How To Implement Unit Tests

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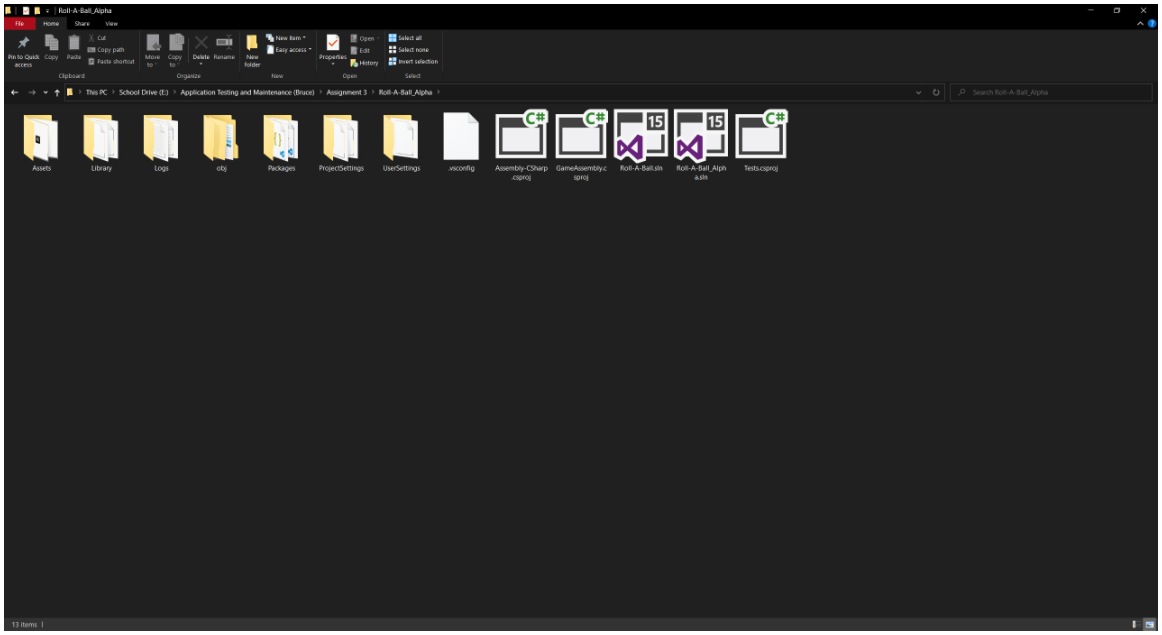
Setup Project for Testing

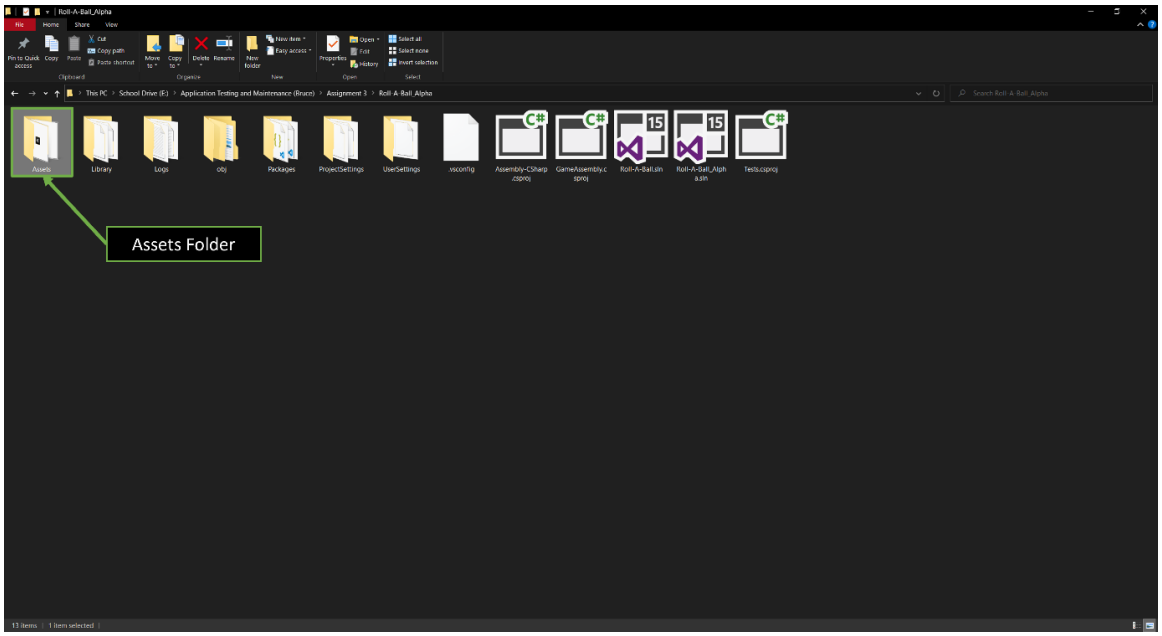
Step 1

➢ Navigate to the “Roll-A-Ball_Alpha” project directory using file explorer



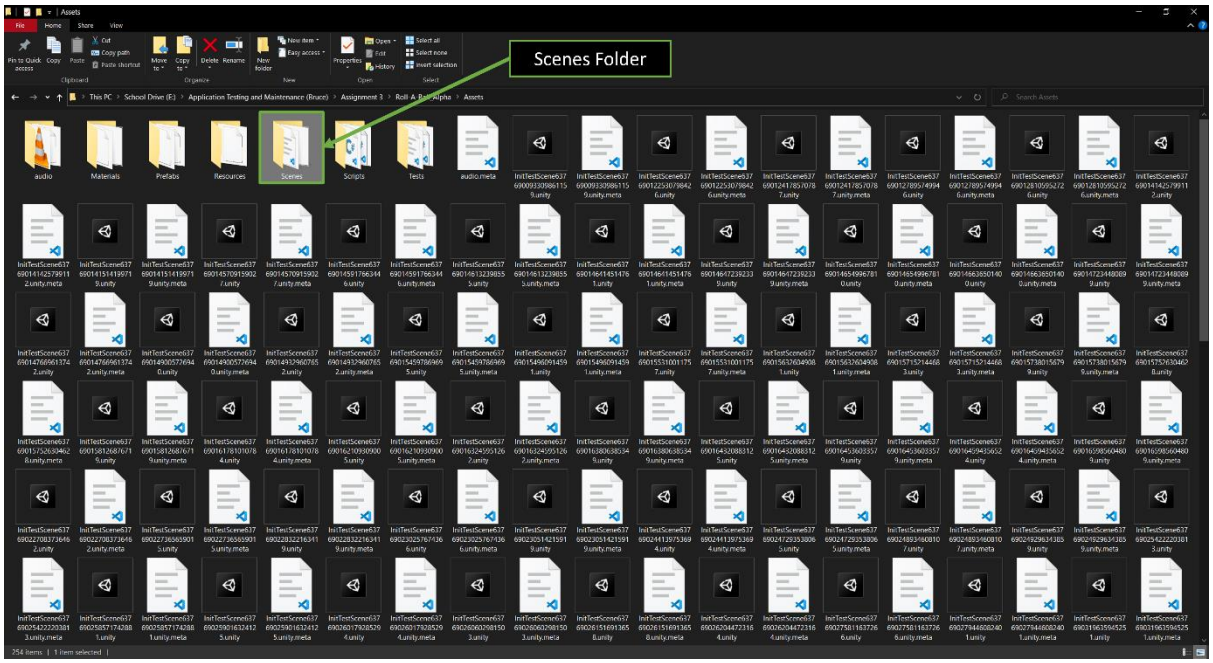
Step 2

➢ Left click twice on the “Assets” folder to open it



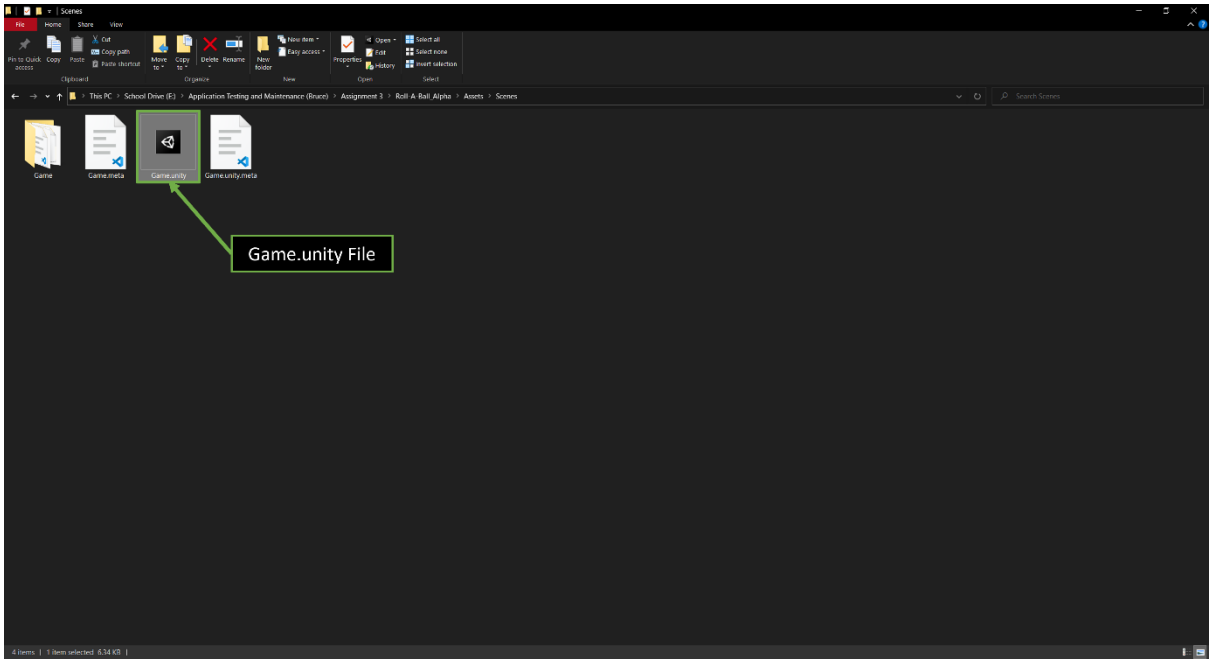
Step 3

➢ Left click twice on the “Scenes” folder to open it



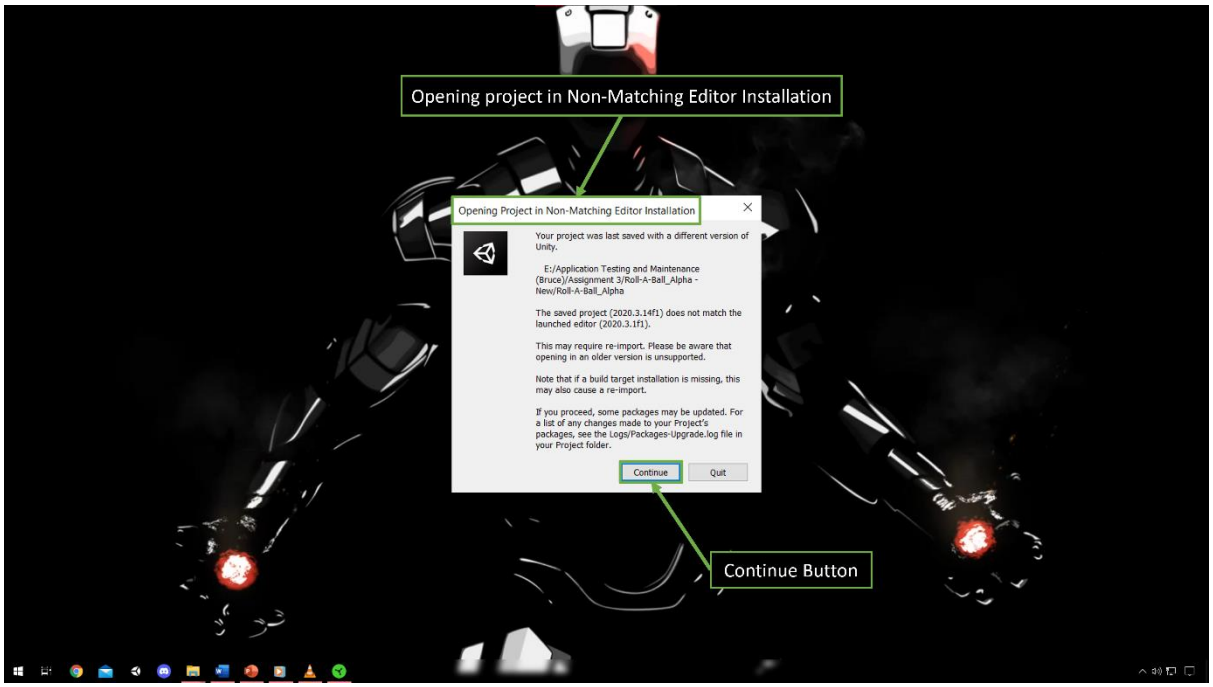
Step 4

➢ Left click twice on the “Game.unity” file to open the “Roll-A-Ball_Alpha” project



