

PACE

- As you approach the storyboarding process, you must choose what is important to convey and how to convey it. This allows for a natural pacing to form.

PRODUCT

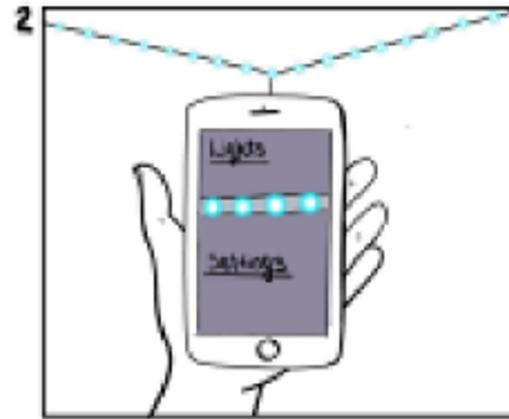
- These storyboards are for you, they are your notes. Creating a storyboard provides you with a physical product that you can look over, refer back to, and edit as you wish.

TLDR: Storyboarding can kickstart the creative process and change the way that you imagine the game.

Figma

Figma is a free software used by designers to create storyboards, low and high-fidelity prototypes. It is most widely used for UX/UI Designers for prototyping mobile apps.

[Paige's Figma Prototype](#)



シーン.

No. 1 **TVblock**

カット	画面 / 絵	内容	セリフ	時間
①		<ul style="list-style-type: none"> ◎ 空 only 下側 ◎ 赤い空、白い雲、70年代感 ◎ カメラ FIX 時 		
		<ul style="list-style-type: none"> ◎ ドラムに合わせ、下からビルボットの列が渋谷の街並みの IN. ◎ 樹並は灰色 (50年代のビルボットの列) ◎ ビルボットが出る瞬間は黒いボットの影がビルボットの影を飛ばす 	(ドラム)	
		<ul style="list-style-type: none"> ◎ 外側から、レコード IN ◎ 穴から飛ぶボットの影 ◎ レコード 回転 		
		<ul style="list-style-type: none"> ◎ レコード 回転 TB ◎ Camera 		
		<ul style="list-style-type: none"> B.O (完全に意味には通じないが、しつこい) ◎ イメージ ◎ レコードの黒い部分がライブ代刺 		

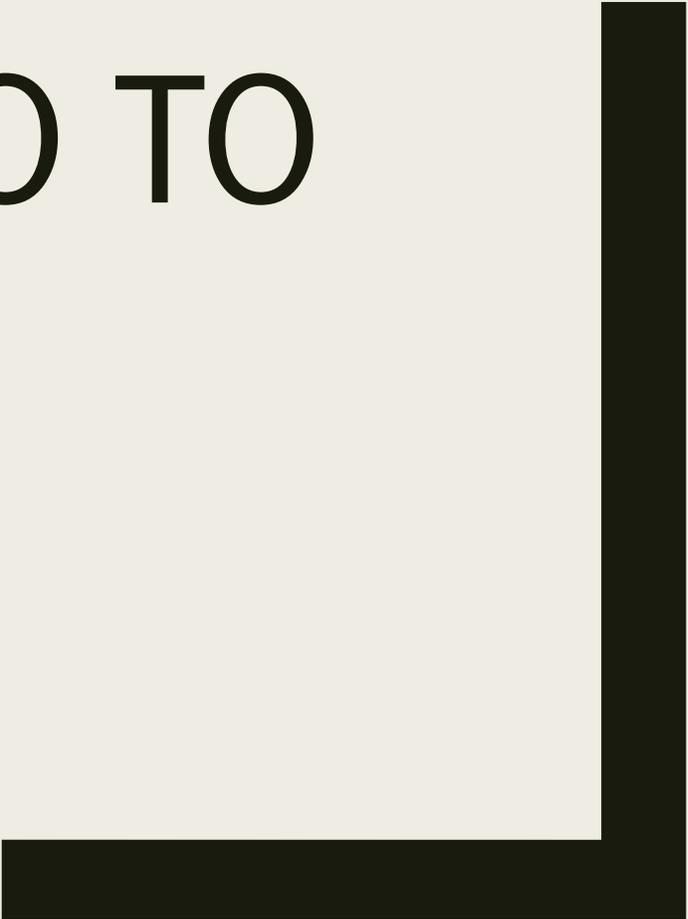
Persona 5 Royal: ATLUS
Storyboard

[Clip: \(0:37-0:52\)](#)



