CREATING A GAME USING C#

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Abstract

This document aims to assist you with learning how to create a C# application in a popular game engine. The skills you are expected to learn is how to use development tools to help you program and create applications. Understand the critical logical thinking involved when creating a program. Learn how to use C# in an object oriented way so you can create things.

Tools and Environment

I expect you to learn by actively experimenting and using the below tools, but you can also research information online on using these tools. I have included some bare bones information which I will expand on later.

0.1 Unity Game Engine

Unity is a popular game engine with a large amount of community resources. It has been used to make small game and large triple AAA games, it also comes with a simple build tool so you can repackage your application on other platforms like mobile.

If there is something you want to find on Unity you can easily find those resources online. The only issue with the online resources is they are a mixed bag in usability. A lot of tutorials are video tutorials which can be an annoyance when you just want to read some information quickly on a subject, while other things might not have much coverage at all, so you either have to search through the written documentation of find a forum discussion/answer on the issue. For now you are unlikely to have those issues until you start trying to tackle certain problems.

The Editor

You can find a full tutorial here https://unity3d.com/learn/tutorials/topics/interface-essentials/interface-overview , but I will try to cover things with images so you do not need to watch through an entire series on how to use the editor.

You will pick up how to use the editor as you begin to use it more. There is information only but the core break down is that you only need to know a few things to get started.