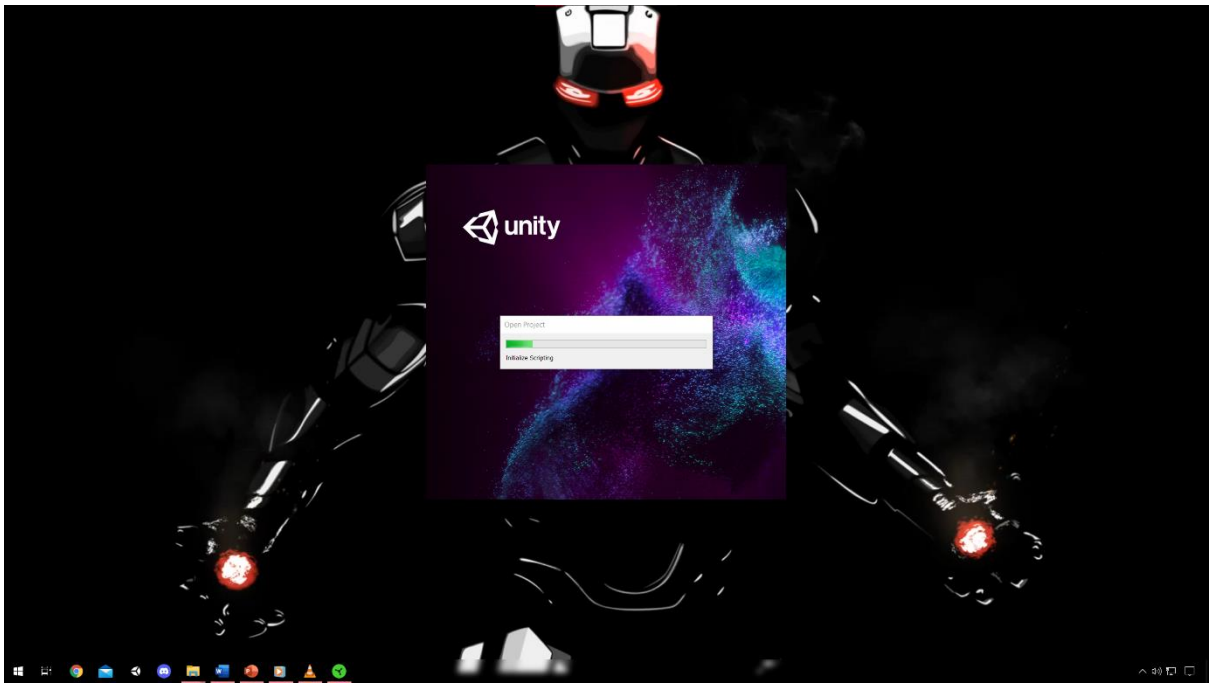
Step 5

- If a window appears titled “Opening Project in Non-Matching Editor Installation”, left click once on the “Continue” button



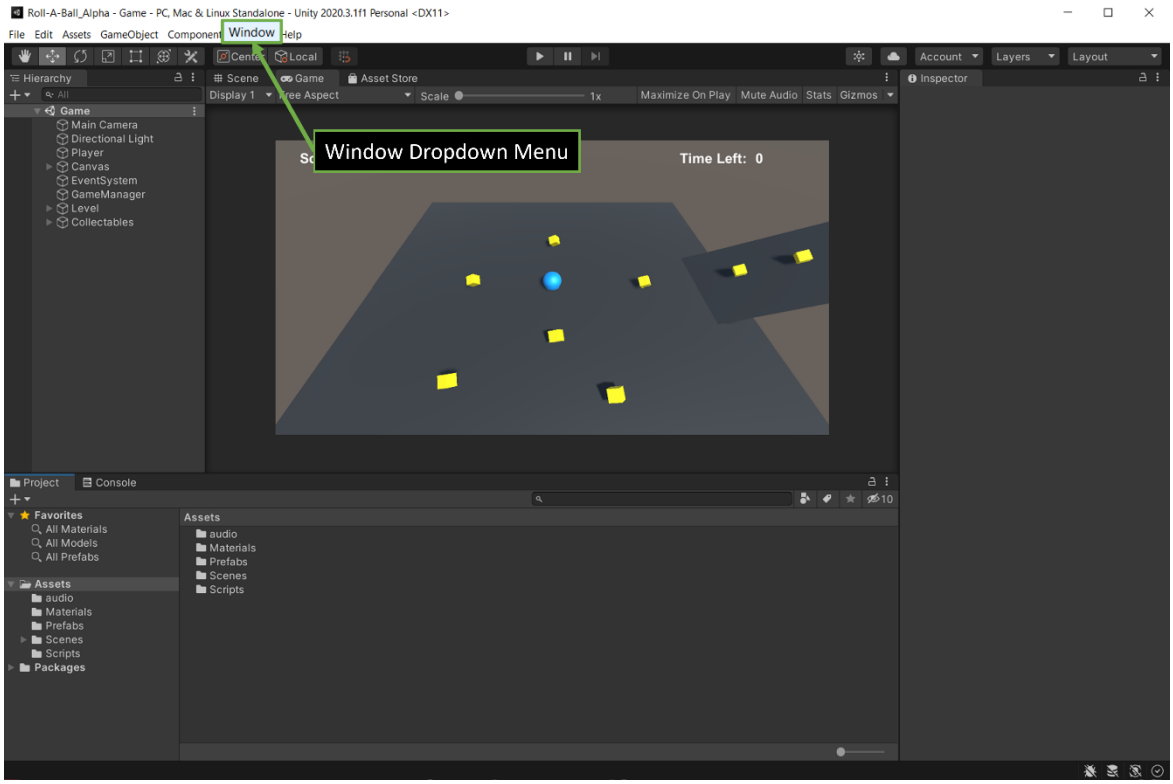
Step 6

- Wait for the unity project to open



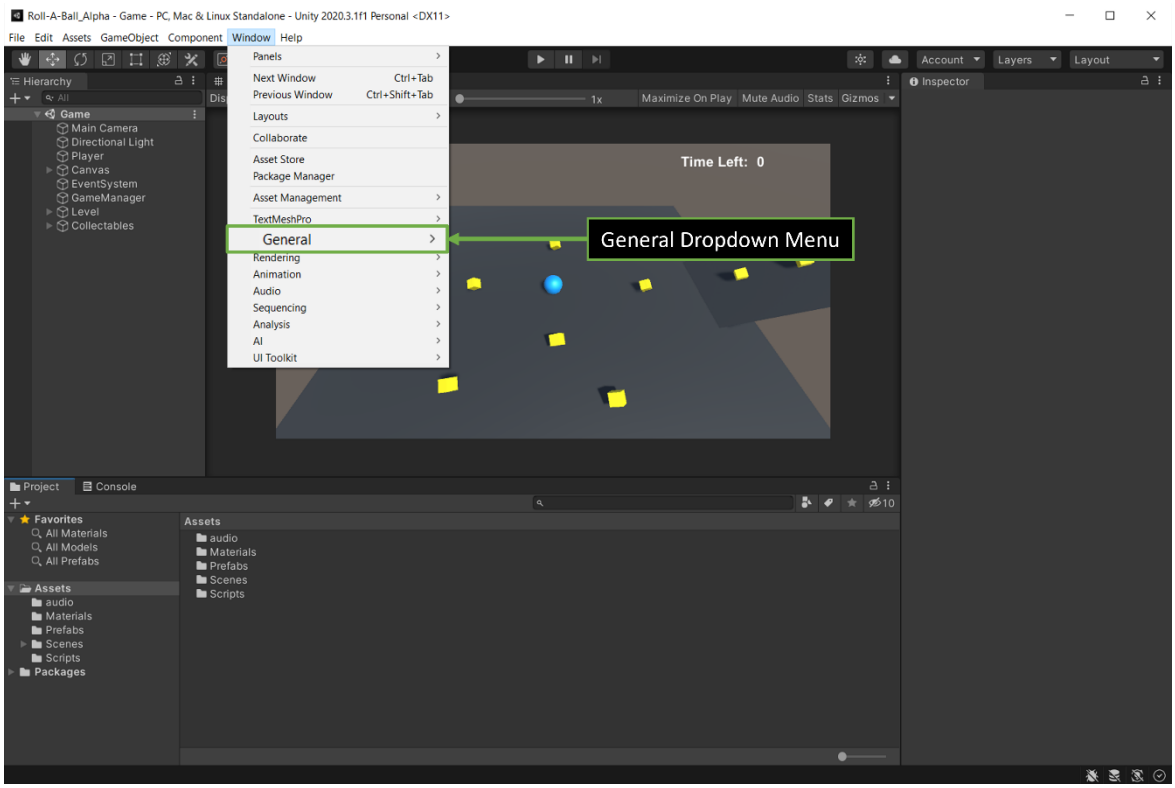
Step 7

- Once the unity project has opened, left click once on the “Window” dropdown menu at the top of the unity editor