WEEK 1: INTRO TO UNITY

Griffin and Ashley



Overview

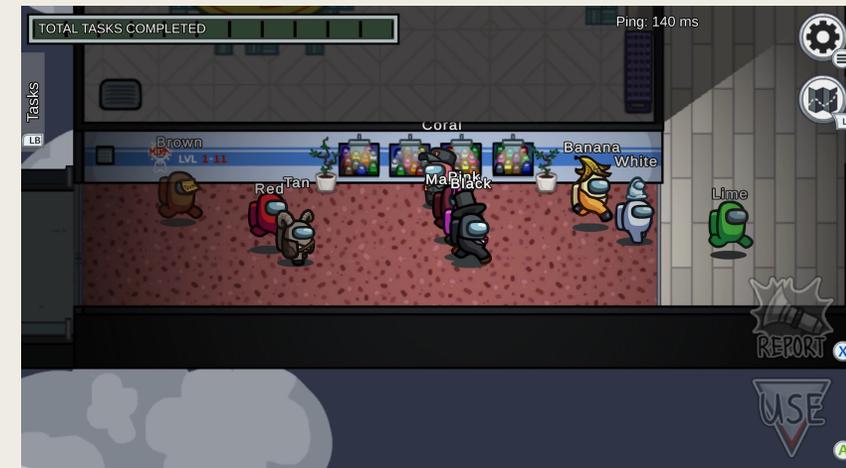
- What is a game engine?
- What is Unity?
- Configuring the Unity Hub
- Creating a Project
- The Unity Editor Interface
- Concepts in Unity
- Dodgeball!

Where do you play your favorite games?

- Have you ever played the same game on multiple platforms?
 - *Console?*
 - *PC?*
 - *Mobile?*
- All these platforms require different code and interfaces
- Do we rewrite the game for each platform?
 - *No, too time consuming!*
- We use a **game engine**



Among Us Mobile (above)
Among Us Steam (below)



What is a game engine?

- A game engine is a software framework that provides an environment to write games in
- There are a multitude of benefits to using a game engine
 - *Cross-platform compatibility*
 - Write code once, run on any platform!
 - *Boilerplate code*
 - Don't have to write things like complex 3D renderers
 - *Reuse assets*
 - Character designs, sounds, behaviors

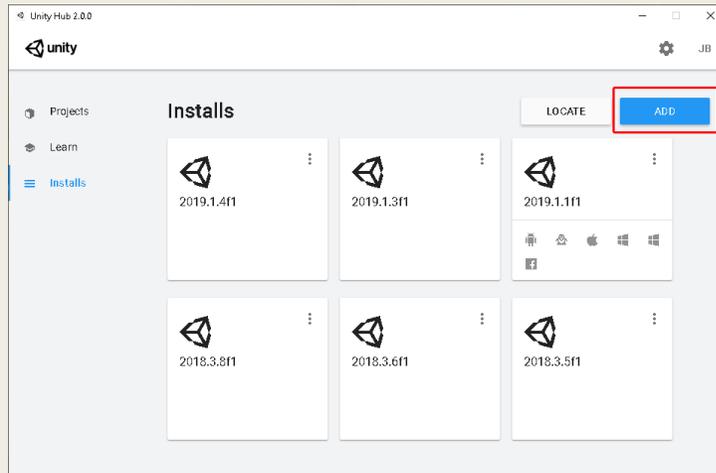


What is Unity?

- A commonly used game engine is **Unity**
- Founded in 2005 originally as a Mac game engine, now supports almost every platform
 - *Mobile, desktop, web, console, virtual reality*
- Pokémon Go, Fall Guys, Among Us, Rust, all built with Unity
- "Game engine" is a restrictive title!
 - *Used for mixed reality interface design, government applications*
 - *Car design at Walt Disney World's TestTrack*



Unity is not one thing...

