Super Multiplayer Shooter Template

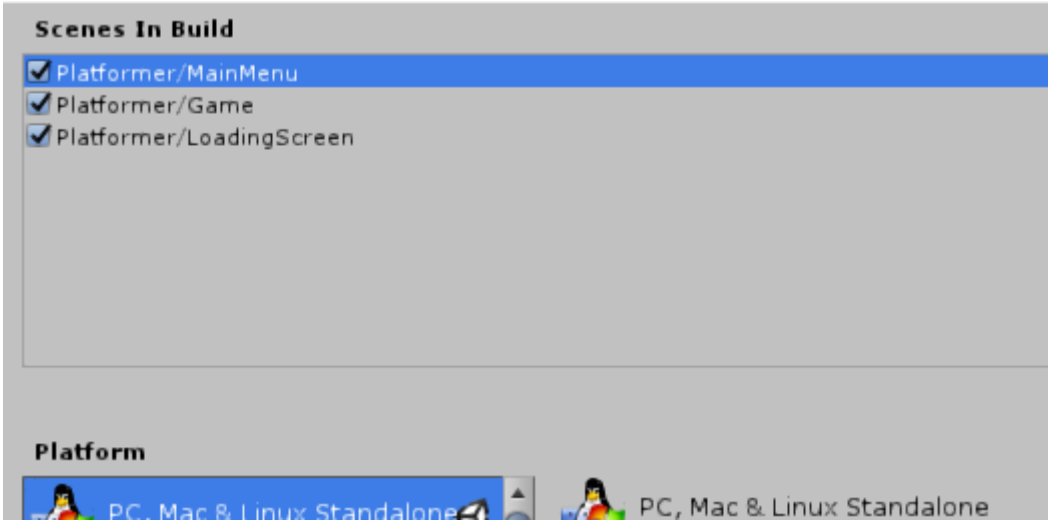
VISYDE Interactives

*Thanks for purchasing **Super Multiplayer Shooter Template**! This documentation will guide you through the package, show you how things work, and teach you on where to put your hands when modifying the template assuming you already know the basics of the Unity3D editor. Before we start, if you have any questions please do message us at support.info@visyde.com. Also, you should join our Discord server here: https://discord.gg/DWa9eYn so you can meet other users and have some chat with the devs. Now without any delay, let's start!*

PREPARATION

Setup:

Before all things, import **Super Multiplayer Shooter Template** in to a new fresh blank project. You also need to import **Photon Unity Networking Classic (PUN)** (the free version will do) and set it up. Now after importing those, make sure all the required scenes are in the build settings window and that they are in the right order like this:



Also, make sure that the following tags and layers exist:

Tags:

- Pickup

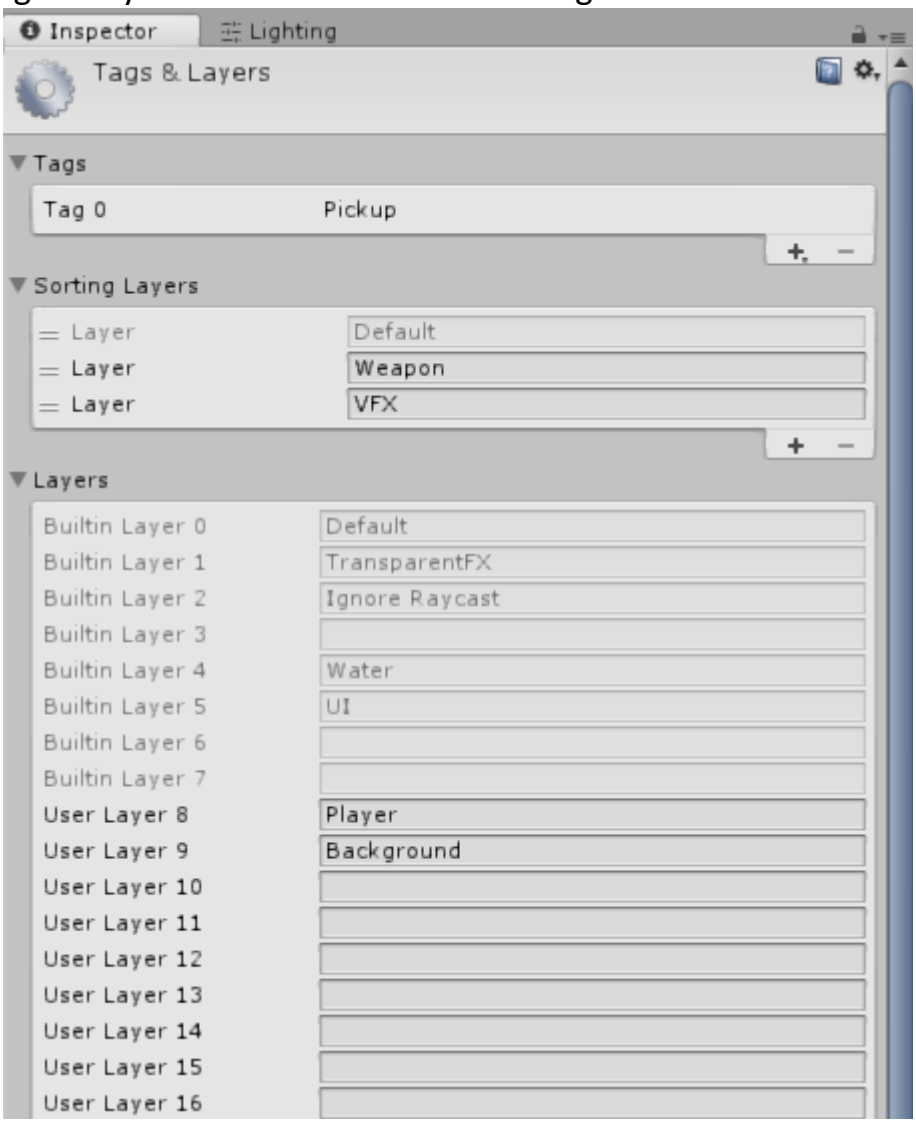
Sorting Layers:

- Weapon
- VFX

Layers:

- Player
- Background

... so, your Tags & Layers tab should look something like this:



That's pretty much it! You can now play the game.