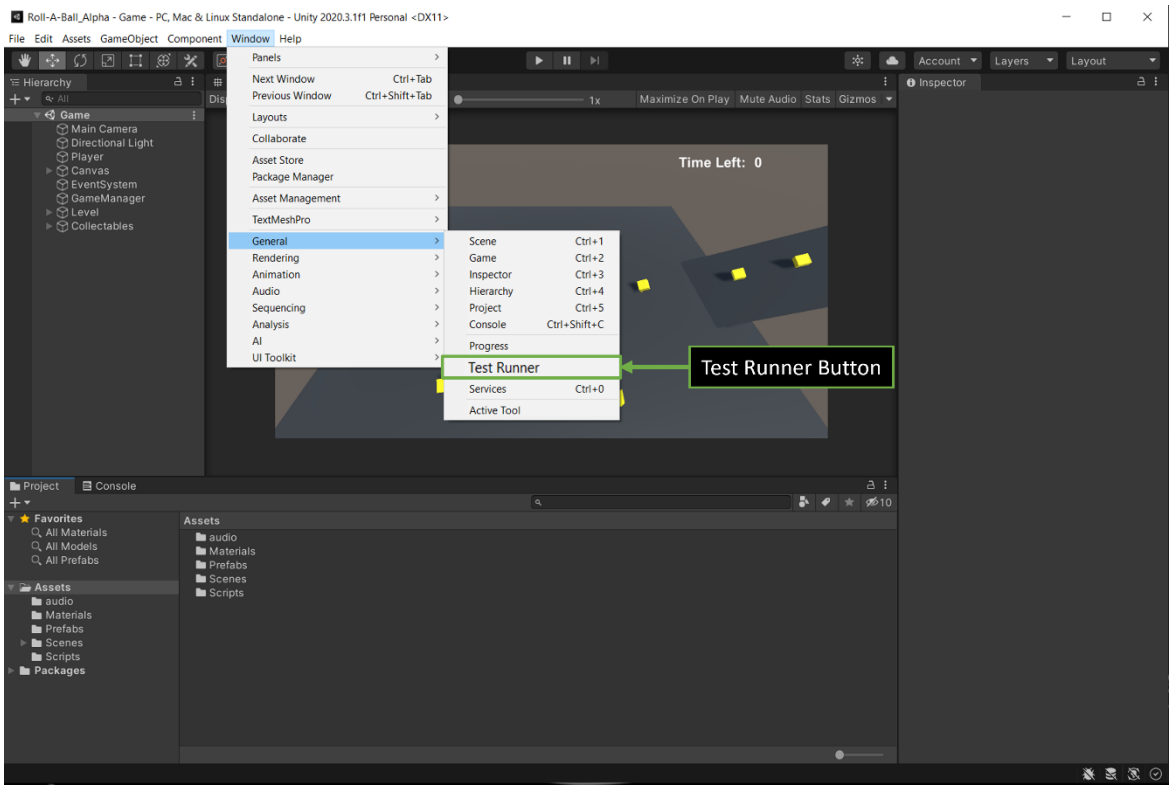
Step 8

- Hover over the “General” dropdown menu within the “Window” dropdown menu



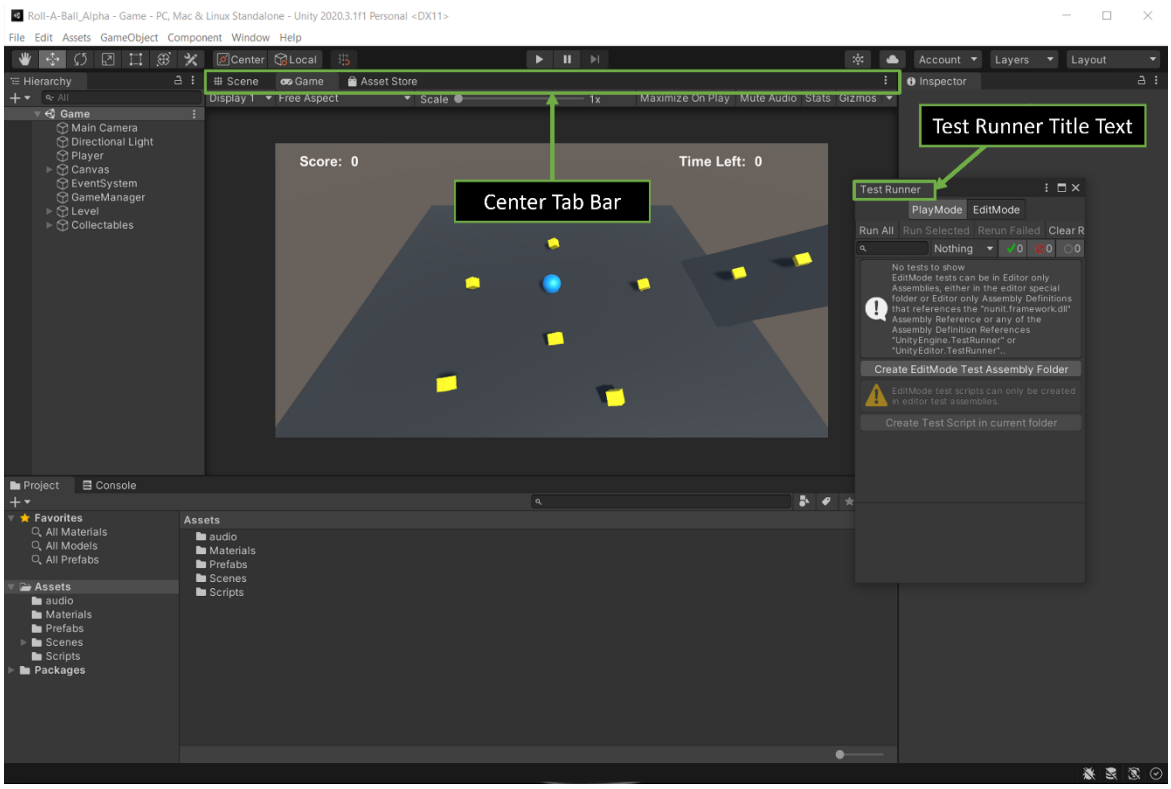
Step 9

- Left click once on the “Test Runner” button within the “General” dropdown menu



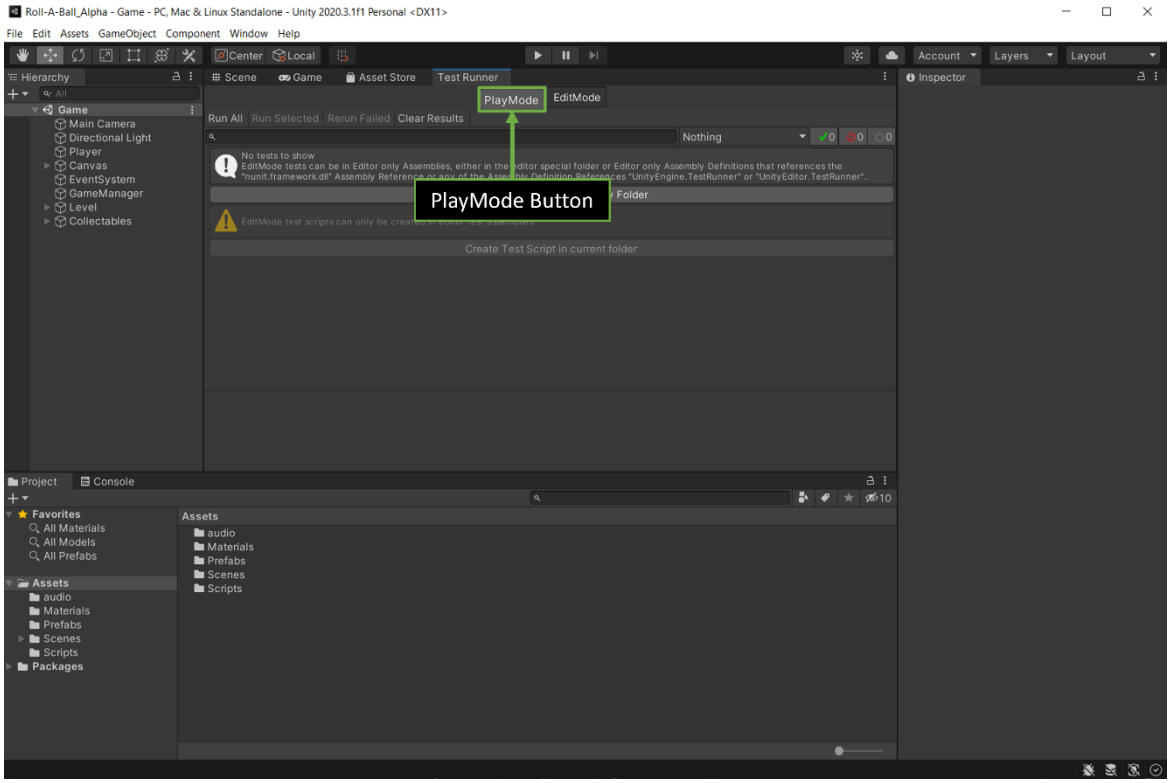
Step 10

- Once the “Test Runner” window appears, left press once on the “Test Runner” title text at the top of the window and drag it on to the center tab bar



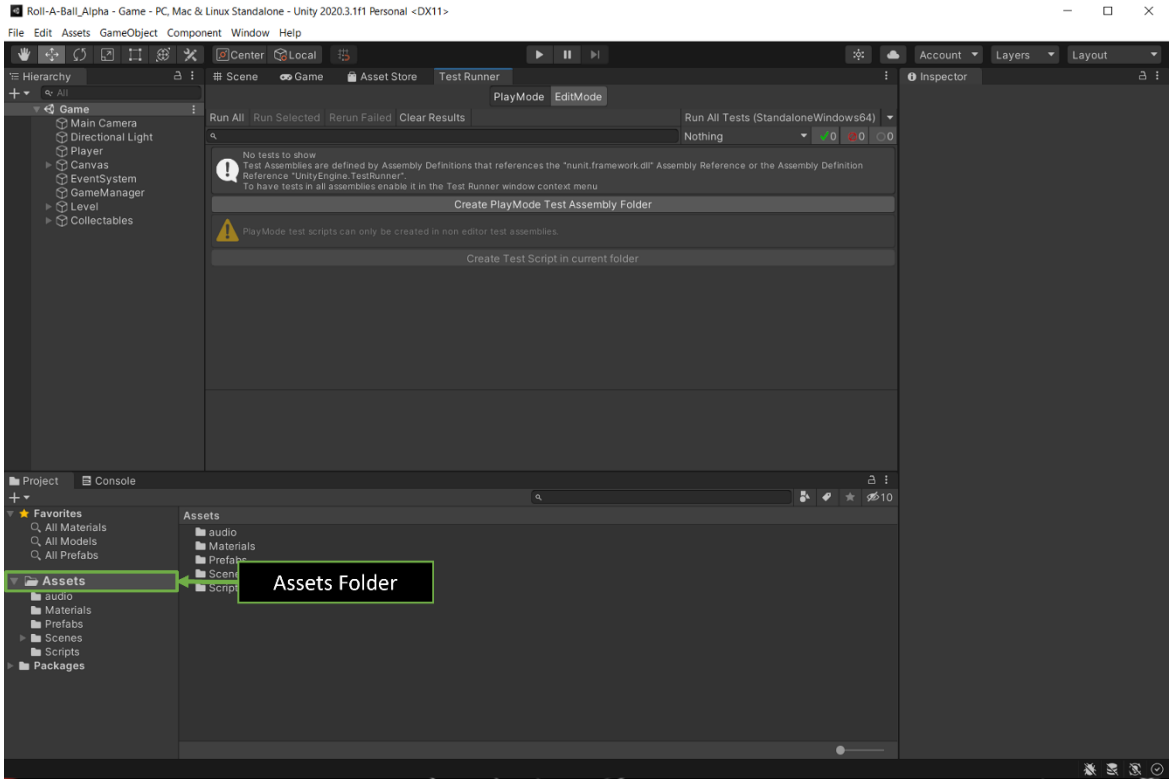
Step 11

➢ Left click once on the “PlayMode” button within the “Test Runner” window



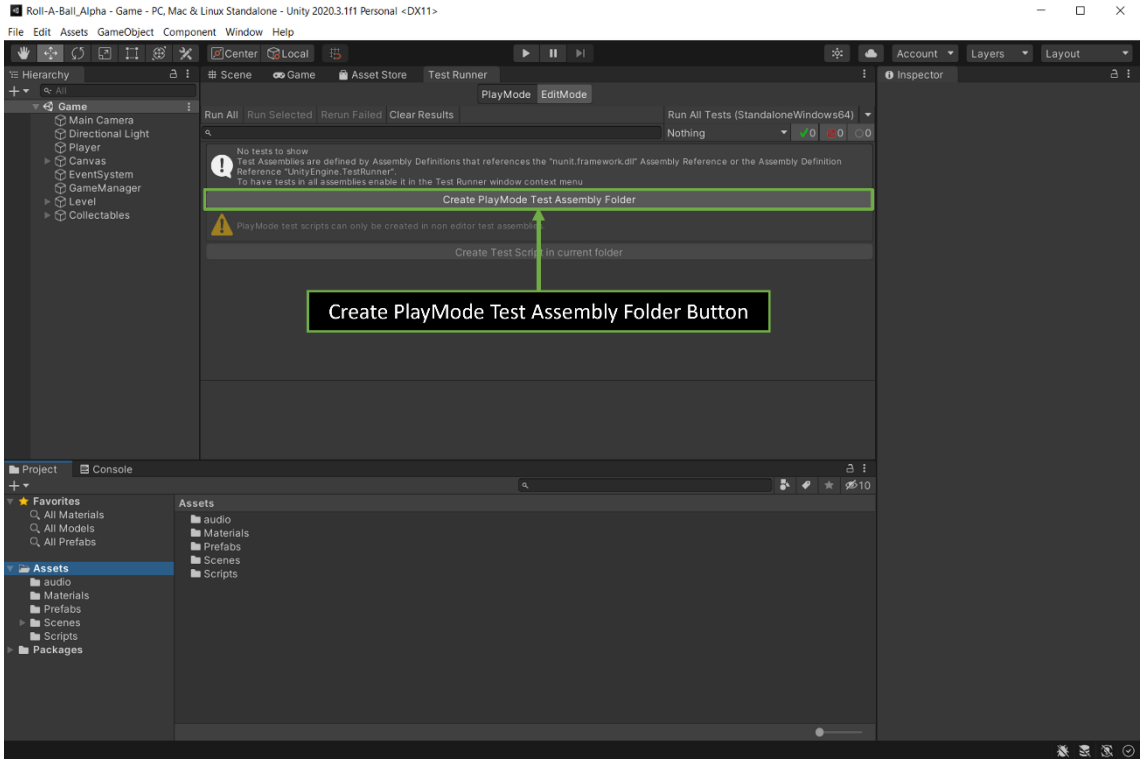
Step 12

➢ Left click once on the “Assets” folder within the “Project” window to select it



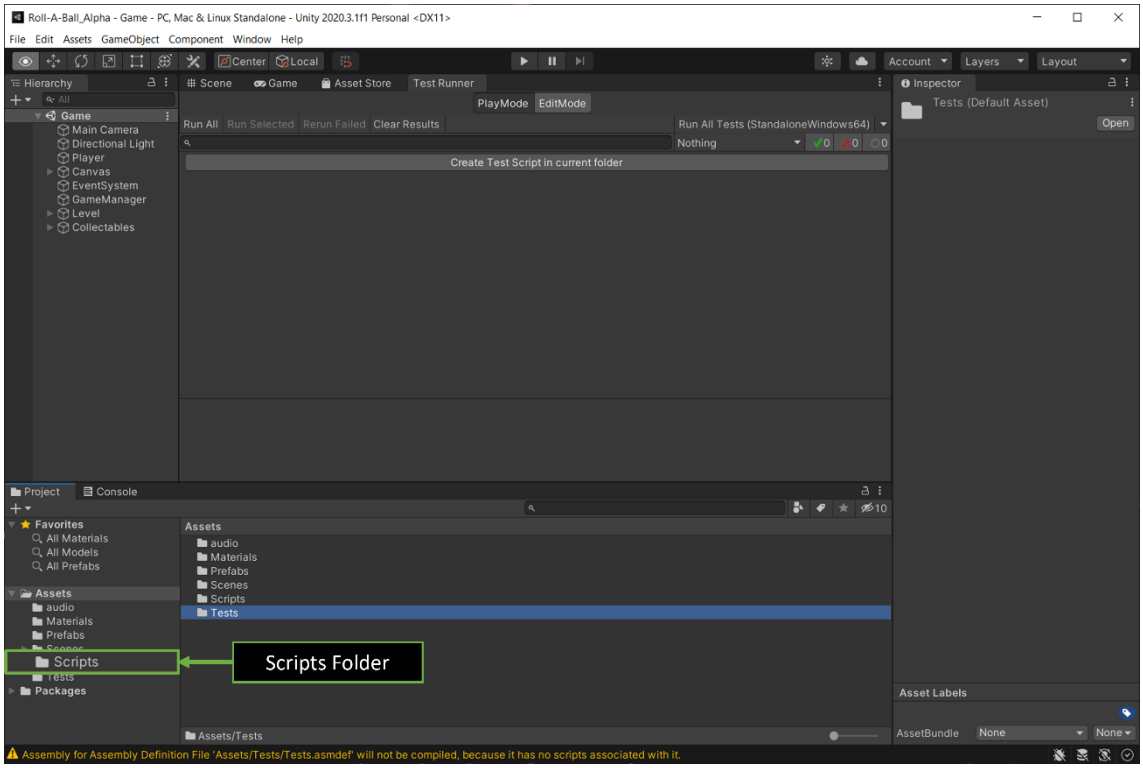
Step 13

- Left click once on the “Create PlayMode Test Assembly Folder” button within the “Test Runner” window
- Press enter once