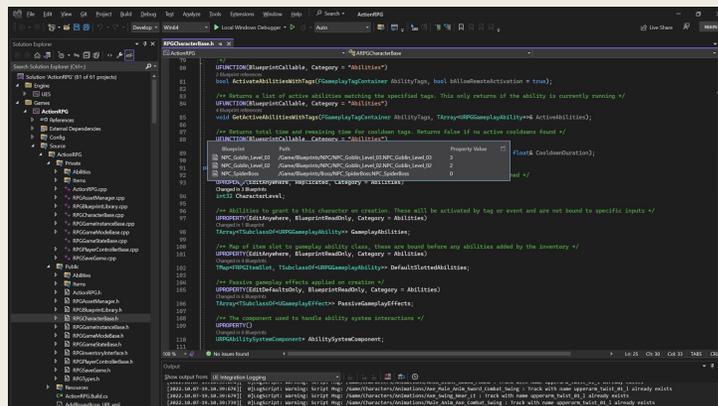


Unity Hub

- Used for managing Unity Installations, credentials
- Where you create projects

Unity Editor

- Used for laying out game objects
- Basic functionality
- Running your game

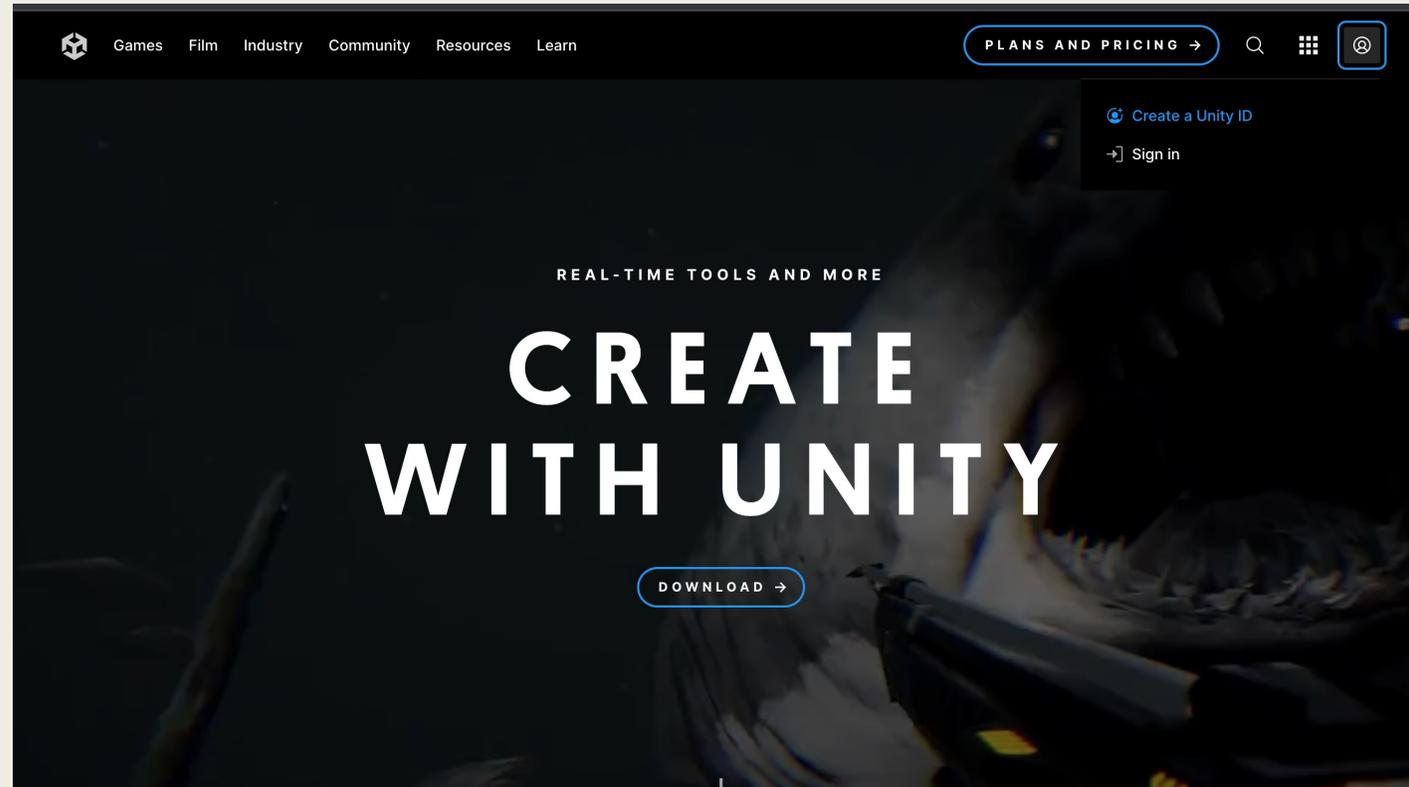


Visual Studio

- A Microsoft product that comes bundled with Unity
- Used for writing code for components

Authenticating to the Unity Hub

- Because Unity is proprietary software, we have to accept the usage agreement and get a license
- The first step in getting a license is to sign up for a Unity account and authenticating in the hub
- Go to <https://unity.com>, click the profile picture in the corner, and click “Create a Unity ID”



Authenticating to the Unity Hub

Create a Unity ID

If you already have a Unity ID, please [sign in here](#).

Email

Password

Username

Full Name

- I have read and agree to the [Unity Terms of Service](#)(required).
- I acknowledge the [Unity Privacy Policy](#) [Republic of Korea Residents agree to the [Unity Collection and Use of Personal Information](#)](required).
- I agree to have [Marketing Activities](#) directed to me by and receive marketing and promotional information from Unity, including via email and social media(optional).