How The Game Works:

From the "MainMenu" scene, players are first required to choose their character before joining a game. Then they can proceed on matchmaking or joining/creating a custom game. While in the matchmaking, the game will try to join a random room, creates a new one if there's no available, randomly selects a map, and waits for others to join. Once the room is full, it is now marked as closed (preventing anyone from joining later) and loads the "Game" scene itself. The match will not start until all players are finished loading the game scene (the Master Client periodically checks this after loading the game scene). When players finished loading, a player object will be spawned for them in a random spawn point and marks themselves "ready". When all players are ready, the game will start after a 5-second count down and a 3-minute timer begins. Random weapons will start spawning periodically as well as power ups. Players can pick up weapons to eliminate others and health pick ups to

refill their hp. Players gain scores by killing other players or by performing multi kills (double kills, triple kills etc.) which give bonus scores. The total score is calculated as "(kills - deaths) + multi kill score". After the 3-minute timer, the game is over and the player with the highest total score wins.

Here's a list of settings and where you can tweak them:

- **Max player count** - MainMenu scene>Managers>Connector>Required Players
- **Starting Countdown** - Game scene>Managers>Game Manager>Preparation Time
- **Game Length** - Game scene>Managers>Game Manager>Game Length
- **Player Respawn Time** - Game scene>Managers>Game Manager>Respawn Time

Controls:

Controls, controls, controls... These are the keys you'll be smashing throughout the game:

- **A,D** *(player movement)*
- **SPACEBAR** *(player jump)*
- **Left Mouse Button** *(shoot)*
- **Right Mouse Button** *(melee attack)*
- **Middle Mouse Button** *(grenade toss)*

**Enable mobile controls through: Game scene>Managers>Game Manager>Use Mobile Controls*

User Interface:

In-game UI:

- **Timer** - displays the game timer (game's over when it reaches 0:00)

- **Message Area** - notifies the player about what's happening in the game like when someone killed someone or when a player leaves the game

- **Weapon HUD** - shows the player's current weapon, ammo, and grenade count

- **Leaderboard** - shows the top 3 currently best players

- **Multi kill Notifier** - Displays a kill message when the player kills someone

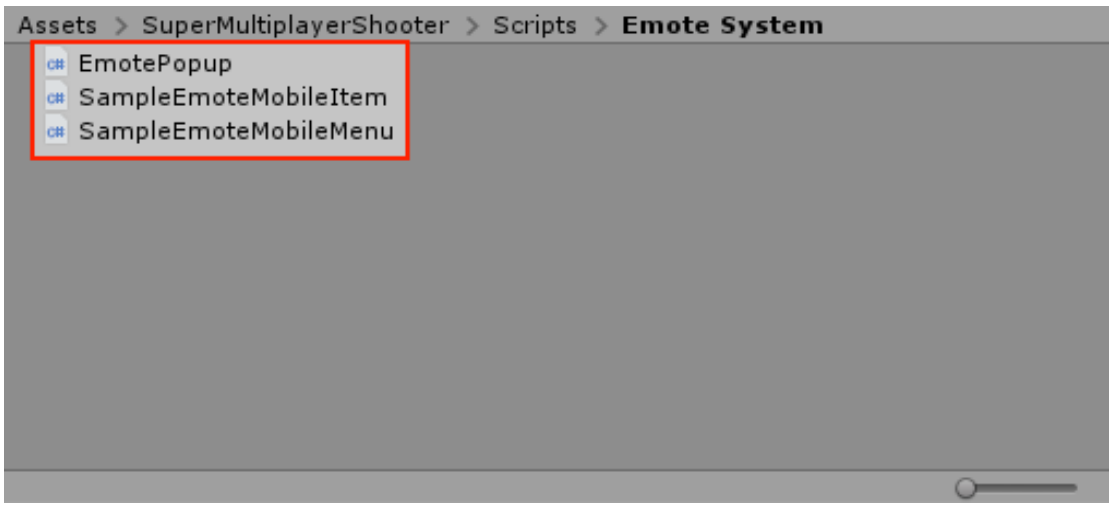
-Press "ESC" to open up the "pause" menu.
-Hold "TAB" to show the scoreboard.

Characters:

SuperMultiplayerShooter supports multiple characters with different characteristics. Characters, as a whole, are composed with 2 major parts: the game object itself and it's "Character Data".
A character data holds a character's stats like max health, movement speed, etc. The character object in the other hand only handles the graphic side like animators and sprites. To make it all centralized, and also for the sake of simplicity, there is only one player object prefab for all the characters.
The player object has the character objects as children and switches between them in-game depending on the character selected. So no matter what character you've chosen, it's still the same player prefab.

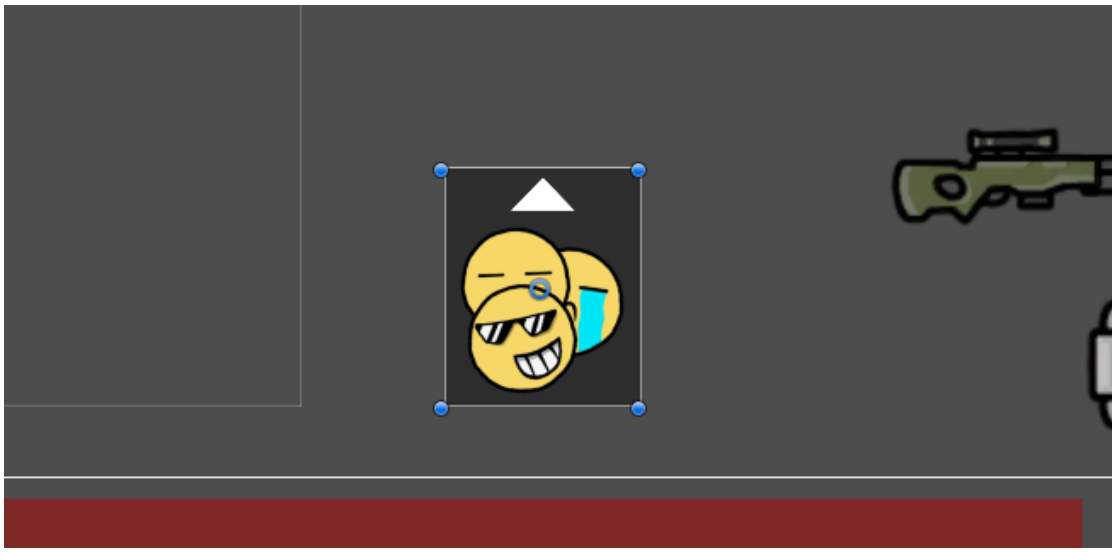
Emote System:

SuperMultiplayerShooter features a fairly simple in-game emote system. It is composed of 3 primary scripts; one for the emote system itself and 2 sample ones for the mobile interface:



The “Game” scene showcases the usage and application of the system on both

mobile and PC platform interfaces.