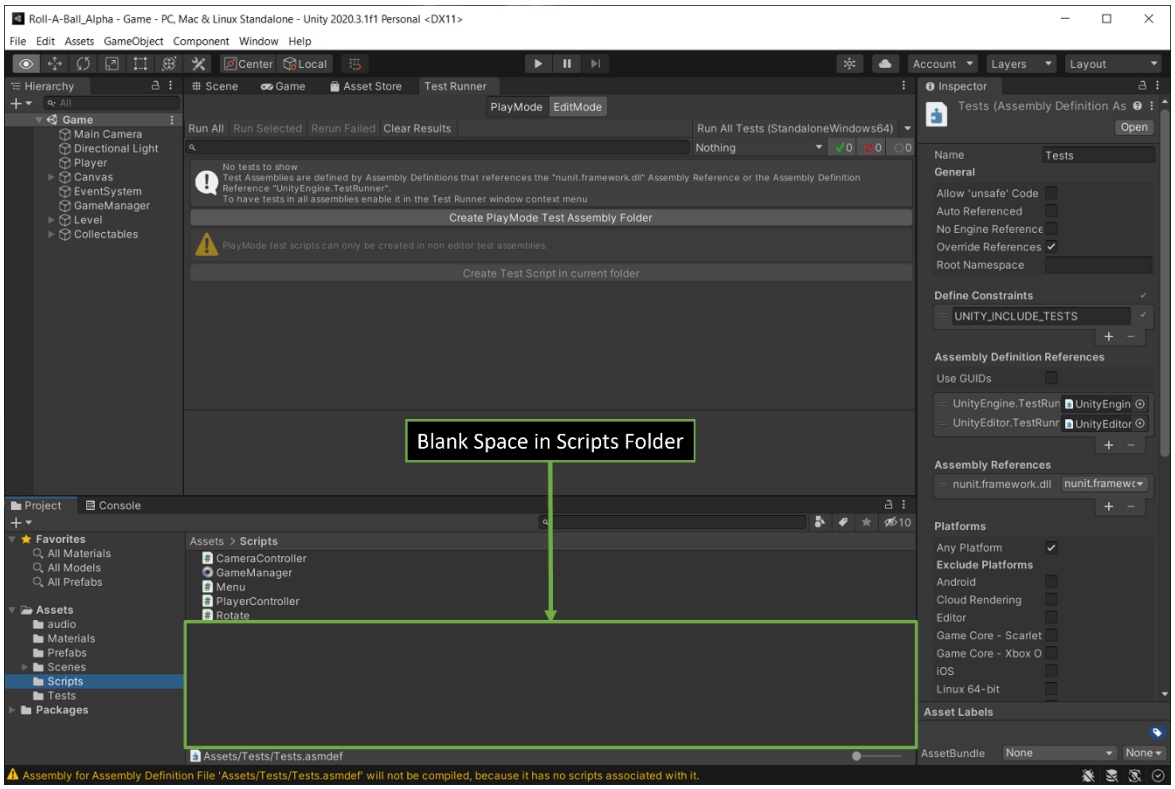
Step 14

- Left click once on the “Scripts” folder within the “Project” window



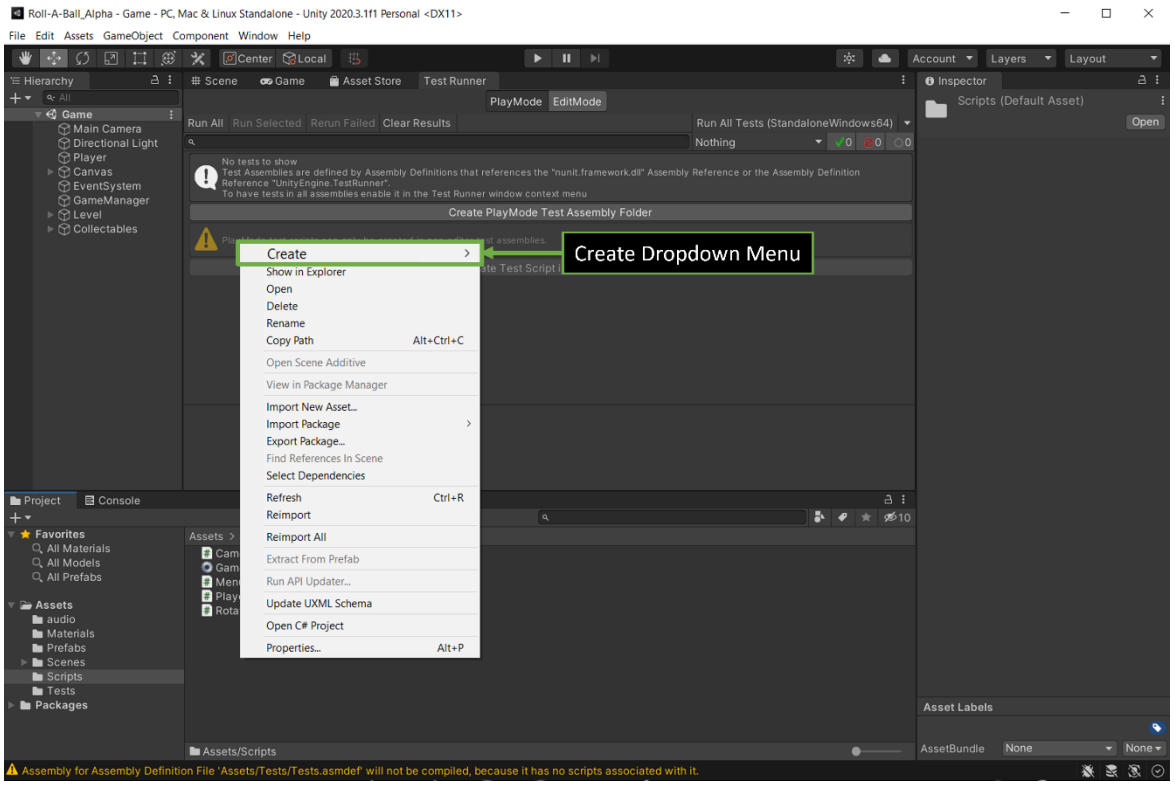
Step 15

➢ Right click once on the blank space within the scripts folder directory



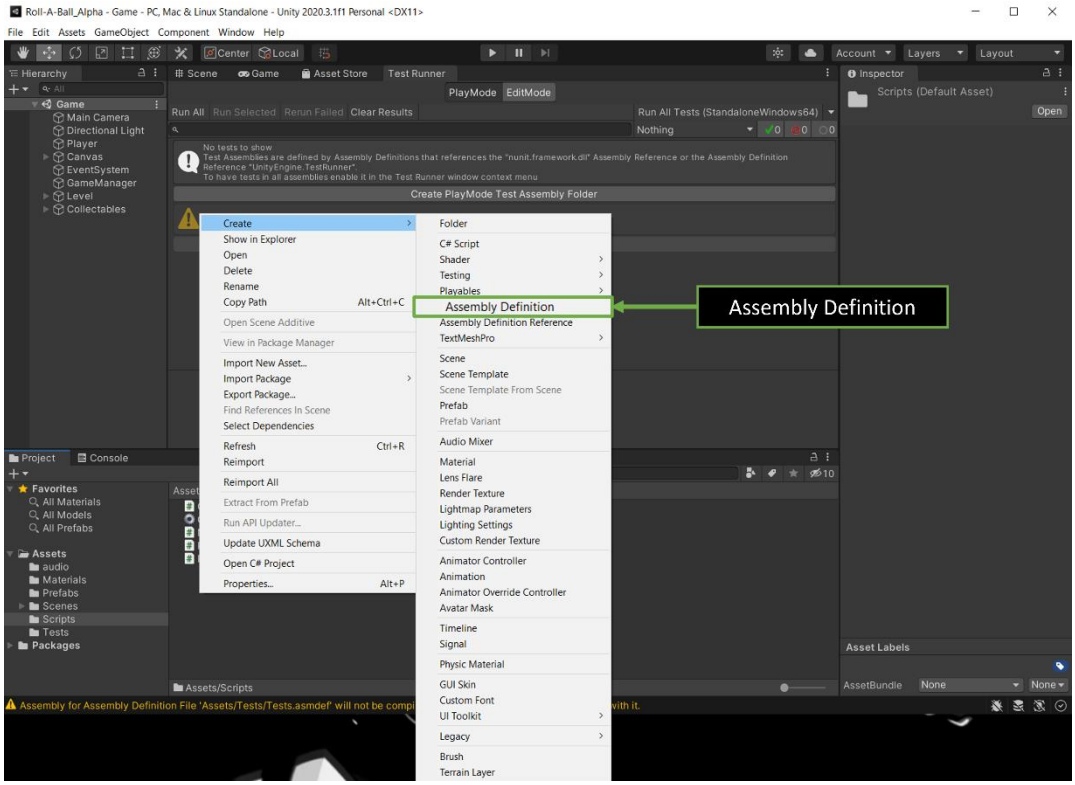
Step 16

➢ On the menu that appears, hover over the “Create” dropdown menu



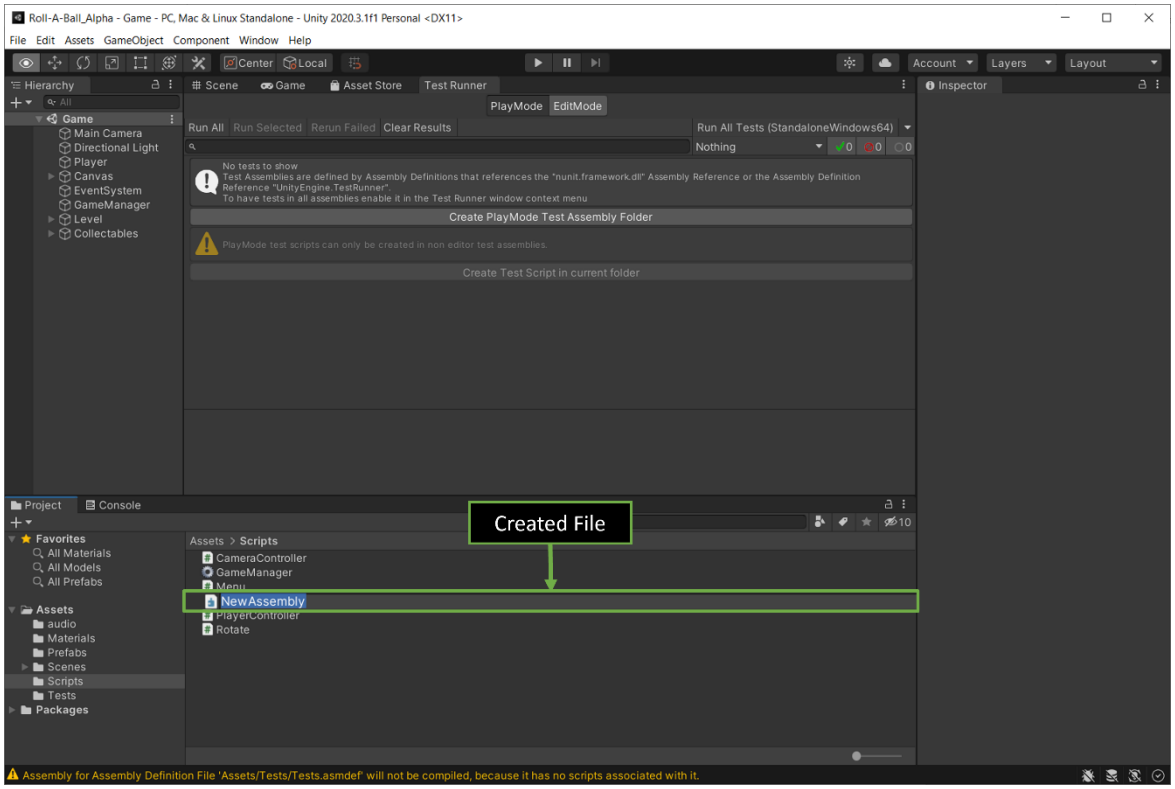
Step 17

- Left click once on “Assembly Definition” within the “Create” dropdown menu



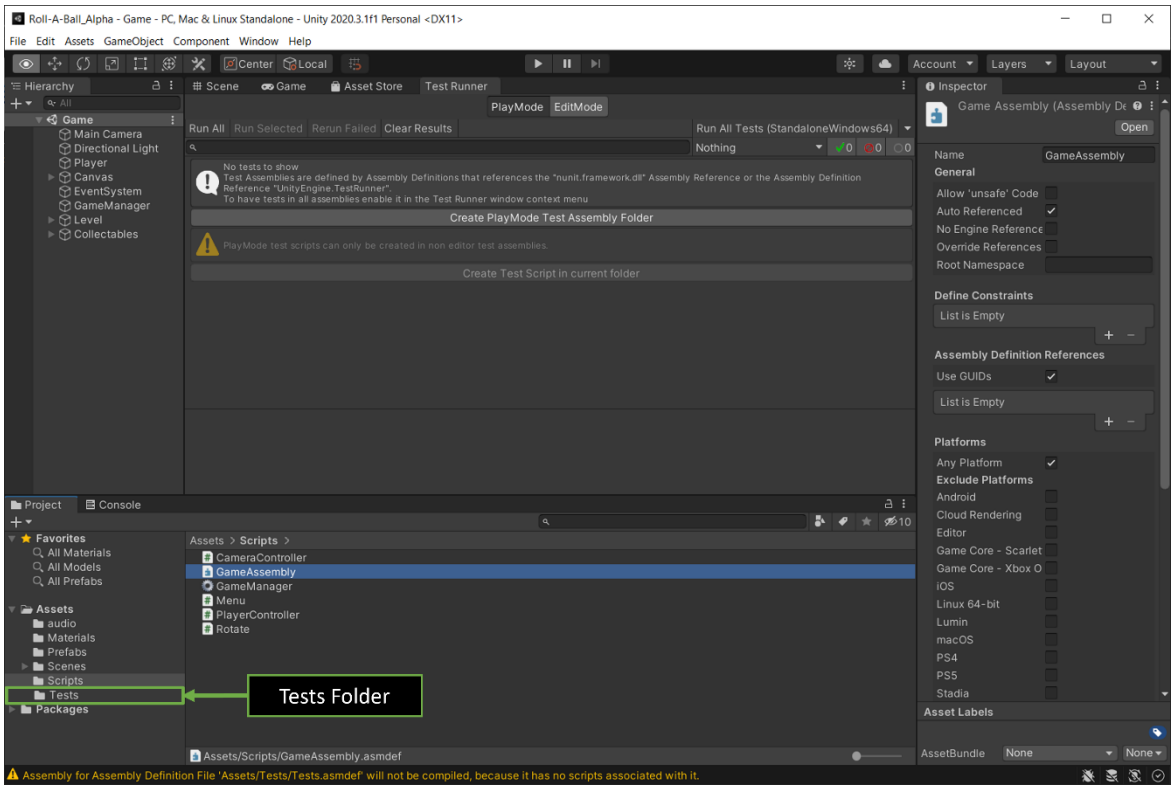
Step 18

- Rename the created file within the “Scripts” folder by typing in “GameAssembly”
- Press enter once