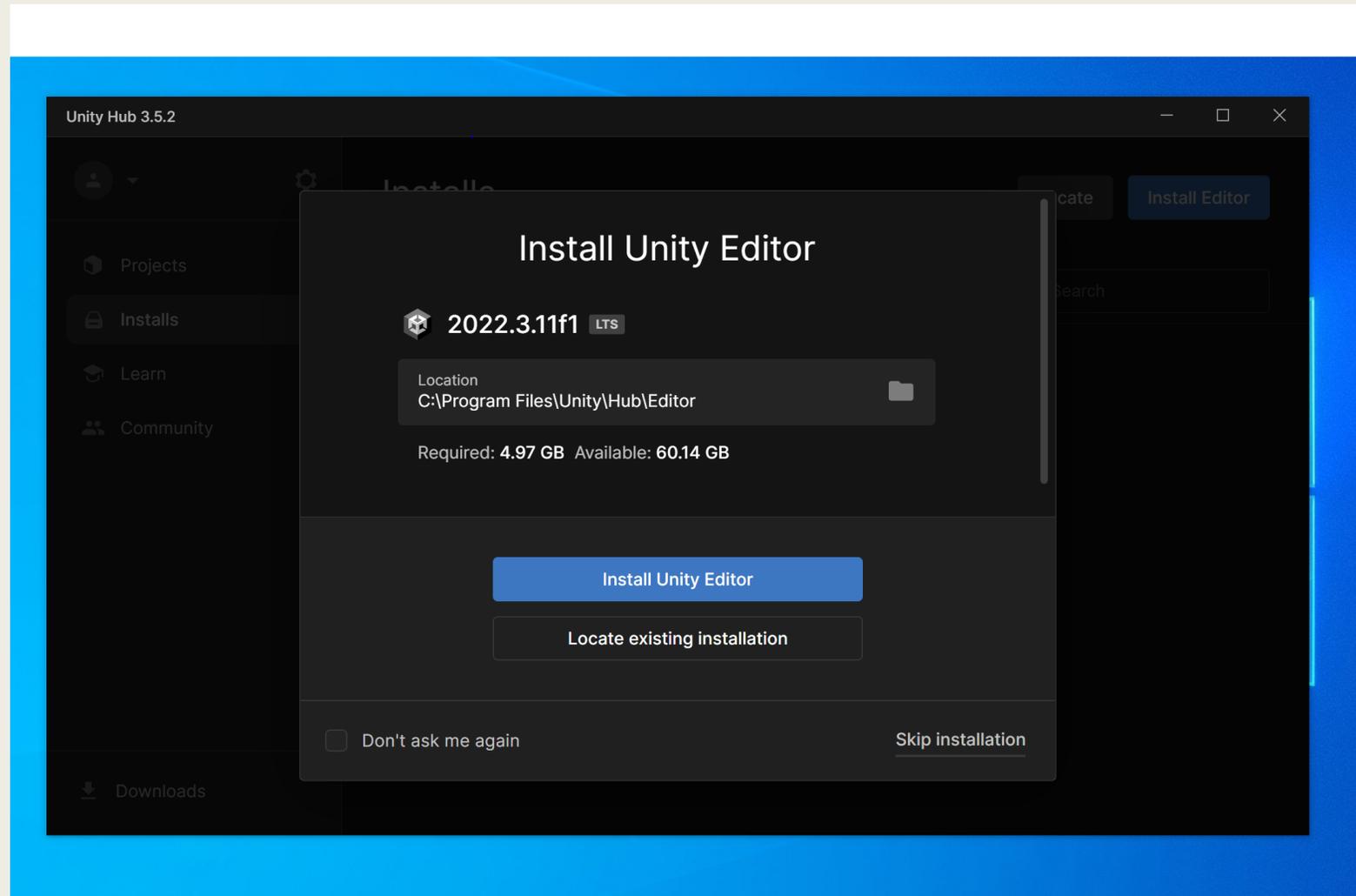
I'm not a robot 
reCAPTCHA
Privacy - Terms

Create a Unity ID

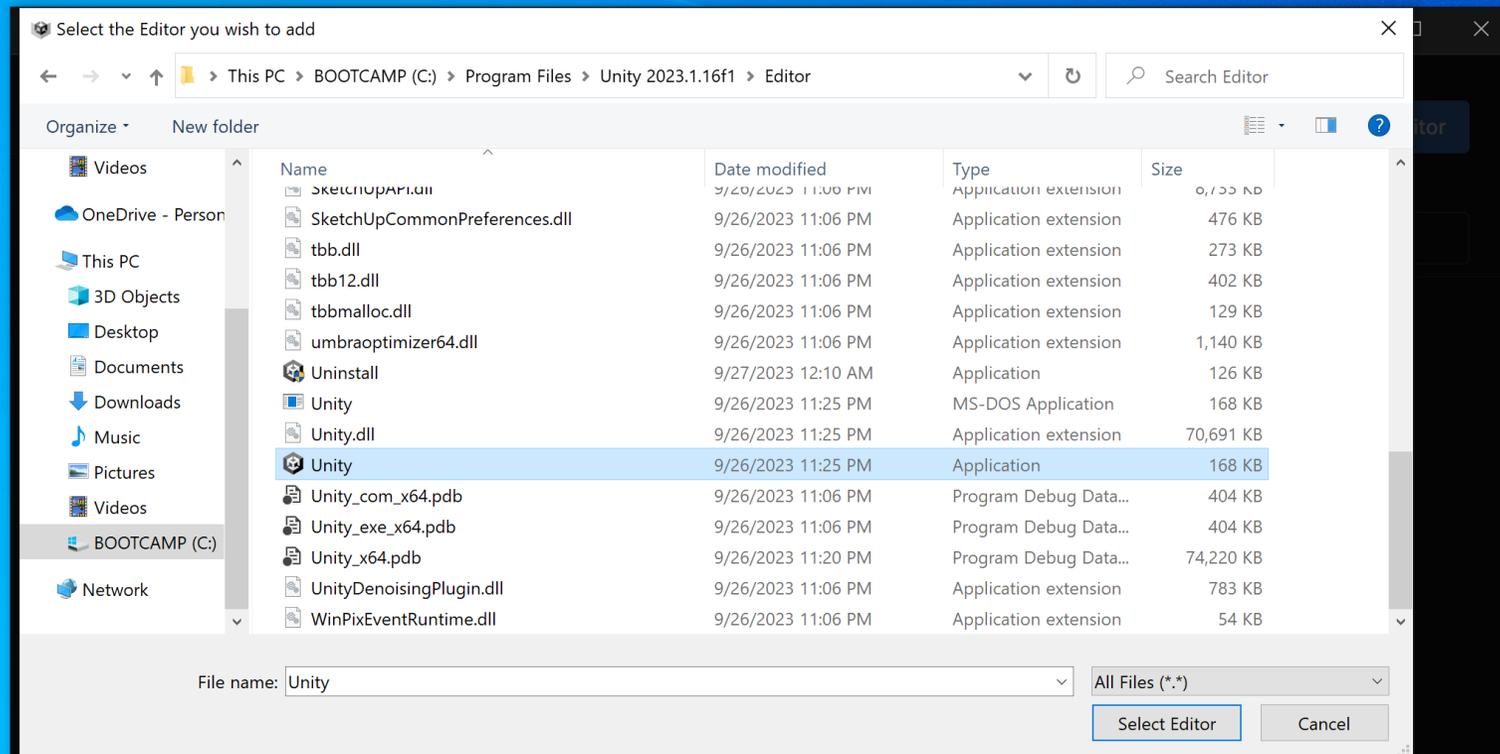
Already have a Unity ID?