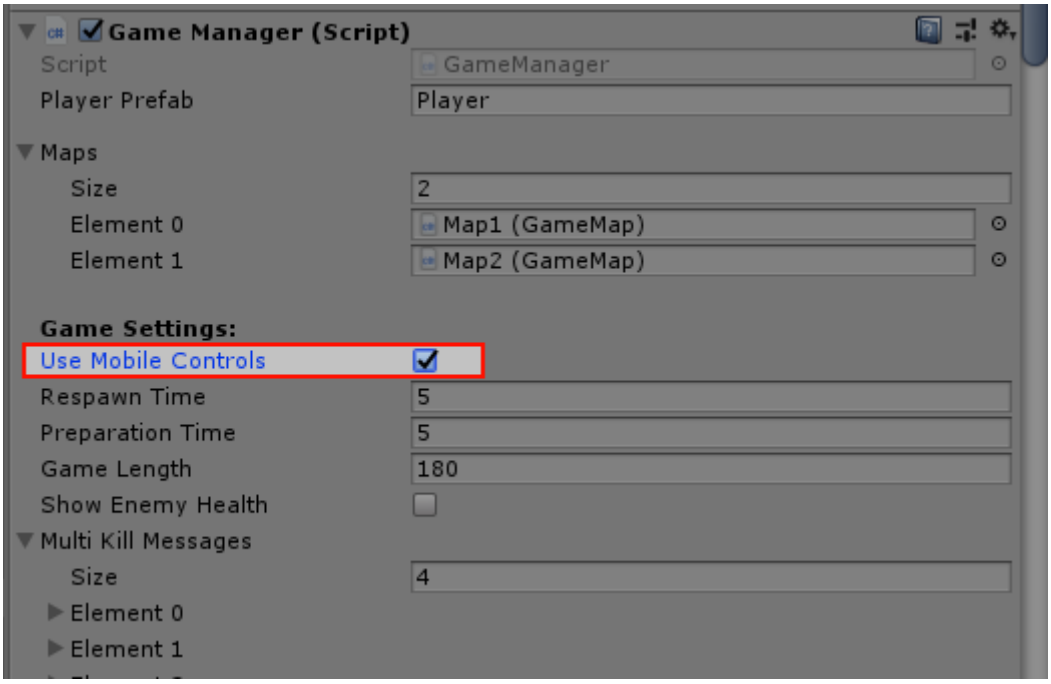
The emotes for PC can be displayed by pressing the 1, 2, and 3 alphanumeric number keys. This functionality is currently hard-coded in the PlayerController.cs script at line **192** to **202** so you can implement your own emote input.

HOW TO'S

Mobile Controls:

Since 1.1, **Super Multiplayer Shooter Template** is capable of switching input controls between mobile and PC along with a new component called "Controls Manager". This new component puts all player control inputs in one place regarding of the platform so that everything's centralized.

To switch between PC or mobile controls, just open up the game scene and tick the "Use Mobile Controls" variable of the "Manager" game object's "Game Manager" component:

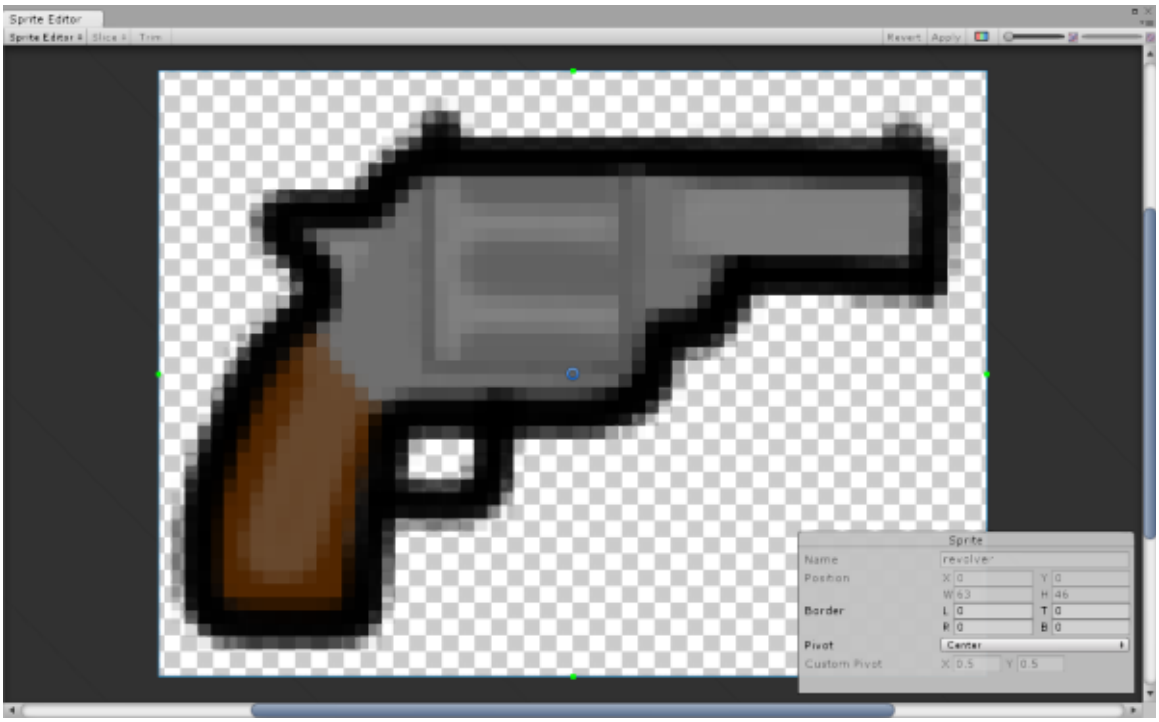


Adding A Weapon:

To add a new weapon, first go to "SuperMultiplayerShooter/Prefabs /Weapons". From there, you will see a bunch of weapons we can actually use in game. Let's say we want to make a new pistol, select the "Pistol" prefab and duplicate it. Now you should have a new pistol weapon named "Pistol 1":

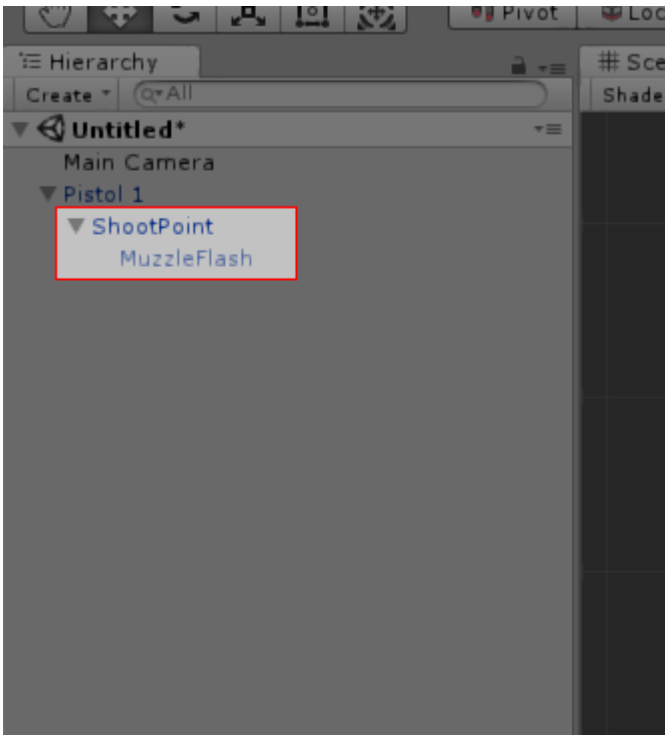
You can rename it to whatever you want. While the new weapon is selected, you should see a component called "Weapon" inside the inspector tab. There you'll see a bunch of variables you can tweak such as the rate of fire, damage, sounds, icons, etc. Change them to your liking. Now let's also change the sprite. Go to "SuperMultiplayerShooter/Graphics/Weapons" and there you should see a sprite named "revolver":

It is unused and is made specifically for this tutorial. Select it, and in the inspector tab click on "Sprite Editor" button and a new window should appear like this:



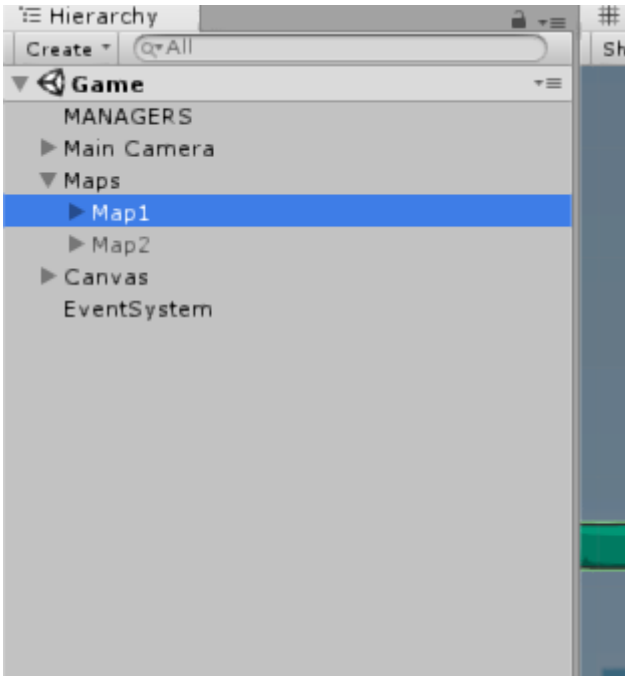
Move the pivot point to the gun grip area:

After that, close the window and click "Apply". Now, go back to the new weapon we've just created (it's under "SuperMultiplayerShooter/Prefabs/Weapons" in case you forgot) and drag it into the scene (any scene). In the "Sprite Renderer" component under the inspector tab, change the sprite value to the "revolver" sprite. Also, there are a couple of objects under the prefab:

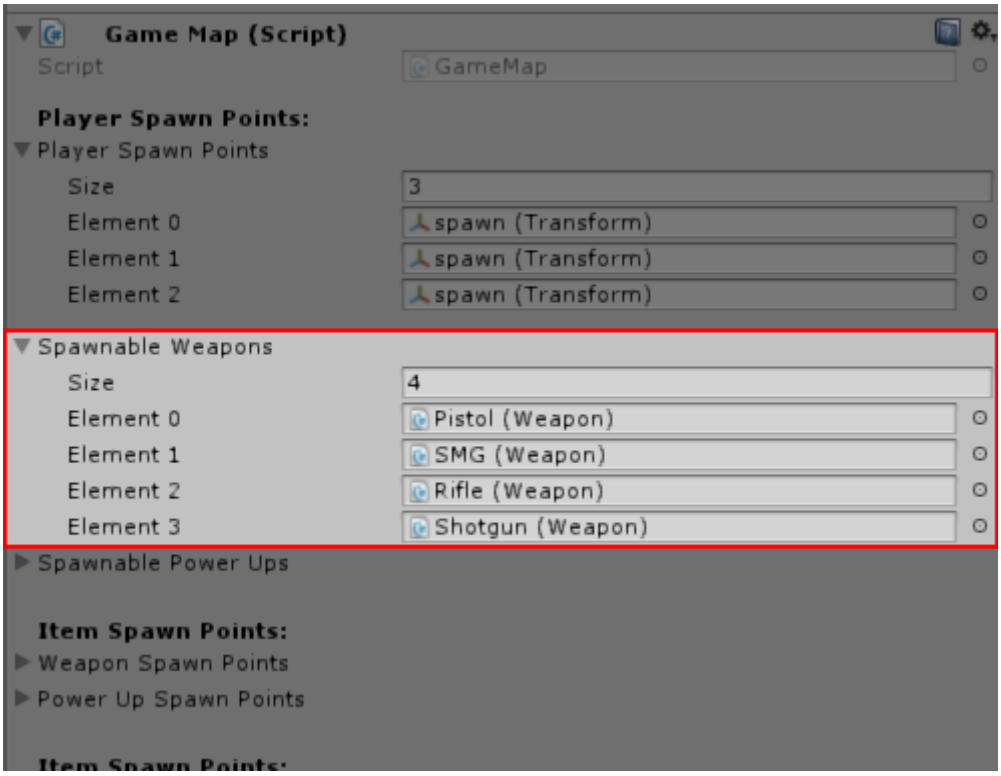


The "ShootPoint" is where the bullet/projectile will be spawned, while the "MuzzleFlash" is, well, the muzzle flash. If you select them you'll see that they're positioned a bit off. To fix this, move the "ShootPoint" to the tip of the gun (at the muzzle point). After that we can now hit the "Apply" button in the inspector tab to save the changes to the prefab and delete it from the scene. Now if you play the game, you will never see the new weapon spawn and that's because we haven't registered it to the "spawnable list" yet. To do this, open up the "Game" scene, and

under the hierarchy you should see a game object called "Maps". Children of this "Maps" are the actual game objects of the game maps because all the maps are in the same scene. That being said, there should be 2 maps currently available...



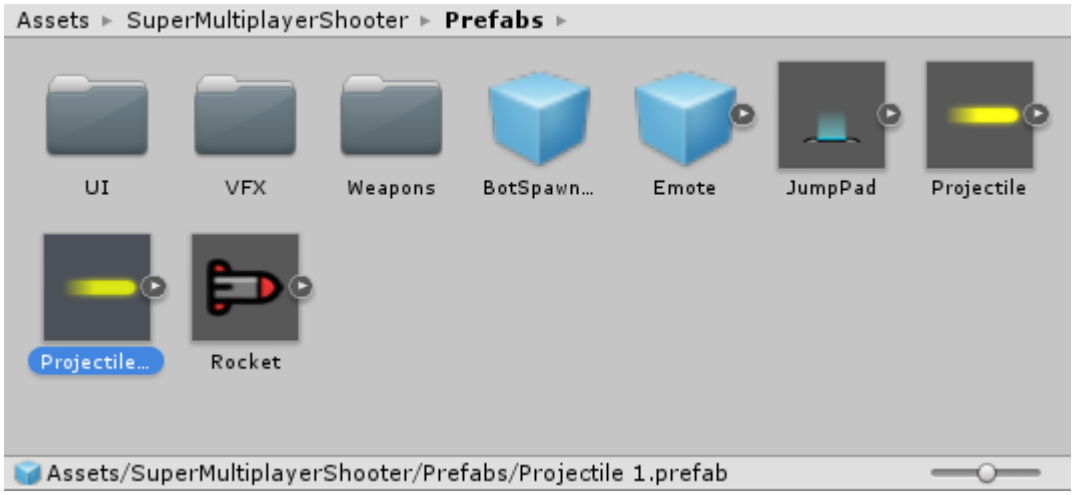
...select the first one.
Then in the "Game Map" component under the inspector tab, expand the "Spawnable Weapons" array and you should see something like this:



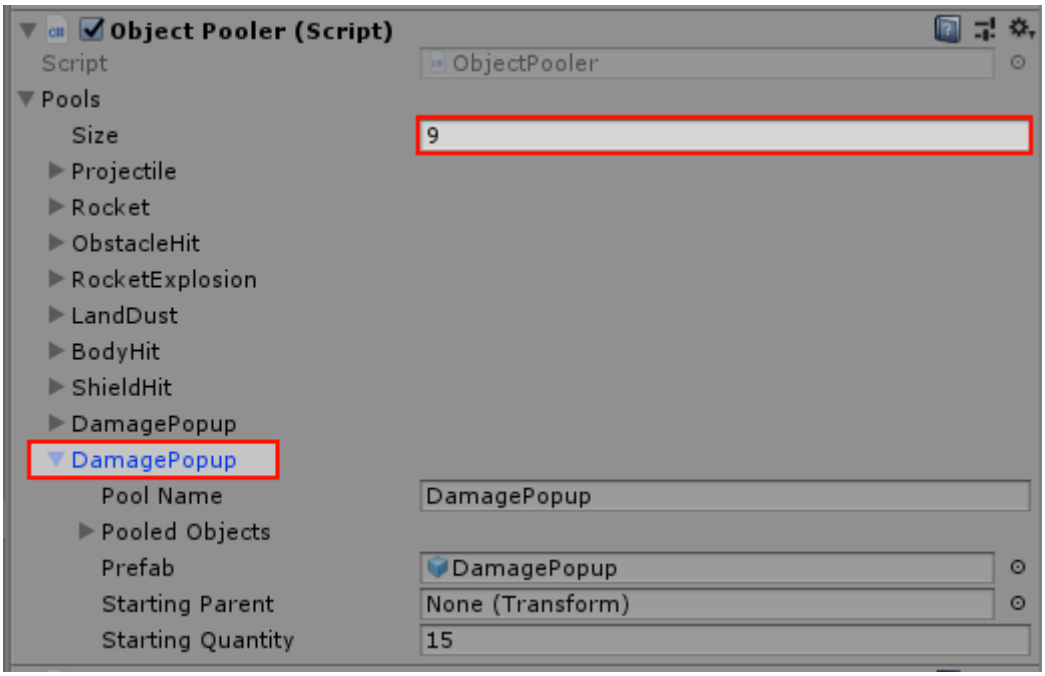
Put the new weapon inside the array to make it a total of 5 weapons. Now do the same for the other map (if you also want the new weapon to spawn in there), save the scene and you're done! Play the game and you should now see your new weapon spawning.