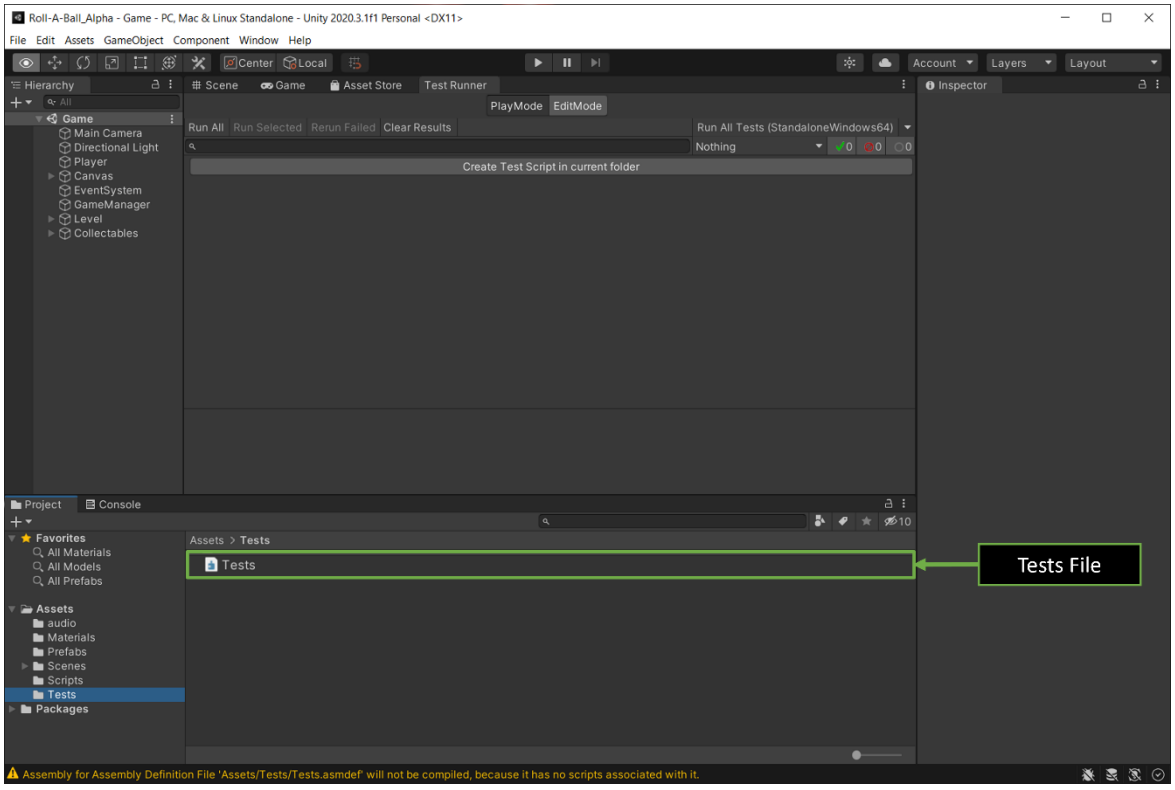
Step 19

➢ Left click once on the “Tests” folder within the “Project” window



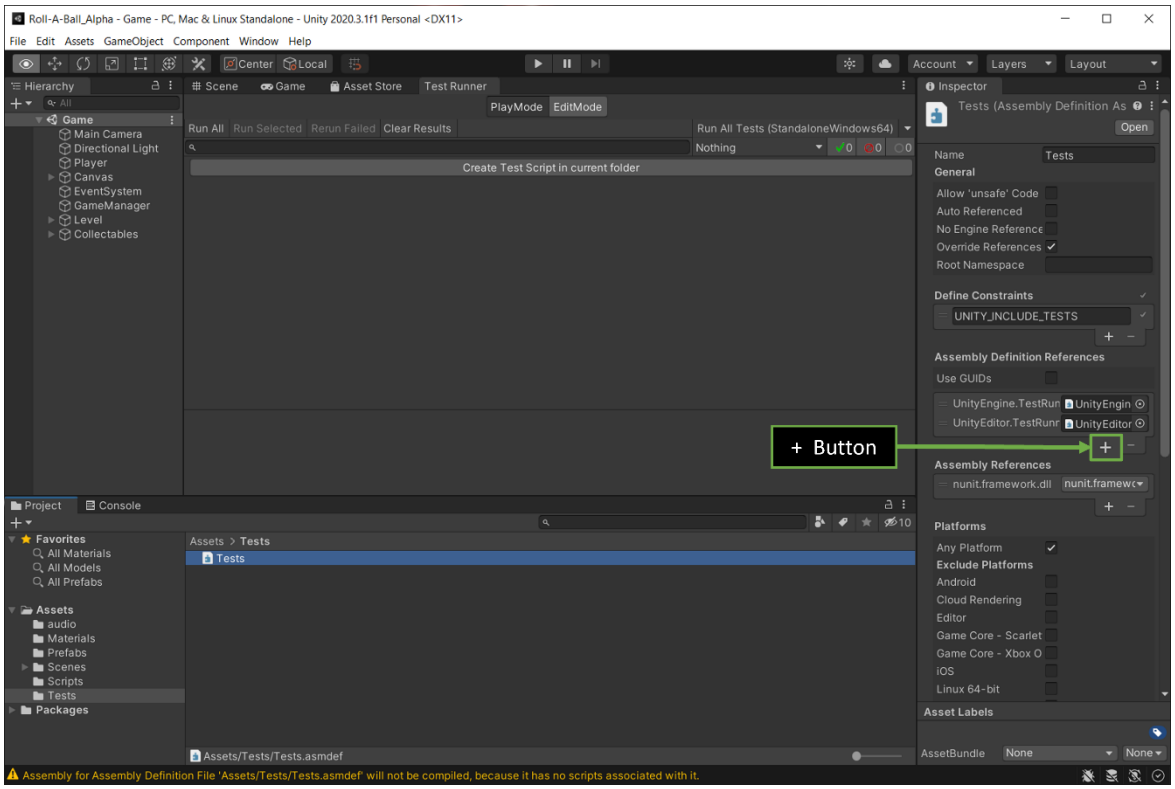
Step 20

➢ Left click once on the “Tests” file within the “Tests” folder to select it



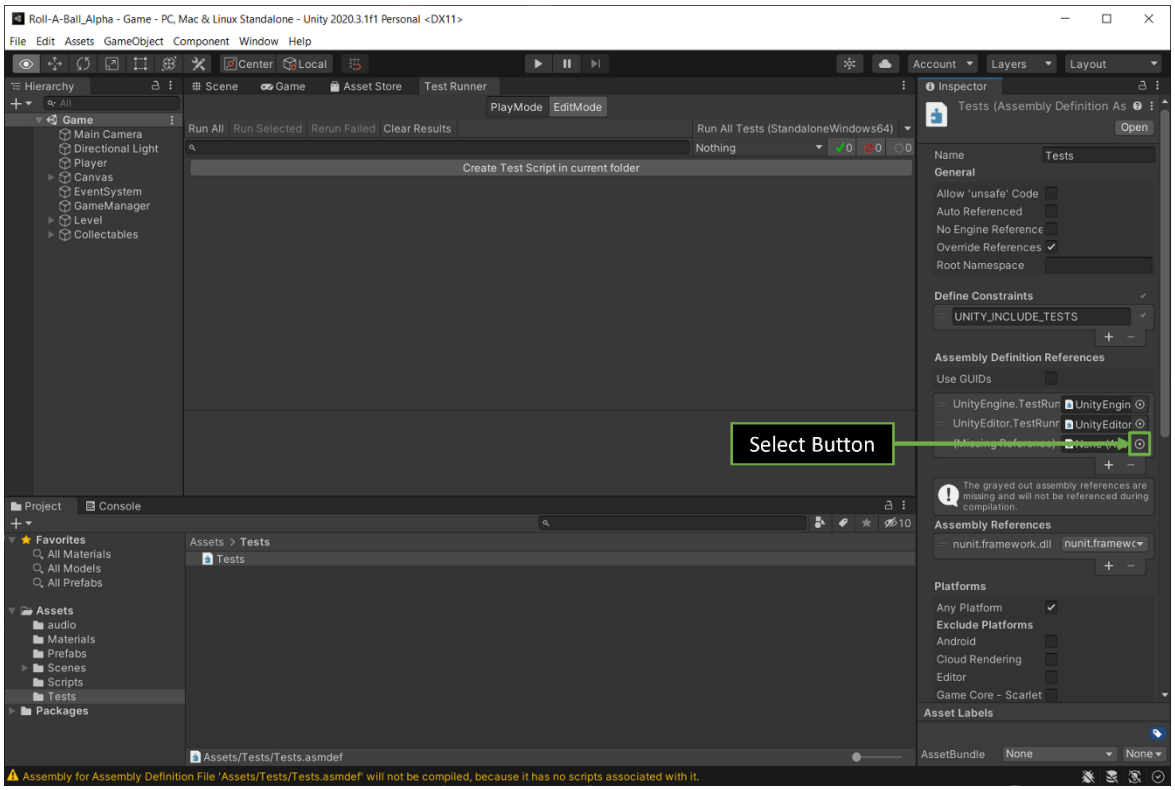
Step 21

- Left click once on the “+” button in the Assembly Definition References within the “Inspector” window



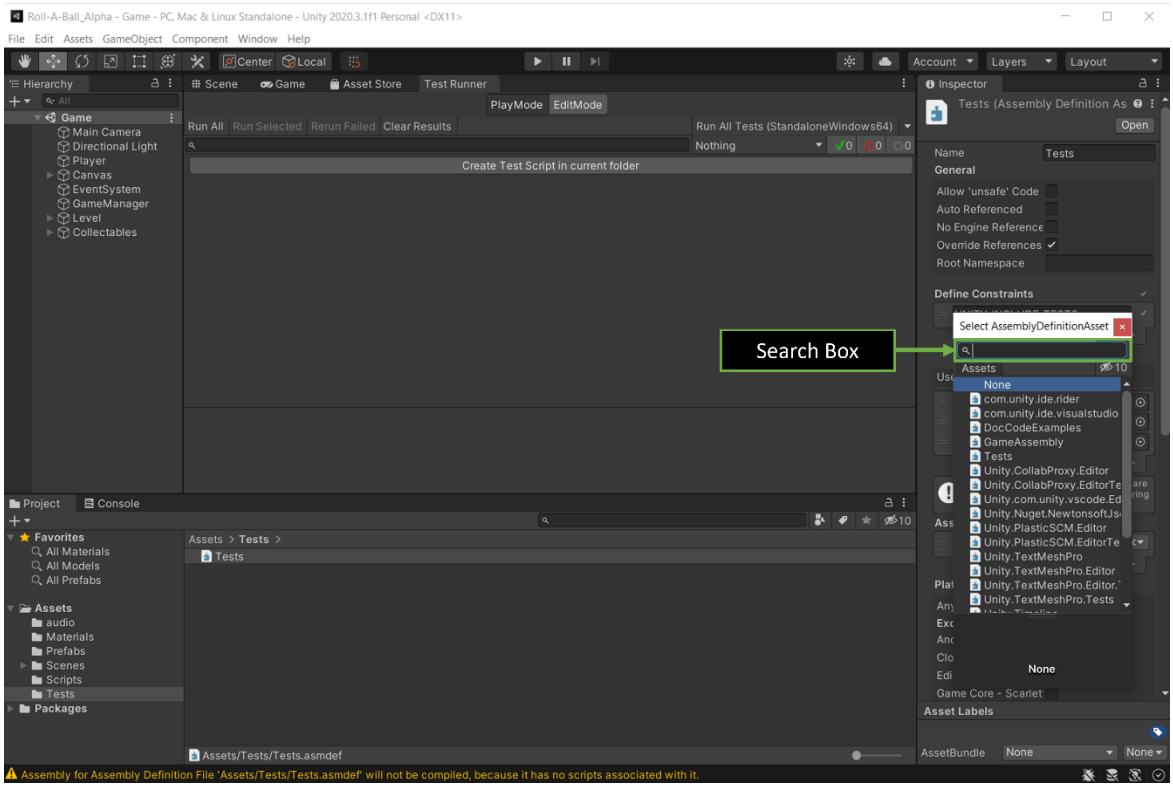
Step 22

- On the assembly definition reference that is created, left click on the select button