These are the main area's of the editor

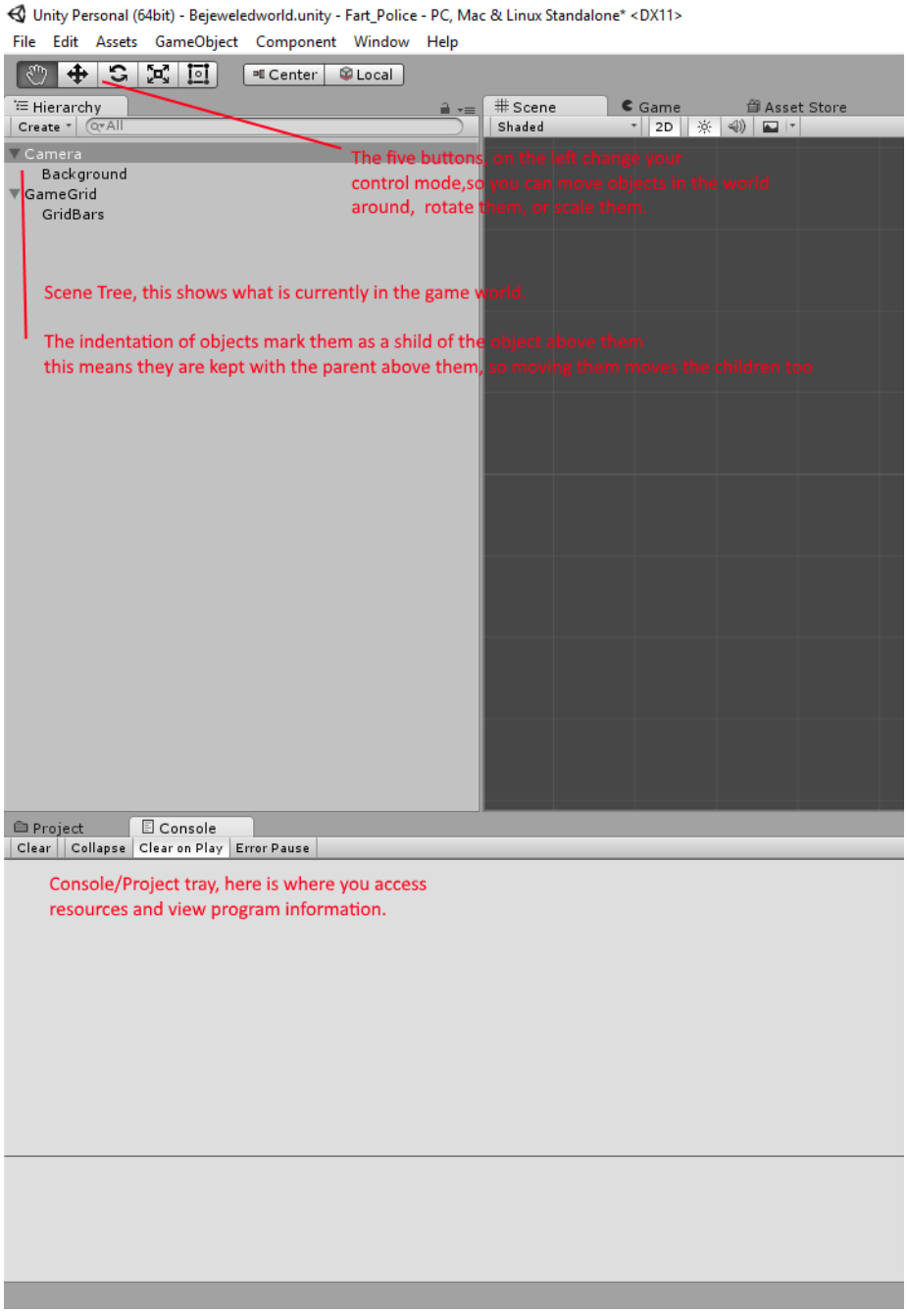

Figure 1: We have the scene hierarchy view, the main control settings for objects and our asset and output trays. The console output tray prints information on the game and the assets show us our code and textures that can be brought into the game world.

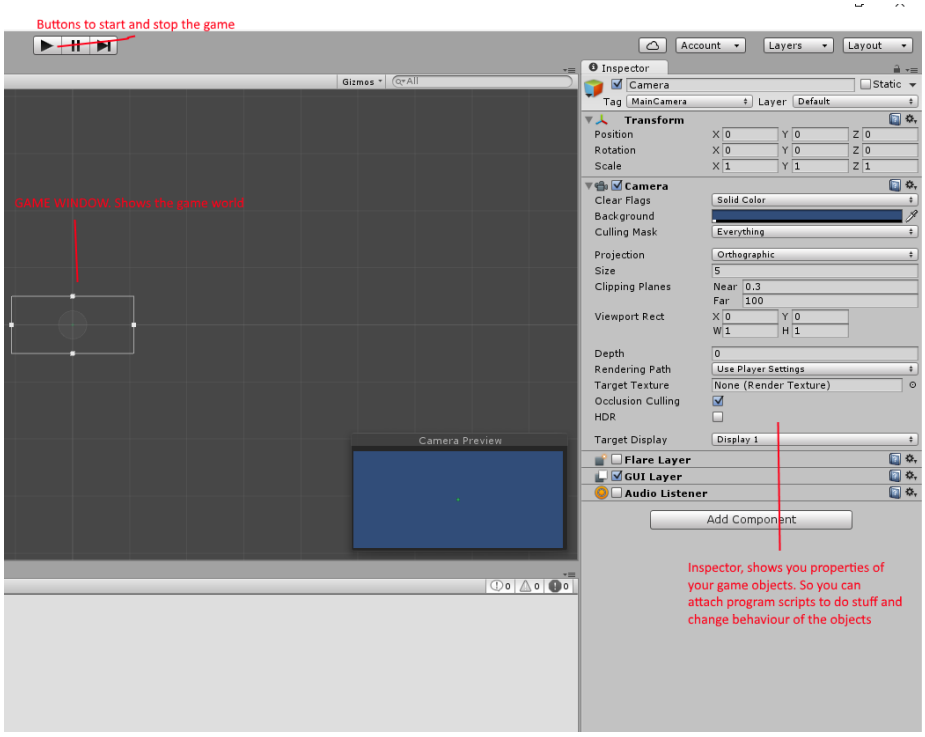

Figure 2: We have the game view and the actions to start and stop the game. And most importantly we have an inspector view which covers the properties and what actually makes an object in our game.

0.2 Visual Studio 2017

Visual studio 2017 will be the programming editor we will use for creating code and debugging code. For now all you need to know is that opening a script in unity should open visual studio for you.

At the top will be a green button called attach to unity, this is how you attach the debugger to the game. A debugger allows you to stop the game mid way through code to inspect the value of variables and see how your code is behaving. Basically it lets you inspect and see what is wrong with your program.

Clicking in the space next to a valid line will create a red dot this is known as a break point and when your program reaches that line the program will stop and you can hover over variables to see what value they hold and you can even step your program forward a line at a time to see what happens.

0.3 Source Control Git (Using GitKraken Tool)

Get Rufus to do this with you, until you get the hang of it. I'll add to this when I have some time.

C# Basics

COMING NEXT WEEK