Adding A Projectile:

You may also want to create another one if it doesn't fit your new weapon. To add one, duplicate an existing projectile prefab:



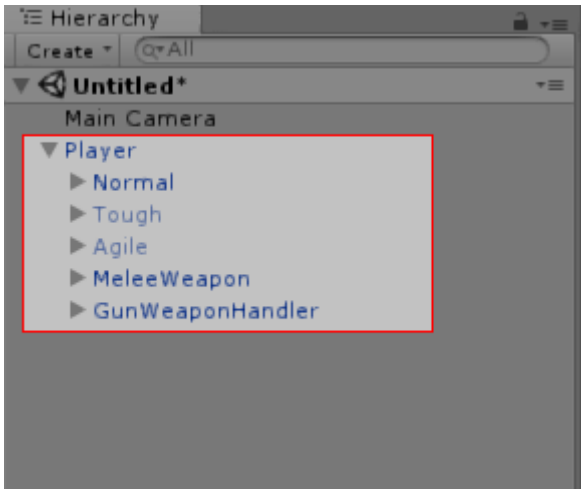
... then put it into the scene and tweak its settings, change the sprite, add particle effects if needed (the new “Rocket” projectile shows this with its smoke trail), etc. Now hit apply and delete it from the scene. Now go to the “Game” scene and select the “MANAGERS” game object, then go to the inspector tab and locate the “Object Pooler” component:



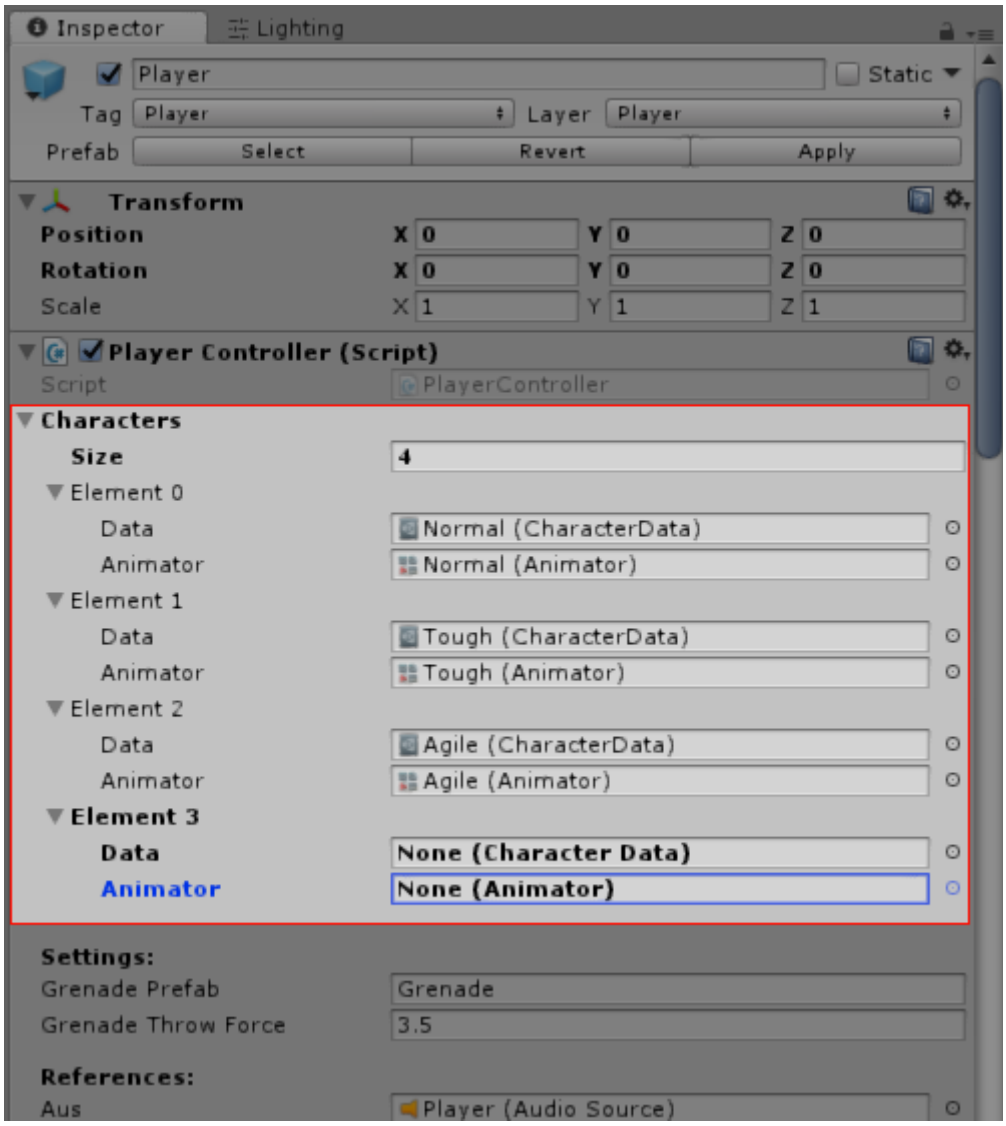
This new pool is for our new projectile. Add a new pool and name it to whatever you want then put our newly created projectile inside the “Prefab” variable field then save the scene. Now to use this new projectile, select a weapon prefab and set its “Projectile” field to the name of the newly created pool.