OR

Click "Locate Existing Installation"



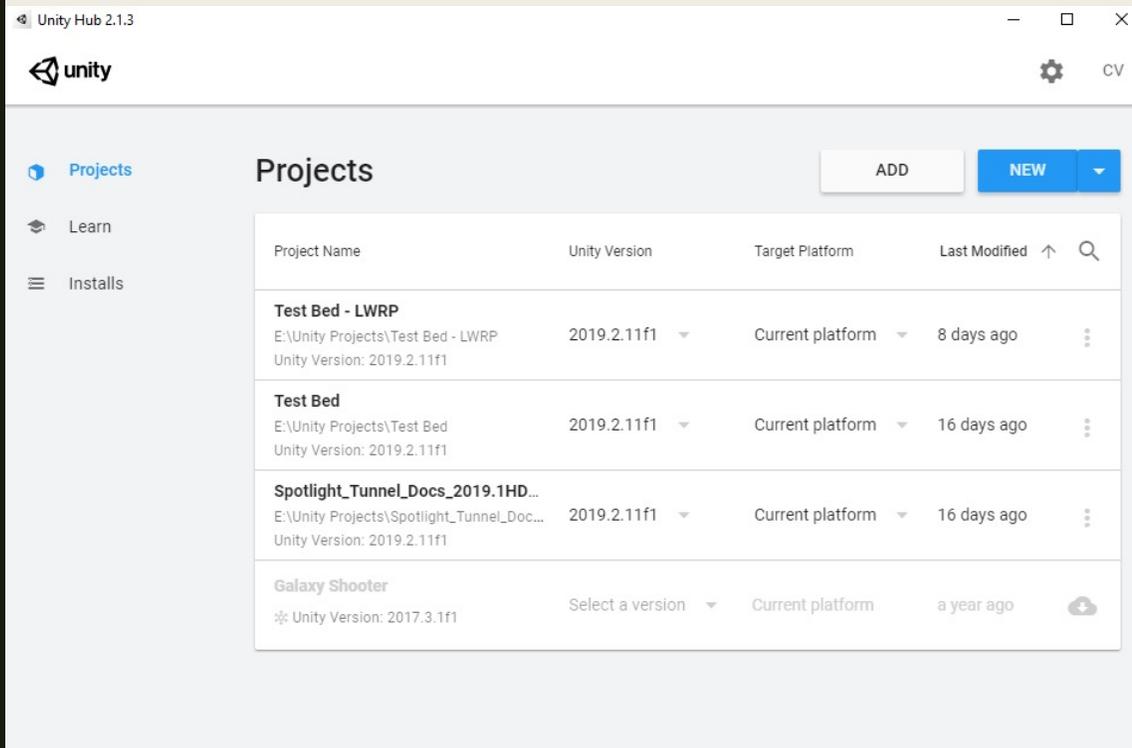
Select "Program Files" -> "Unity
2023.1.16f1" -> "Editor" -> "Unity"