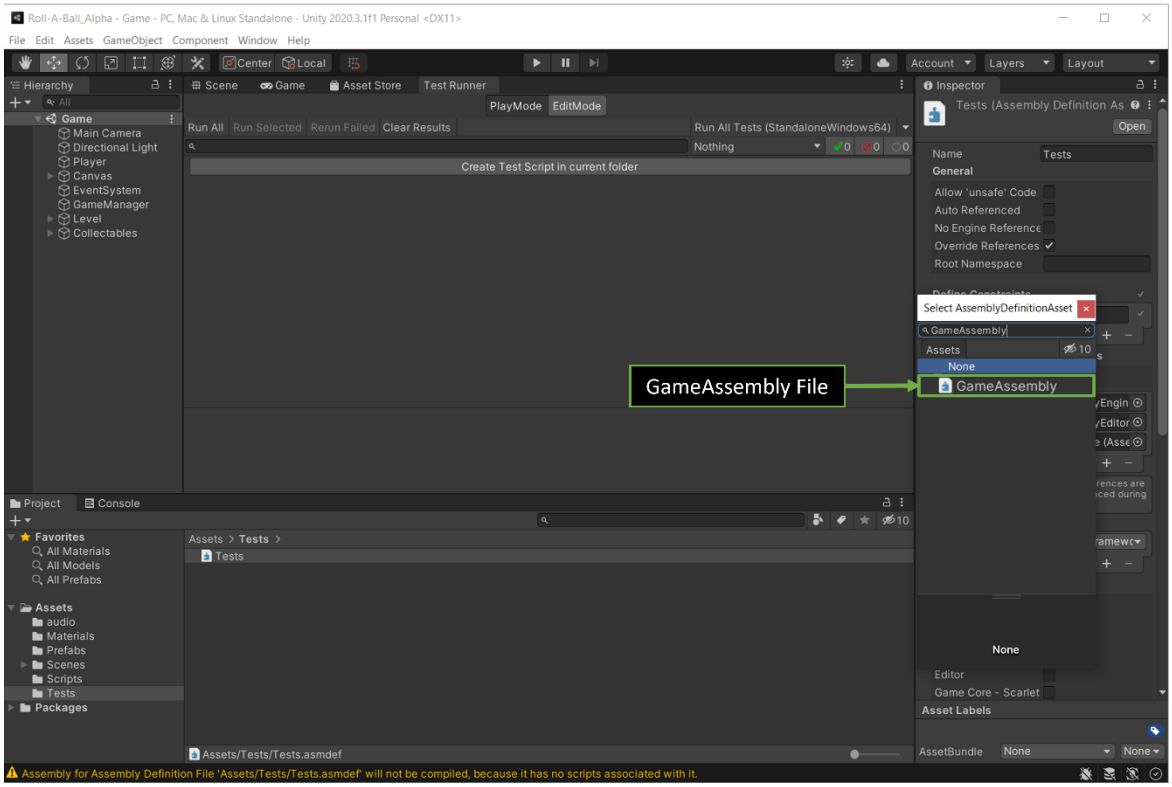
Step 23

➢ Once the select window appears, type in “GameAssembly” within the select search box



