Unity Developer Bootcamp

Lesson 02

Introduction to Game Development with Unity

Learning Objectives

- Use Prefabs to save and reuse GameObjects
- Import assets from the Unity Asset Store and other websites
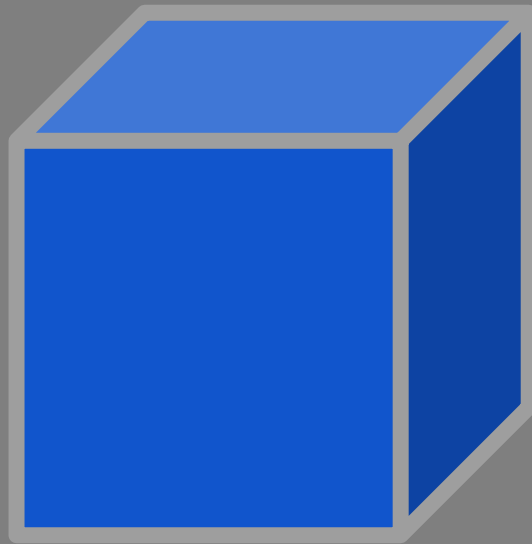- Create a scene that includes models, lights, and a skybox

Lecture

Prefabs

Prefabs

GameObjects on their children can be stored, with components and data, in an asset called **Prefab**.

- Prefabs exist outside of any scene as their own file.
- You can create instances of a Prefab inside of a scene.

- Editing a prefab will affect all instances of it.

Challenge 01

🕐 25 mins

Edit Prefabs and practice the override function

1. Open the GameObjects we created in lesson 1 and turn them into Prefabs

2. Create 3 variants of a Prefab

    a. Change some properties and use the the Override drop-down menu

3. Create a nested Prefab

4. Use the Prefab variants and the nested Prefab to populate the scene

Lecture

Probuilder

What is a Mesh?

A **mesh is a collection of vertices, edges, and faces that make up a 3D object**.

- More polygons means more detailed models, but it comes at the cost in performance.

- Meshes are created and manipulated using 3D modeling software.
  e.g. Blender.

- The **Mesh Filter** contains the a reference to a **Mesh Asset**, and the **Mesh Renderer** *draws* the mesh using materials and shaders.

Vertices　　　**Edges**　　　**Faces**
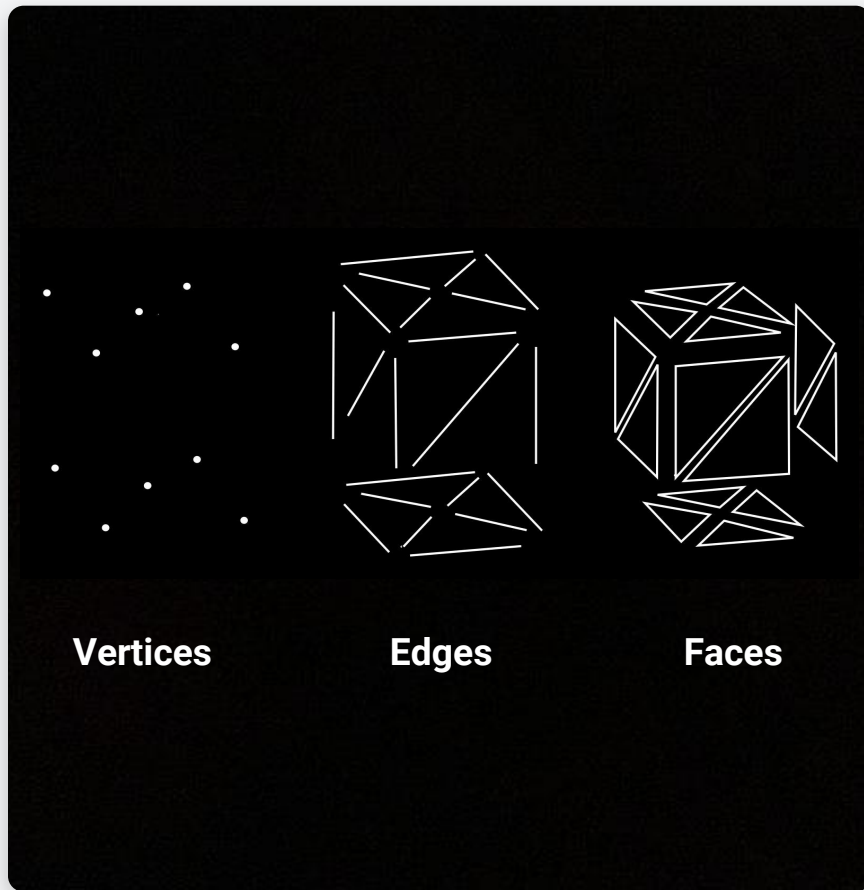
ProBuilder

ProBuilder is a modeling tool that works within Unity.

- With ProBuilder you can **create prototypes** of levels and objects.