Adding A Character:

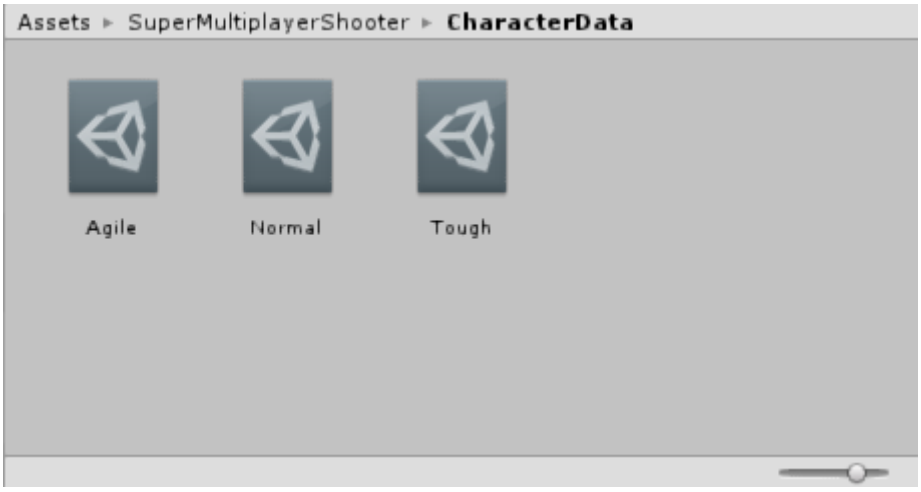
To add a character, first locate the "Player" prefab in Resources folder (SuperMultiplayerShooter/Resources) then drag it into any scene. Now if you expand the player prefab in the hierarchy, you'll see something like this:



The **Normal**, **Tough**, and **Agile** are the character game objects. In fact if you try to enable one of those and disable the others, you'll see the actual character itself. Now to add one, just simply create a new sprite game object as child of player (right-click the Player object in hierarchy then select 2D Object>Sprite), change the sprite, add some animations, and add the "Footsteps Audio Manager". In the "Footsteps Audio Manager", the Player variable is the Player game object itself. Also, its animator controller should have these parameters: **Moving**, **Dead**, and **Falling** (use these to animate your character). After that, select the Player object and in the inspector, there's a component called "Player Controller". Expand the "Characters" array and add a new element by duplicating the last element item:



You'll notice that there are 2 fields per element. In the "Animator" field, specify the character object we've just created. In the "Data" field however a "Character Data" is required, so we first need to create one. Creating one should be simple, go to the CharacterData folder (SuperMultiplayerShooter/CharacterData), then you should see the character data of the 3 characters there:

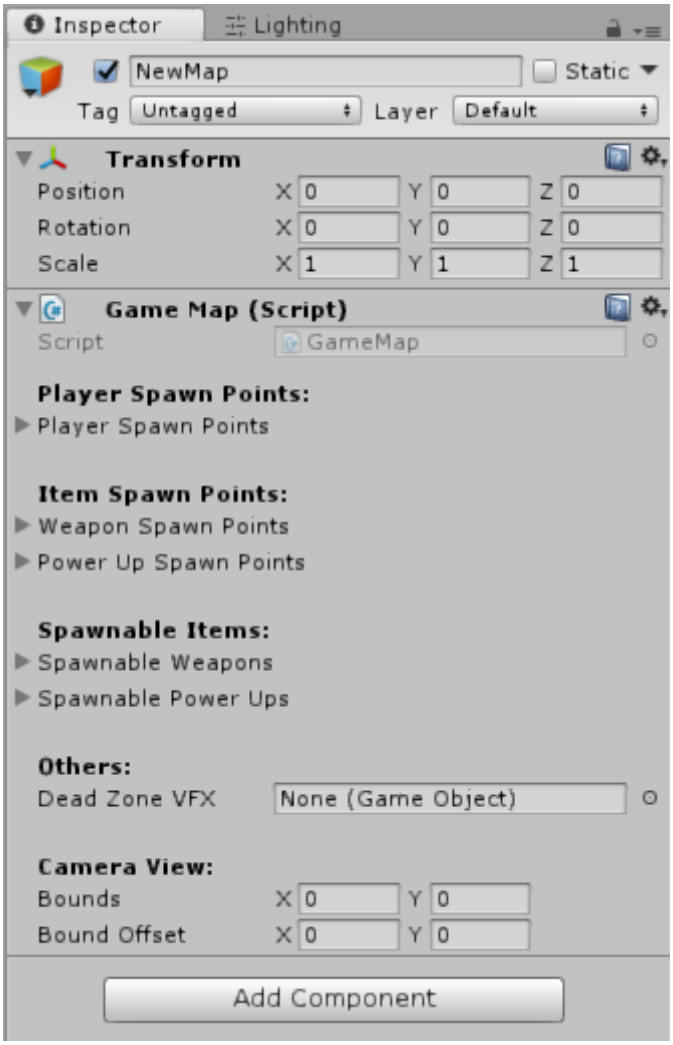


Duplicate one of them or simply right-click then "Create>Visyde>Character Data" to create a fresh one, tweak some settings then select the player again and put the new data in the "Data" field of the new character. Finally, hit the "Apply" button in the

inspector and delete the player object from the scene.
The new character is now pretty much playable, but, it's not selectable from the main menu yet. To add it to the selection, go to the MainMenu scene and select the "Managers" game object in the hierarchy. In the inspector tab there should be a component called "Character Selection" and under it is an array called "Characters". Add the new character data there and you're pretty much done! Play the game and you should see your new character in the selection.

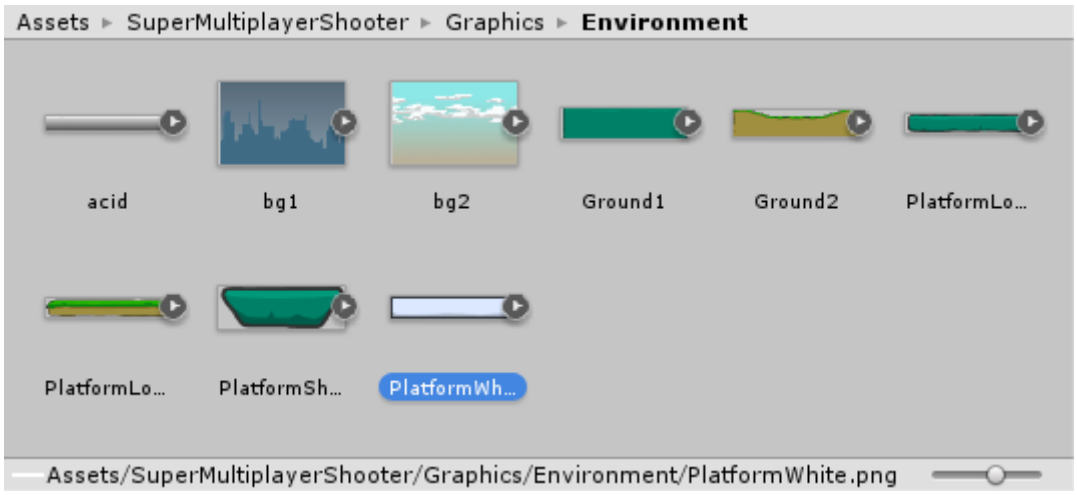
Adding A Map

The more the map, the better so let's add another one! First, go to the Game scene and create a new empty game object as a child of the "Maps" game object (right-click the Maps object and select "Create Empty") and rename it to anything. Select the empty object and add the "Game Map" component.

