Game Objects and Scrips

From the “Creating a Clock” tutorial at

https://catlikecoding.com/unity/tutorials/basics/game-objects-and-scripts/

Basic Layout:

**Preset Layouts** in the top right corner

**Show Grid** in Scene window

Game Objects:

Right click in the hierarchy window and create the game object. Types include

* Empty Game object
* Cylinder

**Game objects** are made of **Components**. They always include a **Transform Component** by default. 2D object use a **Rect Transform** instead.

To make a game object a child of another game object in the Unity editor, move it in the hierarchy window onto another game object. The child object has own transform applied to it and then its parents transform. If a child object is moved, it position stays the same (useful for rotating the clock indicators).

Object Components:

**Transform:** Holds the size, rotation, and scale of an object. In a transform, Y is upwards.

**Mesh Filter:** Contains a reference to the cylinder mesh.

**Mesh Renderer:** Renders the objects mesh and controls the material of the mesh.

**Capsule Collider:** Used for 3D physics. Has a pill shape.

**Mesh Collider:** Used for 3D physics. Has the shape of the objects mesh?

Assets:

**Material**: Determines how a mesh looks

* **Albedo**: determines the color of light that reflects off it.

Scripts:

Scripts include a class that inherits from **Monobehavior**. This is used to allow a script to be used as a component. “The mono part refers to the way in which support for custom code was added to Unity. It used the Mono project, which is a multi-platform implementation of the .NET framework.” The monobehaviour class comes from the UnityEngine namespace

Special methods like **Awake** should not have a public or private prefix to them because they are not intended to be used by anything but Unity. All Awakes run before any Starts run before any Updates. You usually use Awake if you need something initialized so somebody's Start function can use it.

A **Property** is a method that acts like a field where it is a get or set.

* Time.time is an example which is how much time has passed since the program started.