- It has advanced features like UV editing, parametric shapes, and texture blending.
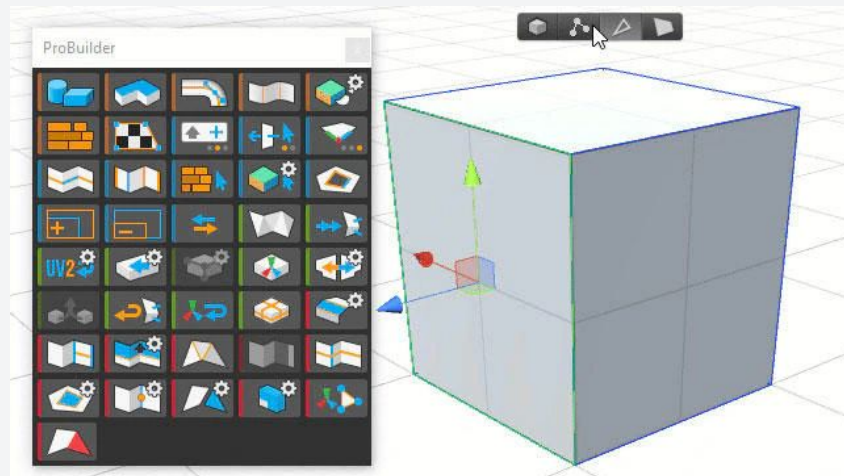
Challenge 02

🕐 20 mins

Create a bowling lane with Probuilder

1. Create one lane, with two gutters

2. You can add the pins and the bowling ball using primitive GameObjects

3. You can add details using materials

Lecture

Importing Assets

Importing Assets

Unity accepts a wide variety of **3D model, sound, texture, and video clip formats (among other types).**
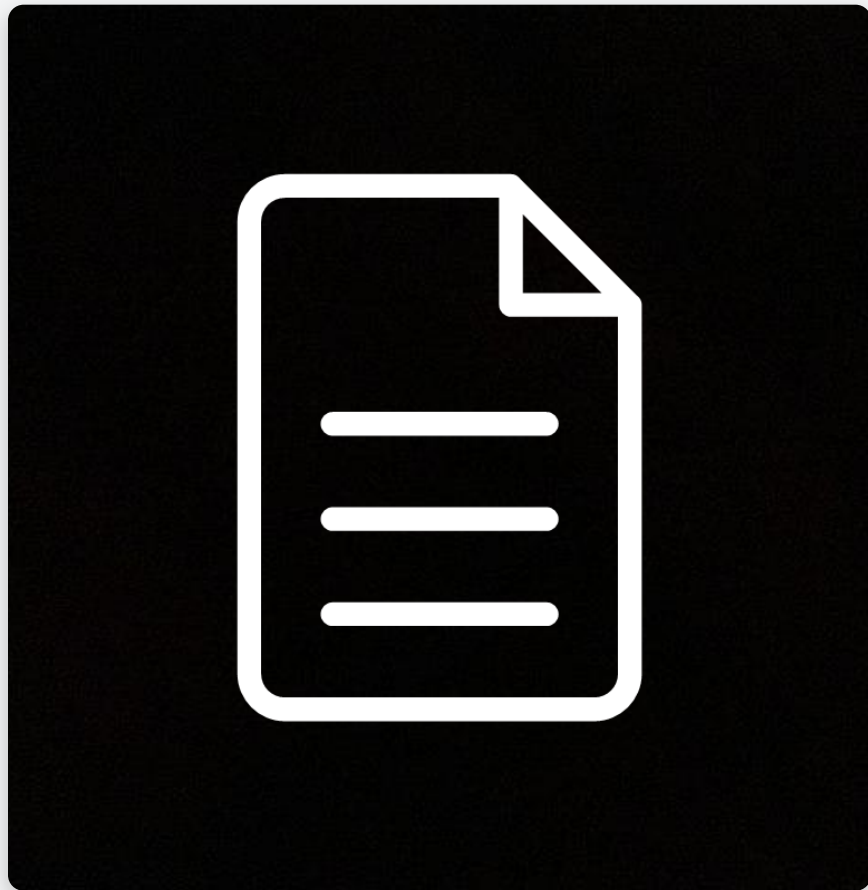
- Assets can be imported individually, or as part of a Asset Package (.unitypackage) file.

The Unity Asset Store **is a marketplace run by Unity that distributes assets** that are optimized for Unity projects. **There are other asset stores.**
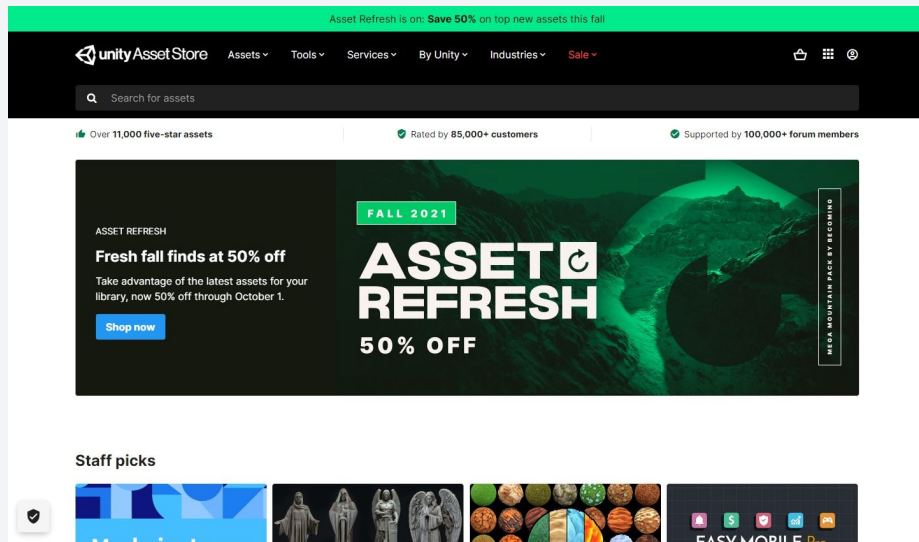
Import Formats (non-exhaustive list)

- Models
  - Standard
    - .fbx
    - .obj
    - .dae
  - Proprietary
    - .blend (Blender project)
    - .max (3DS Max project)
    - .mb (Maya project)
- Textures
  - .jpg
  - .png
  - .tiff
  - .psd (Photoshop document)
- Sounds
  - .wav
  - .mp3
  - .ogg
  - .aiff

Lecture

The Bowling Project