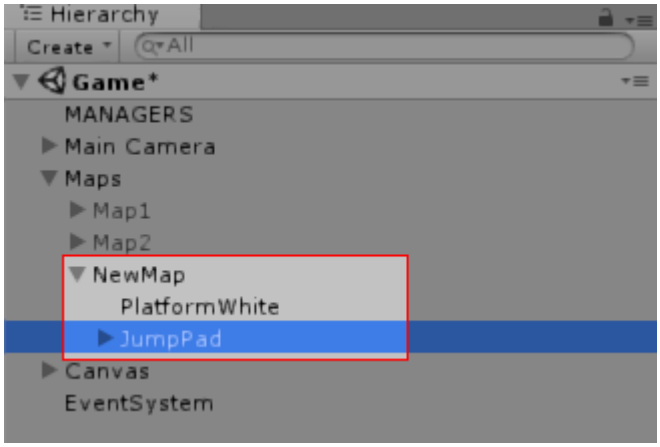


Looking at the component, you'll see arrays for the player spawn points, item spawn points, and spawnable items. Player and weapon spawn points require transform objects (you can use empty game objects as points), spawnable weapons require weapon prefabs (SuperMultiplayerShooter/Prefabs/Weapons), and spawnable power ups require a "PowerUp" type scriptable object

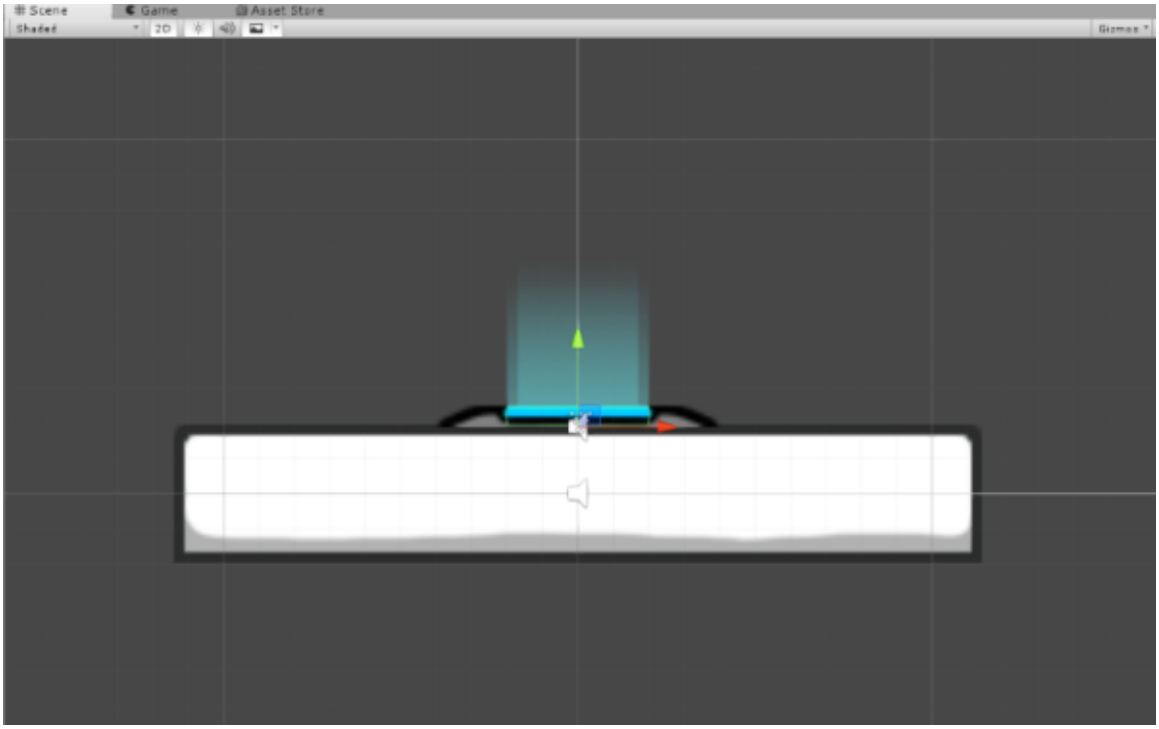
(SuperMultiplayerShooter/PowerUps). The "Bounds" and "Bounds Offset" variables are for the camera bounds so camera doesn't go beyond the map. You can look at the other maps and see how their "Game Map" component is set up. Now let's add a platform for our players to walk on. Go to "SuperMultiplayerShooter/Graphics/Environment" and look for the white platform sprite:



Drag it into the hierarchy and make it a child of the new map game object. In the inspector tab, set the order in layer of the Sprite Renderer to 1 and add a Box Collider 2D component to make it walkable. Add as many platforms as you want by duplicating it and populate the map. Now let's add things like jump pads! Go to "SuperMultiplayerShooter/Prefabs" and look for the "JumpPad" prefab, drag it into the hierarchy and also make it a child of the new map:



and adjust the position so it sits just above a platform...



After setting up everything, select the "Managers" game object and in the "Game Manager" component under the inspector tab, there's an array called "Maps", put the new one there and you're almost finished!
Now to include the map in the random selection, go to the "MainMenu" scene and select the "Managers" object and under the "Connector" component, increase the value of the "Number Of Maps" variable by 1. You're done! Play the game and the map should be in the game now.

"We're constantly improving this guide so if you see something that isn't covered, we're probably already working on it."