Don't ask me again

Skip installation

Creating your first project with Unity



Unity Hub 2.1.3

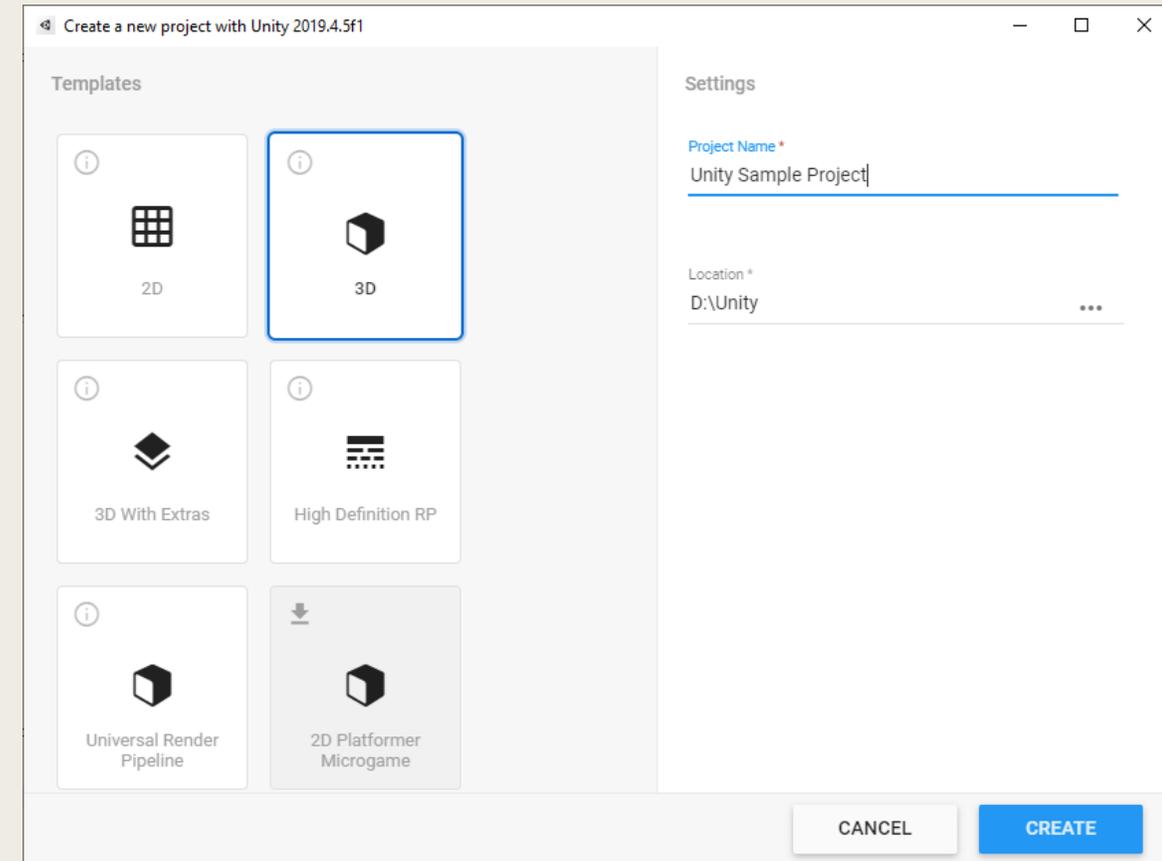
unity

Projects

Learn

Installs

Project Name	Unity Version	Target Platform	Last Modified
Test Bed - LWRP E:\Unity Projects\Test Bed - LWRP Unity Version: 2019.2.11f1	2019.2.11f1	Current platform	8 days ago
Test Bed E:\Unity Projects\Test Bed Unity Version: 2019.2.11f1	2019.2.11f1	Current platform	16 days ago
Spotlight_Tunnel_Docs_2019.1HD... E:\Unity Projects\Spotlight_Tunnel_Doc... Unity Version: 2019.2.11f1	2019.2.11f1	Current platform	16 days ago
Galaxy Shooter * Unity Version: 2017.3.1f1	Select a version	Current platform	a year ago



Create a new project with Unity 2019.4.5f1

Templates

- 2D
- 3D**
- 3D With Extras
- High Definition RP
- Universal Render Pipeline
- 2D Platformer Microgame