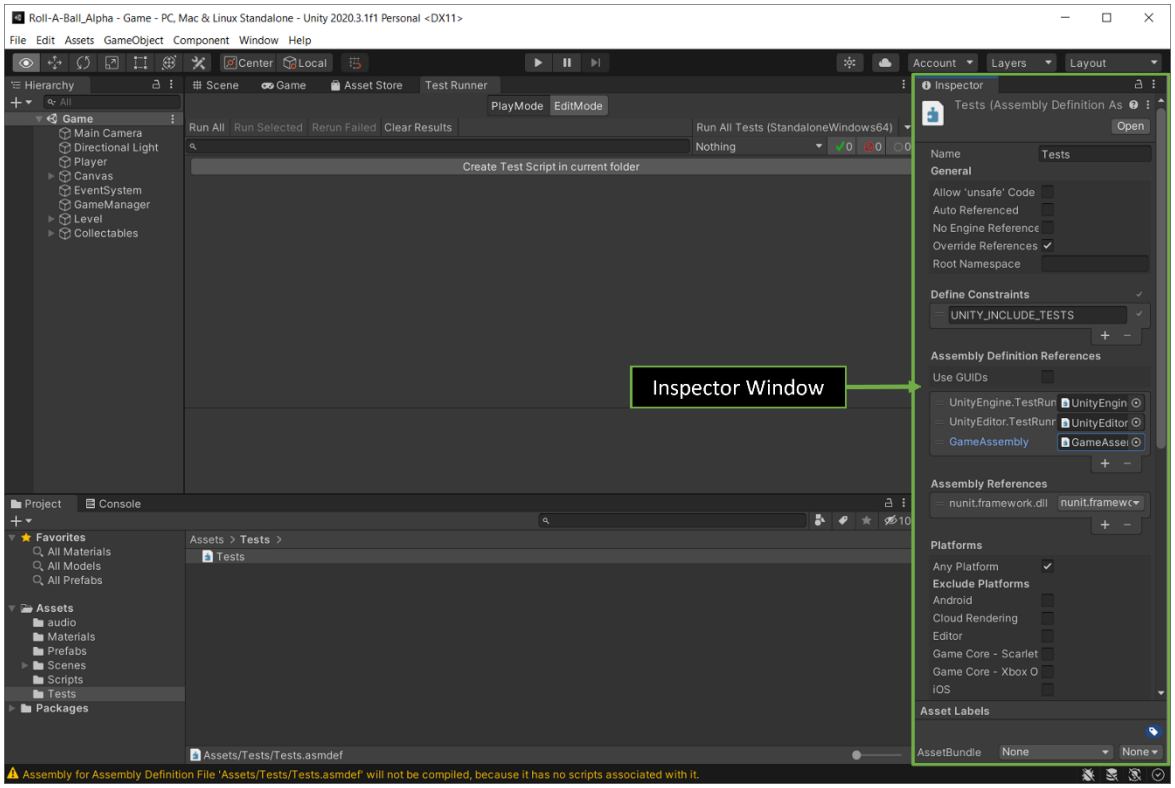
Step 24

➢ Left click twice on the “GameAssembly” file



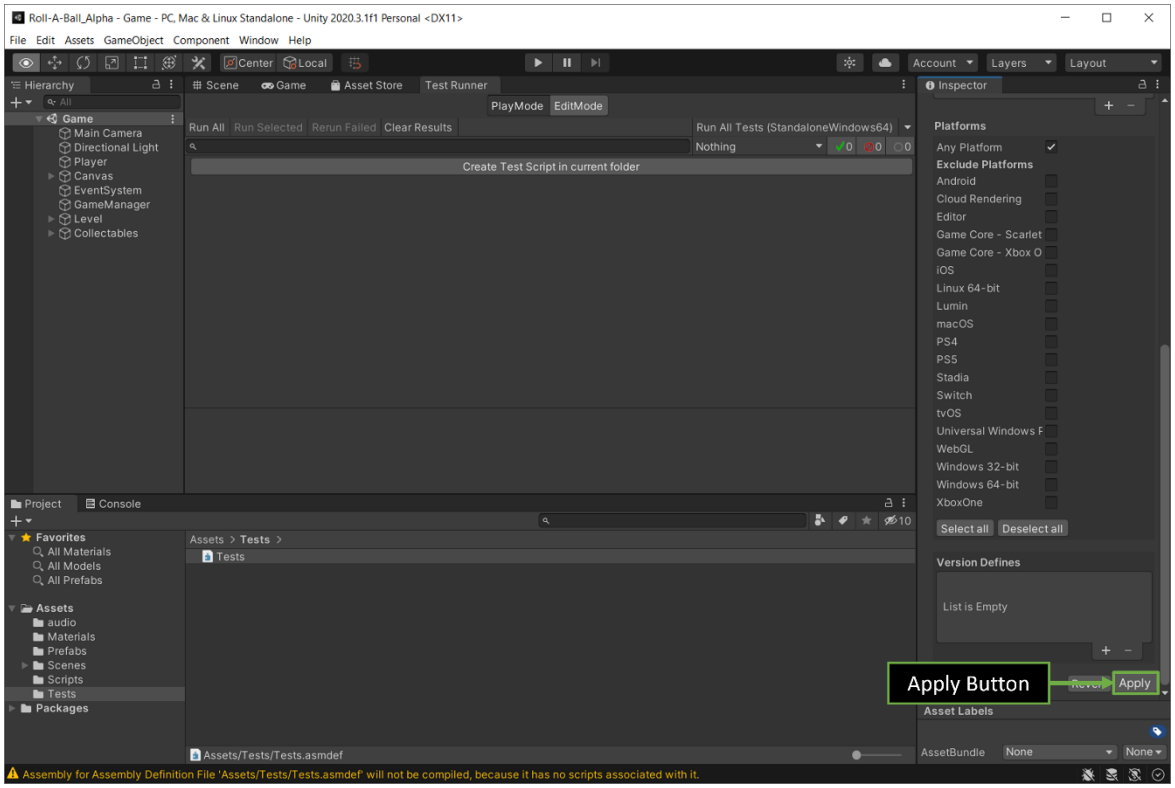
Step 25

➢ Scroll down to the bottom of the “Inspector” window



Step 26

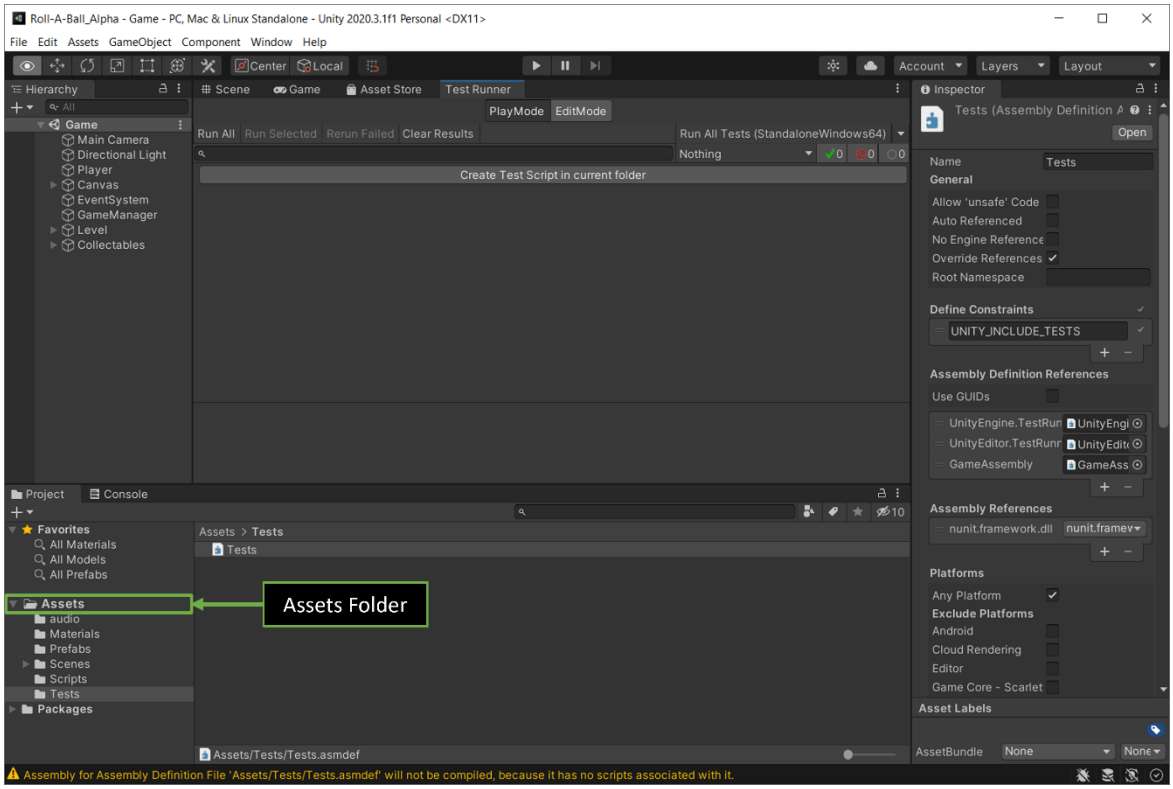
➢ Left click once on the “Apply” button



Setup Unit Tests

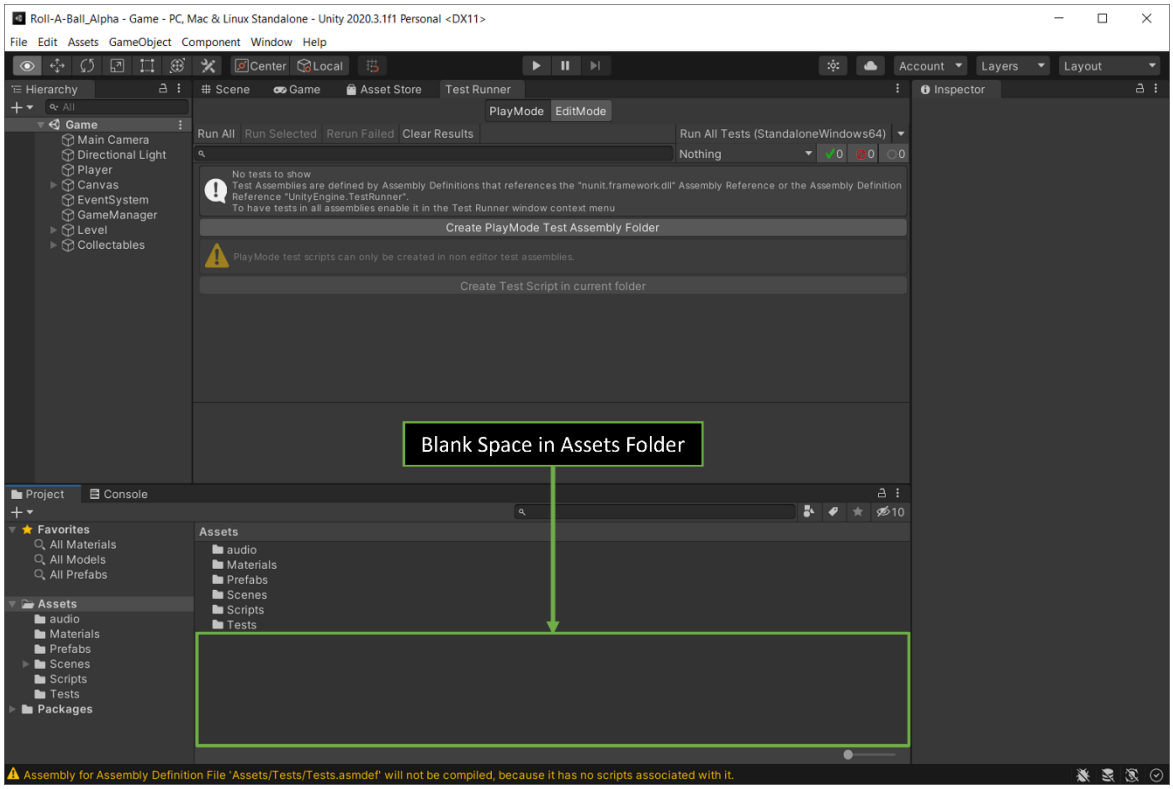
Step 1

- Left click once on the “Assets” folder within the project window hierarchy



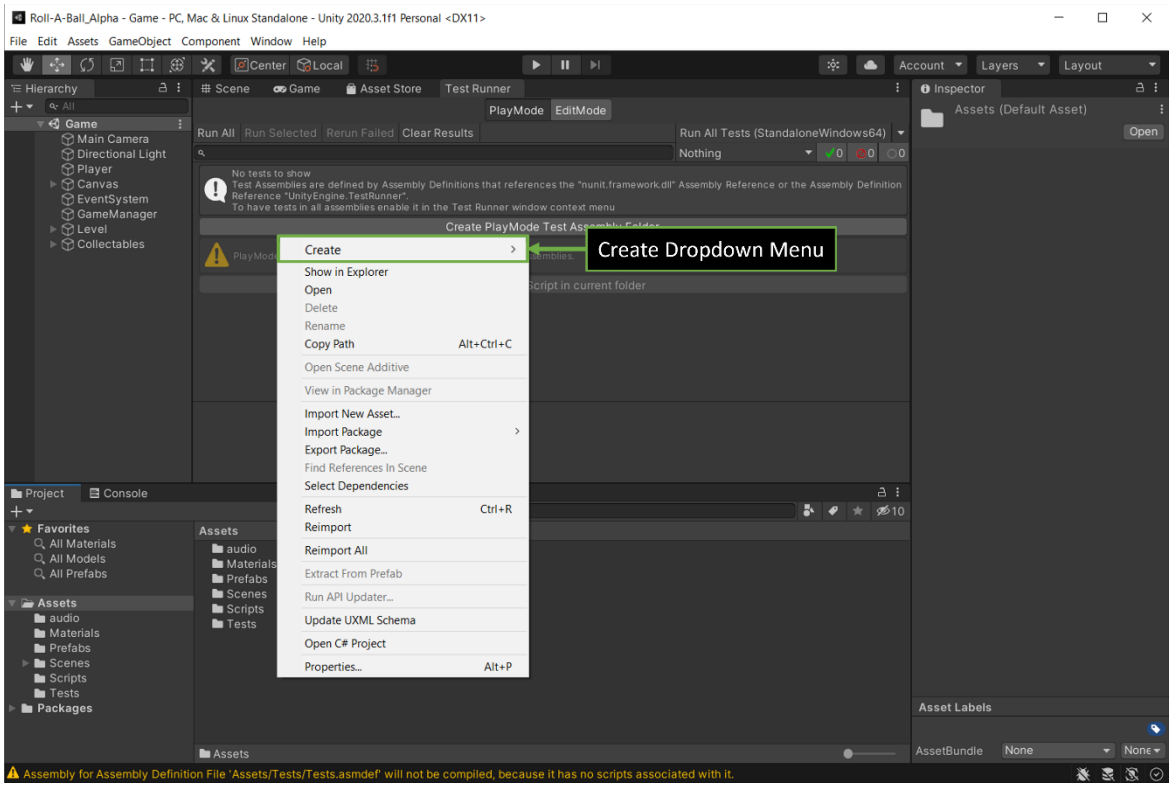
Step 2

- Right click once on the blank space within the assets folder directory



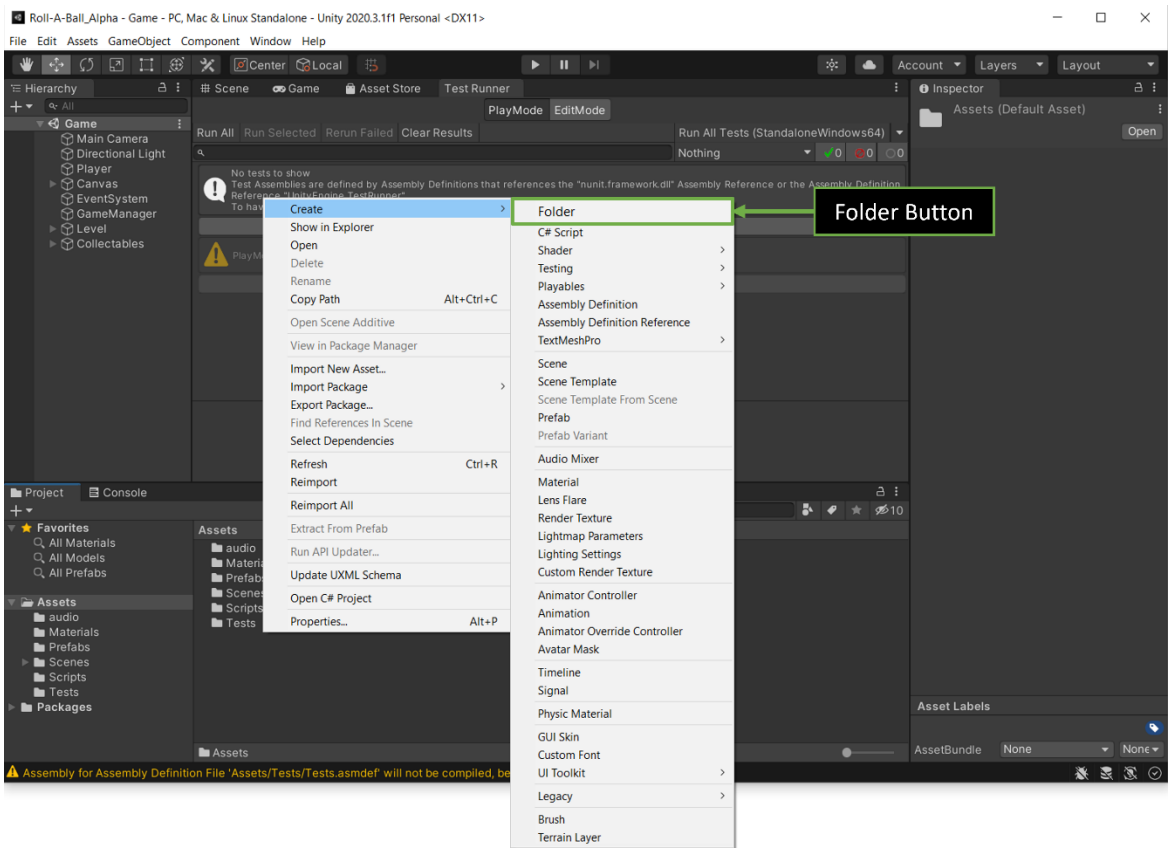
Step 3

➢ Once the menu appears, hover over the “Create” dropdown menu



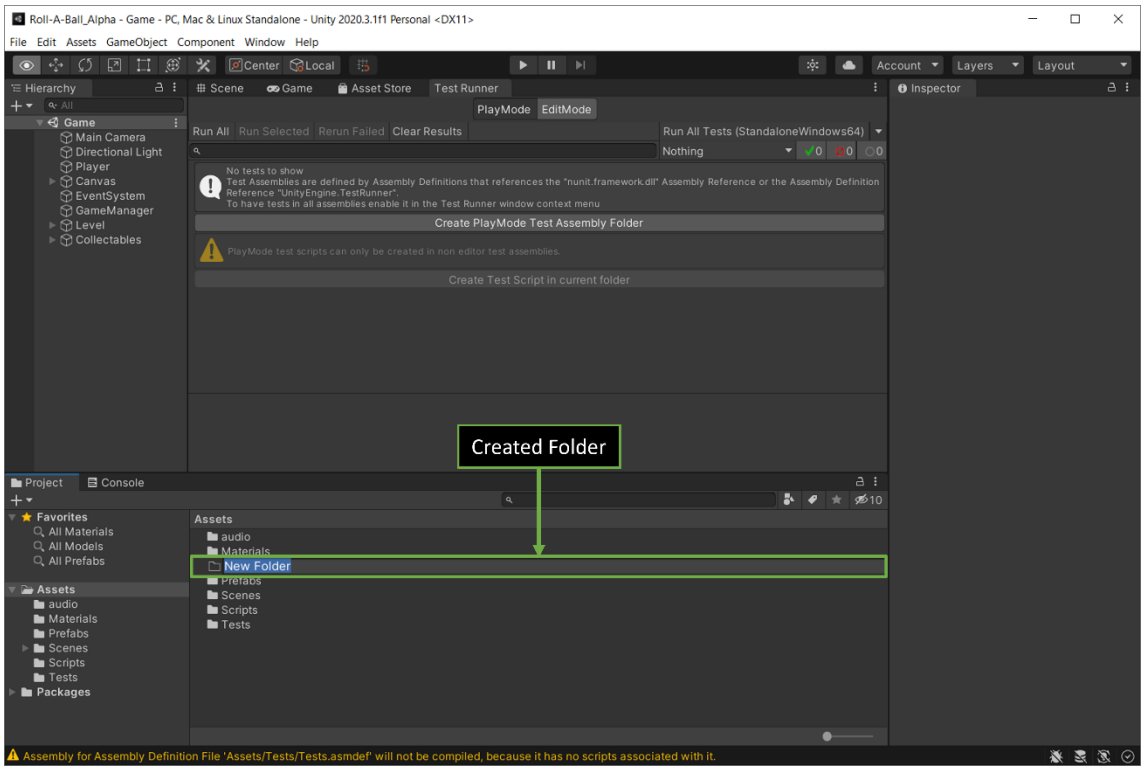
Step 4

➢ Left click once on the “Folder” button



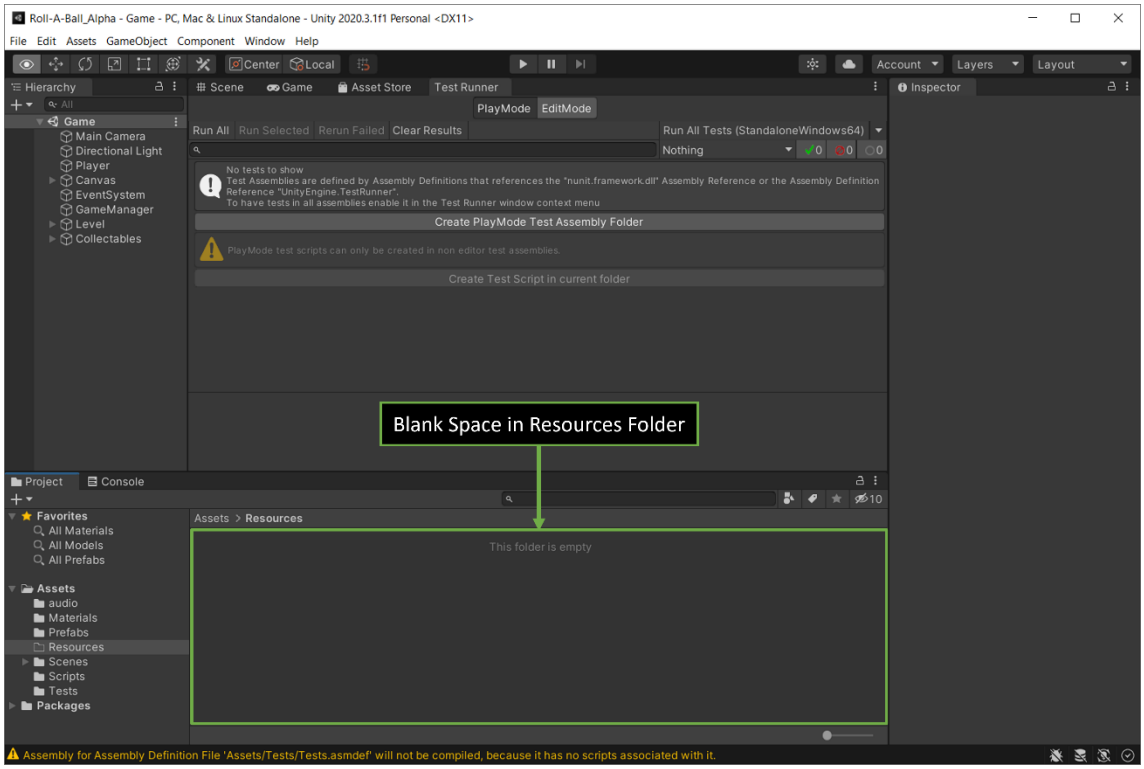
Step 5

- Rename the created folder within the “Assets” folder by typing in “Resources”
- Press enter twice to rename the folder and then open it



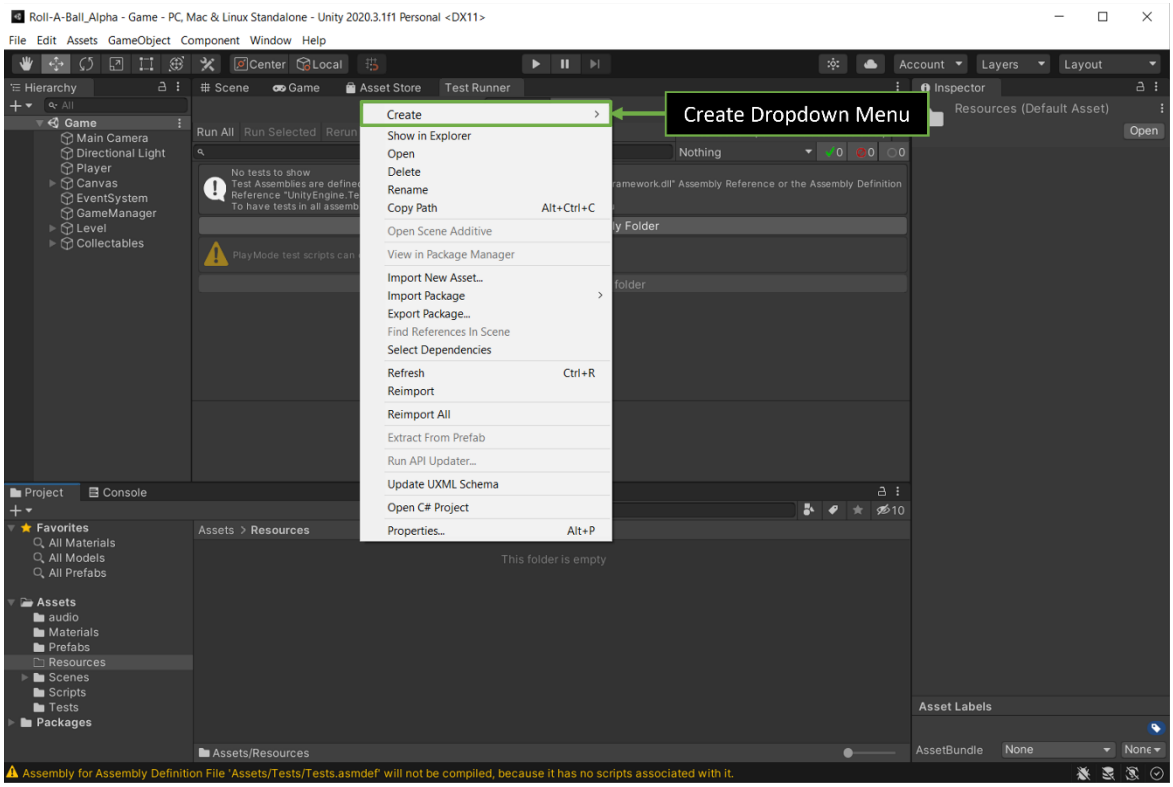
Step 6

- Once the Resources folder is open, right click once on the Blank Space within the Directory



