# Unit 02\_02: GameObjects

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#### Introduction

There are certain parts of Unity that are so important, they justify their own unit. This is the case for **GameObjects**.

#### Goal

The goal of this unit is to introduce the concept of the Unity GameObject.

#### **Process**

*Everything* that is in your Hierarchy is a GameObject. It's the fundamental object that Unity uses to interact with the core game engine.

GameObjects offer some basic functionality, including important variables:

- name
- layer
- tag
- activeSelf (read only)

And some methods:

- SetActive
- GetComponent
- Find
- FindWithTags

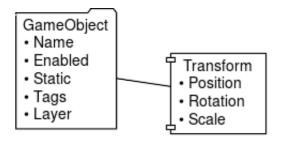
We'll be using all of these during these units.

Here's a visual representation of a GameObject:

# GameObject • Name • Enabled • Static • Tags • Layer

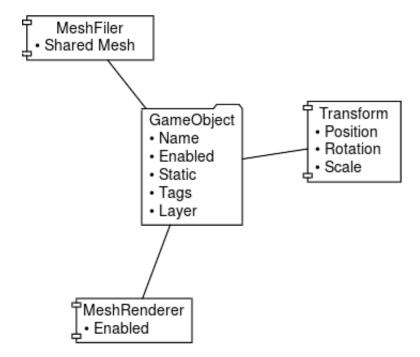
The magic of GameObjects happen with **Components**. Components are extra bits of functionality/code that you can arbitrarrily attach to a GameObject. Every section in the Inspector panel is a separate Component.

By default, every GameObject has one Component added automatically: the **Transform** component, that defines the GameObject in the 3d space:

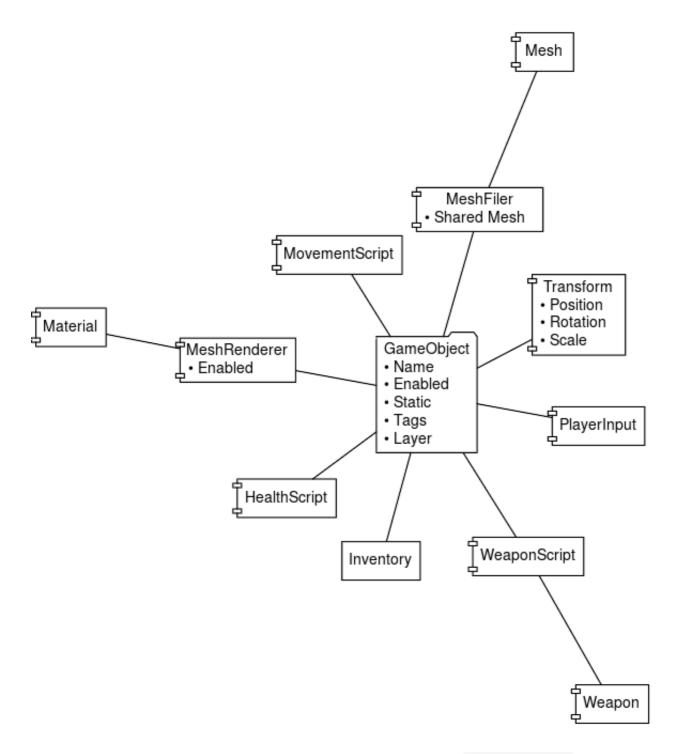


We'll be adding more and more Components to our gameObjects, some of which we'll create ourselves!

When you created a new cube, you actually created a new GameObject, with a Cube MeshFilter and a MeshRenderer component attached:



And soon you'll end up with GameObjects that might look like:



Later, we'll take a look at how to access these components using GetComponent.

### Wrap-Up

Understanding the GameObject is critical to success in game development. This pattern exists in pretty much every game engine (Pawns in Unreal, etc).

## **Further Material**

• GameObject in Unity manual