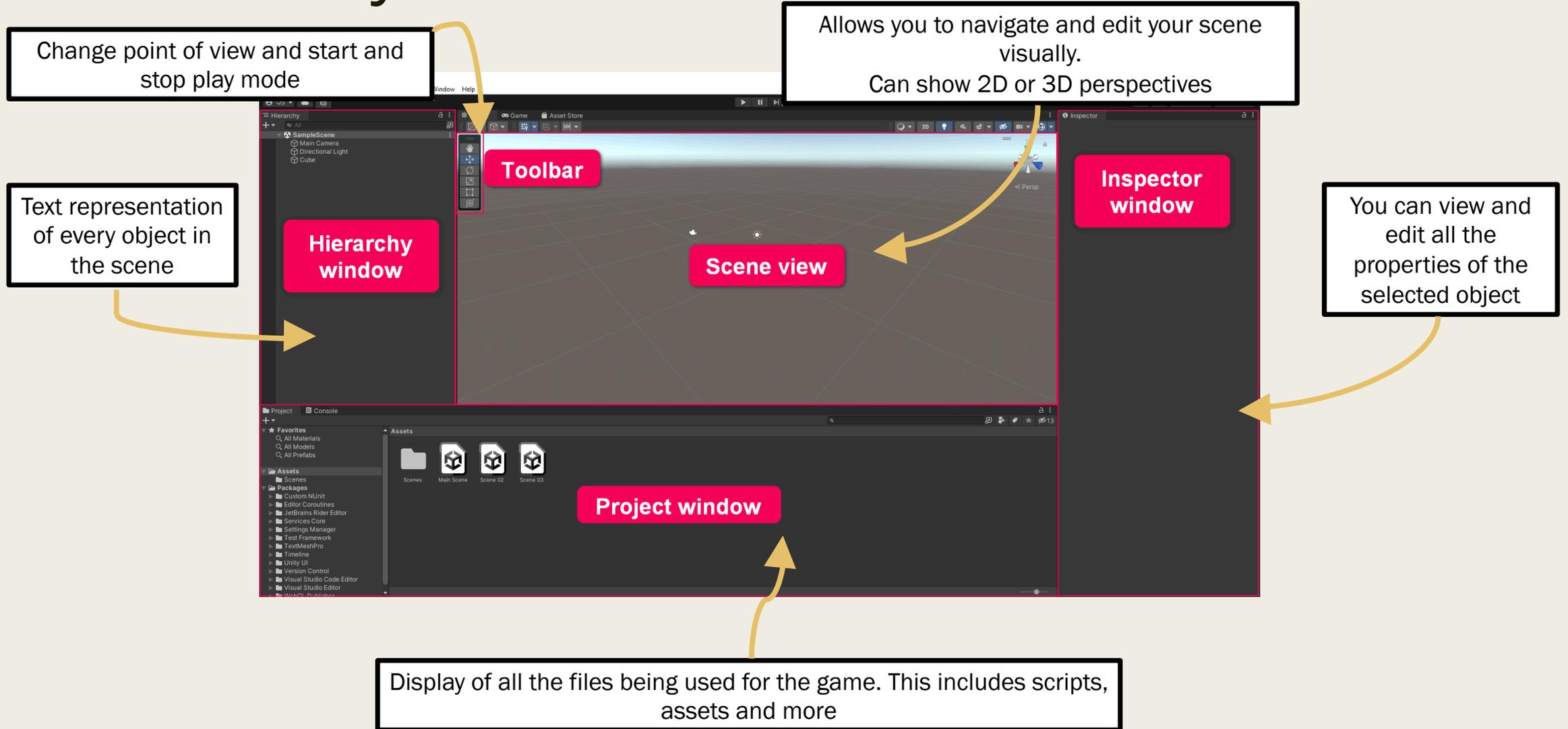
Settings

Project Name *
Unity Sample Project

Location *
D:\Unity

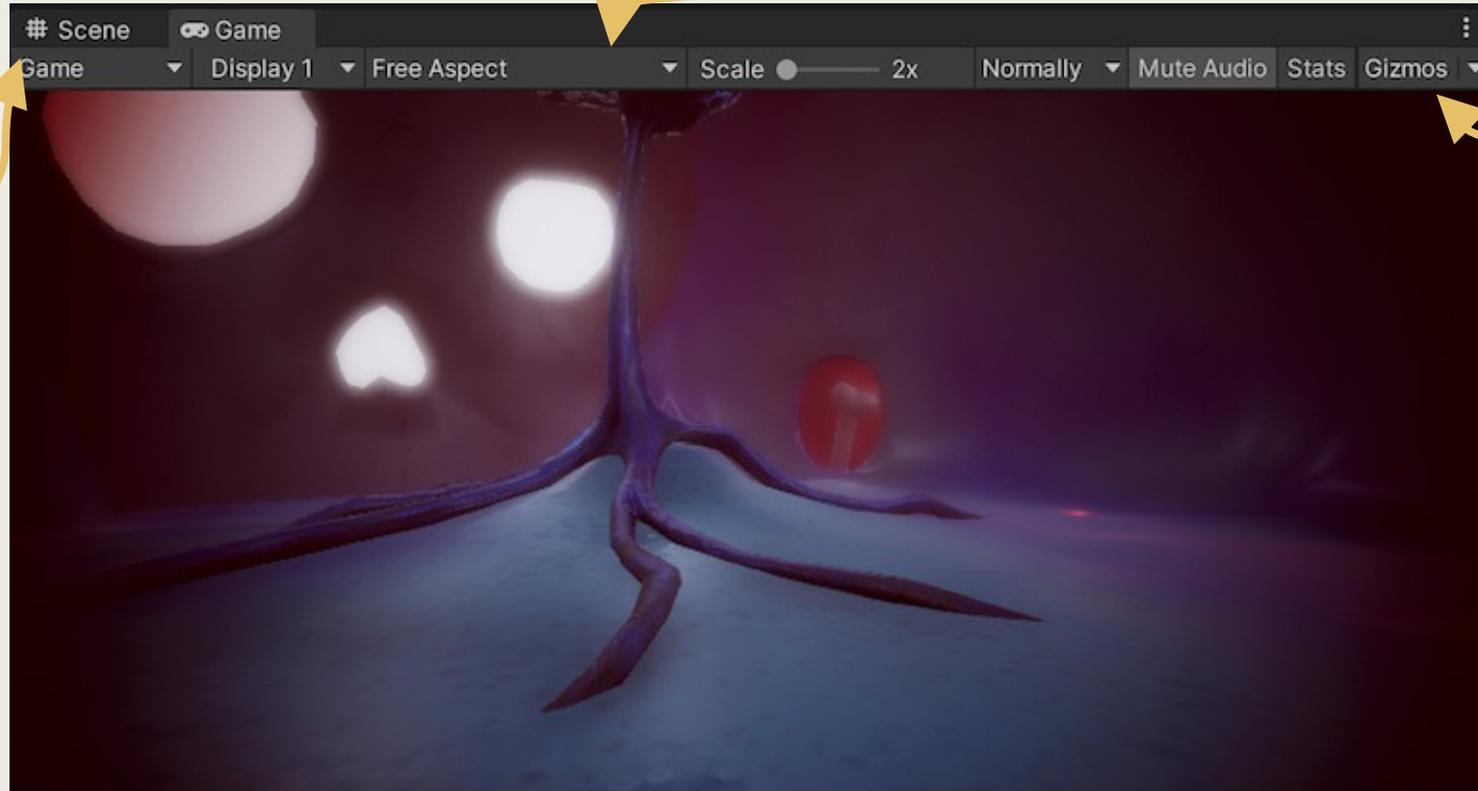
CANCEL CREATE

The Unity Interface – Scene View



The Unity Interface – Game View

Drop down has Game or Simulator Mode



Game view control bar

Contains options for how unity gizmos for objects in both screen and game view

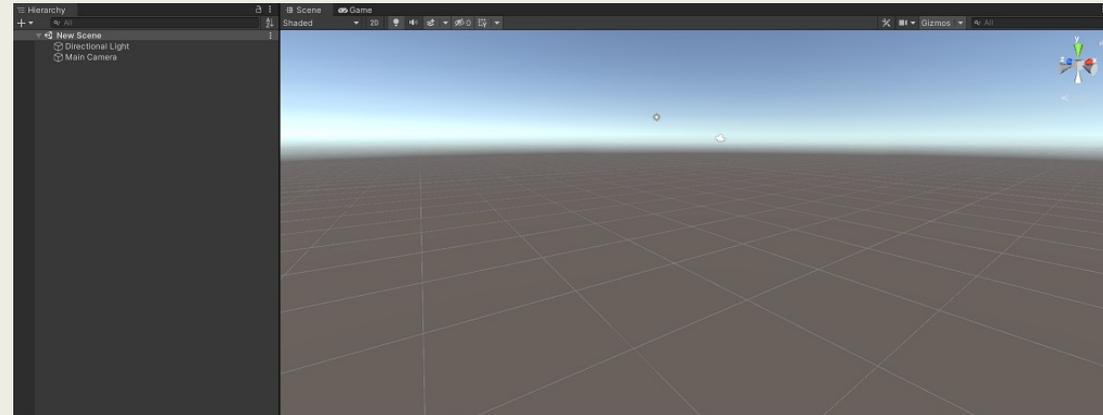
UNITY CONCEPTS

With material from: <https://blog.eyas.sh/2020/10/unity-for-engineers-pt1-basic-concepts/>



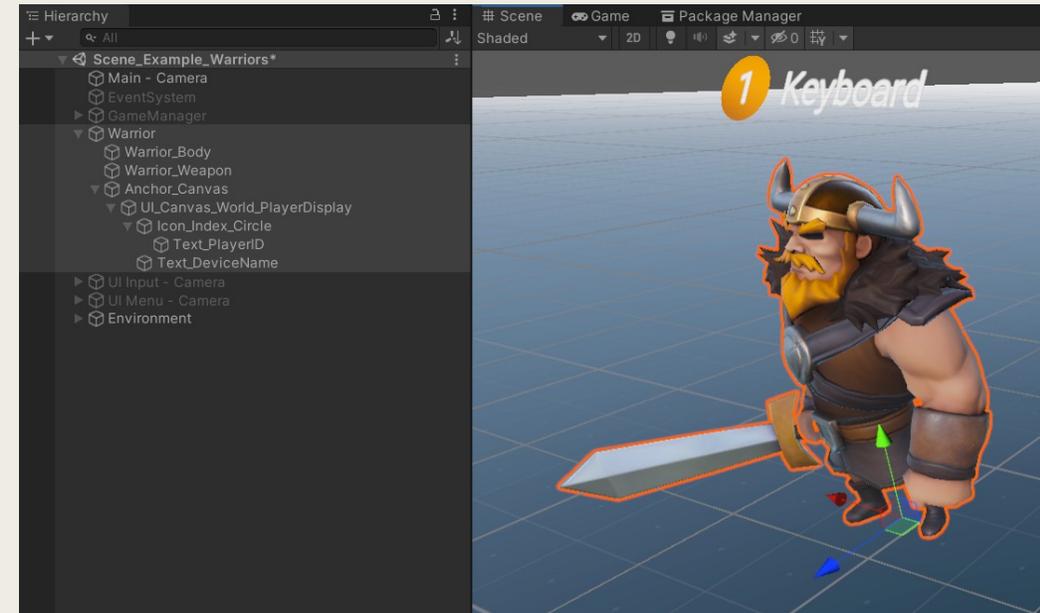
Scene

- Largest unit for organizing objects in your game
- Generally used to represent one level of your game
 - *Multiple scenes can be loaded at once, but more advanced*
- We're going to be working in one scene



GameObject

- Exist within a scene
- Every **physical** and **metaphysical** object within your game
 - *Physical: players, trees, enemies*
 - *Metaphysical: inventory managers, multiplayer logic*
- Has a position and rotation
 - *Doesn't matter for metaphysical objects*
- Can be nested within one another



Components

- Every GameObject consists of one or more components
- Components are segments of code that give behavior to a GameObject
 - *3D game objects will have a “Renderer” component that draws it and a “Collider” component that sets its collision bounds*