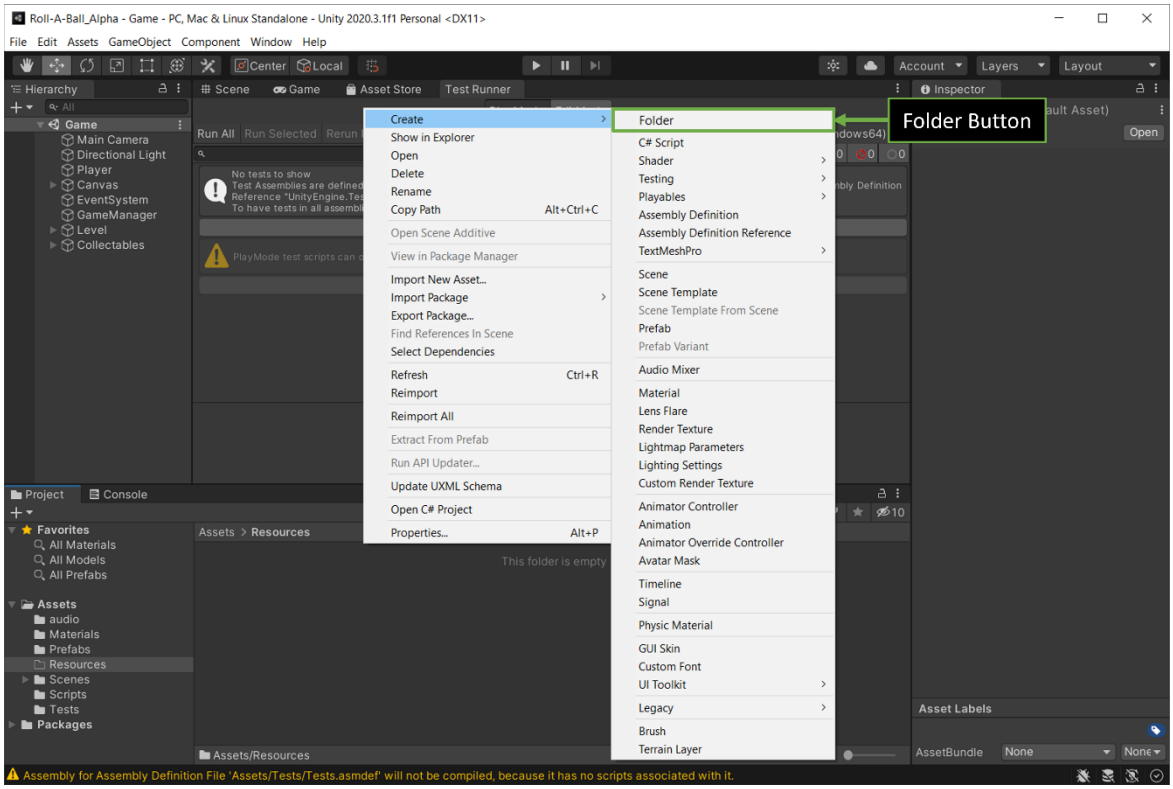
Step 7

➢ Once the menu appears, hover over the “Create” dropdown menu



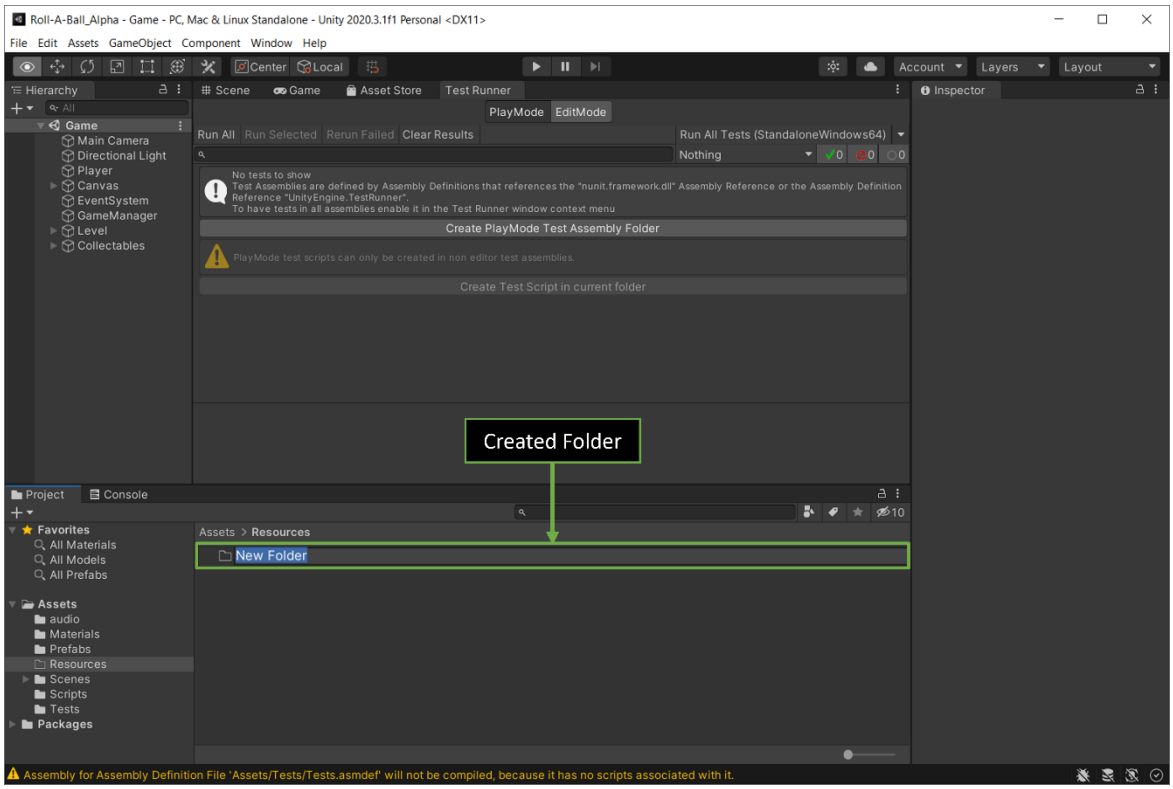
Step 8

➢ Left click once on the “Folder” button



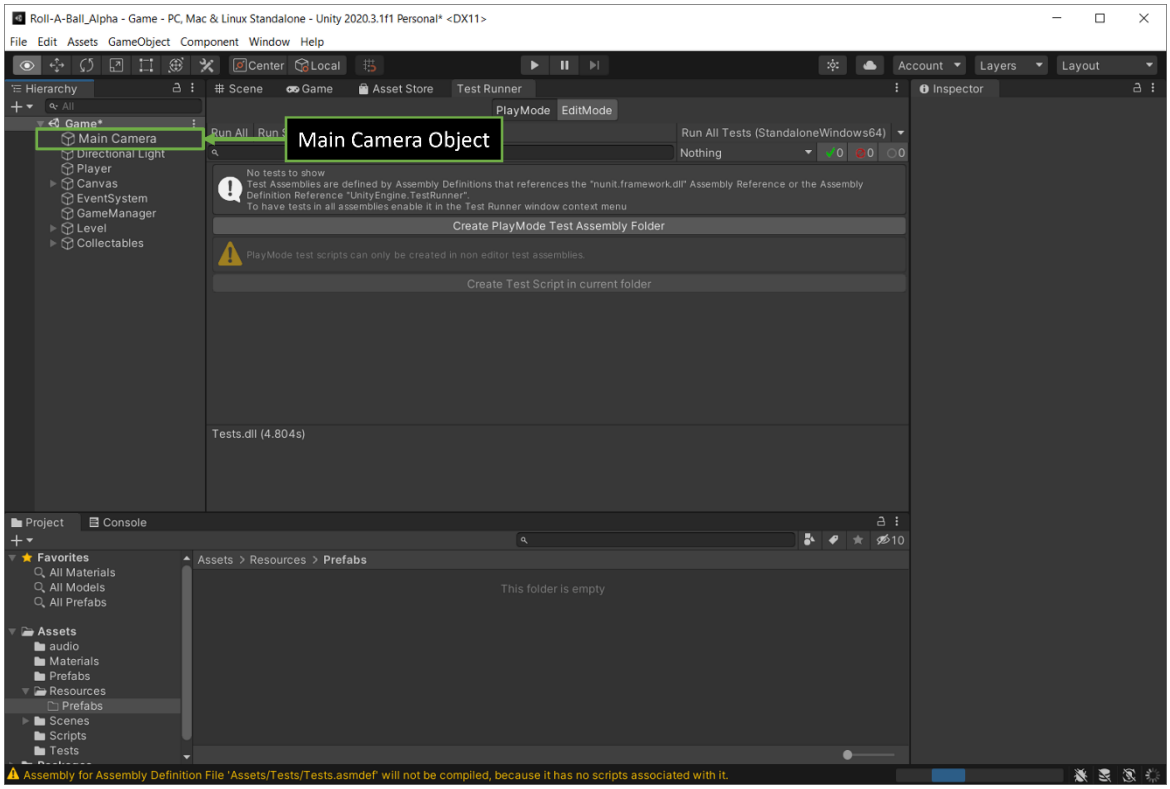
Step 9

- Rename the created folder within the “Assets” folder by typing in “Prefabs”
- Press enter twice to rename the folder and then open it



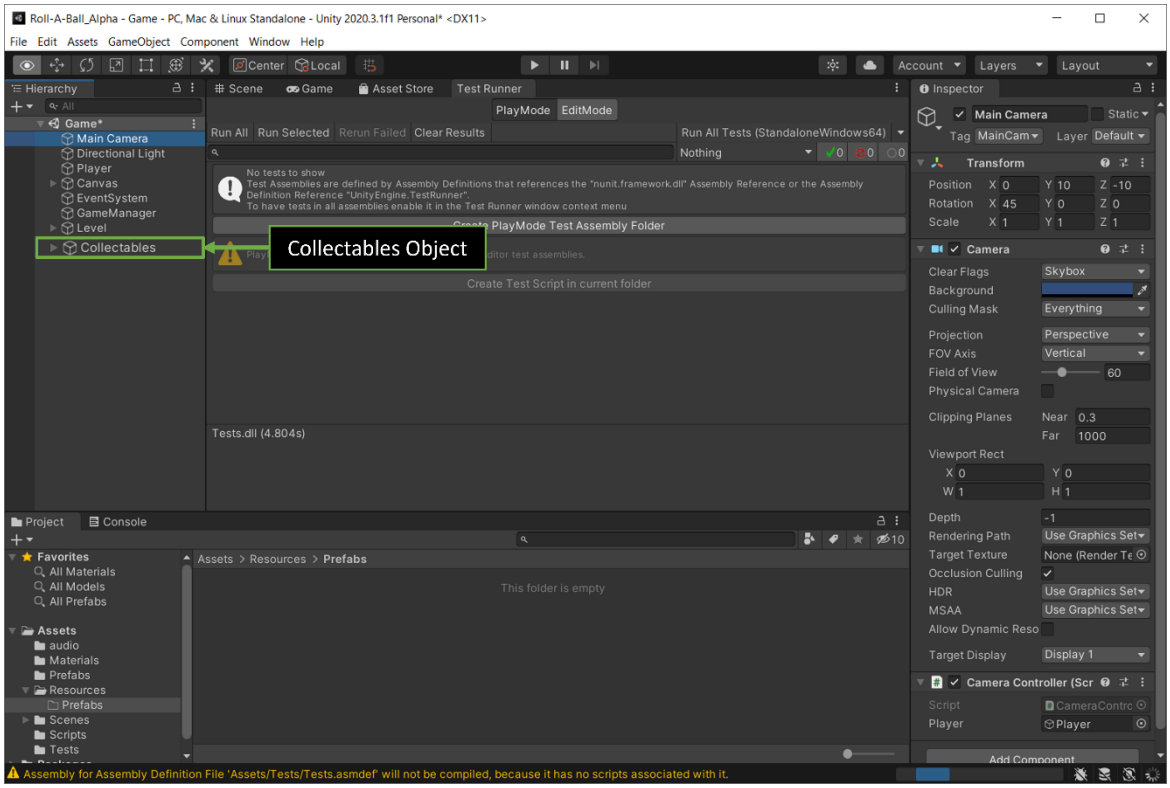
Step 10

- Left click once on the “Main Camera” object



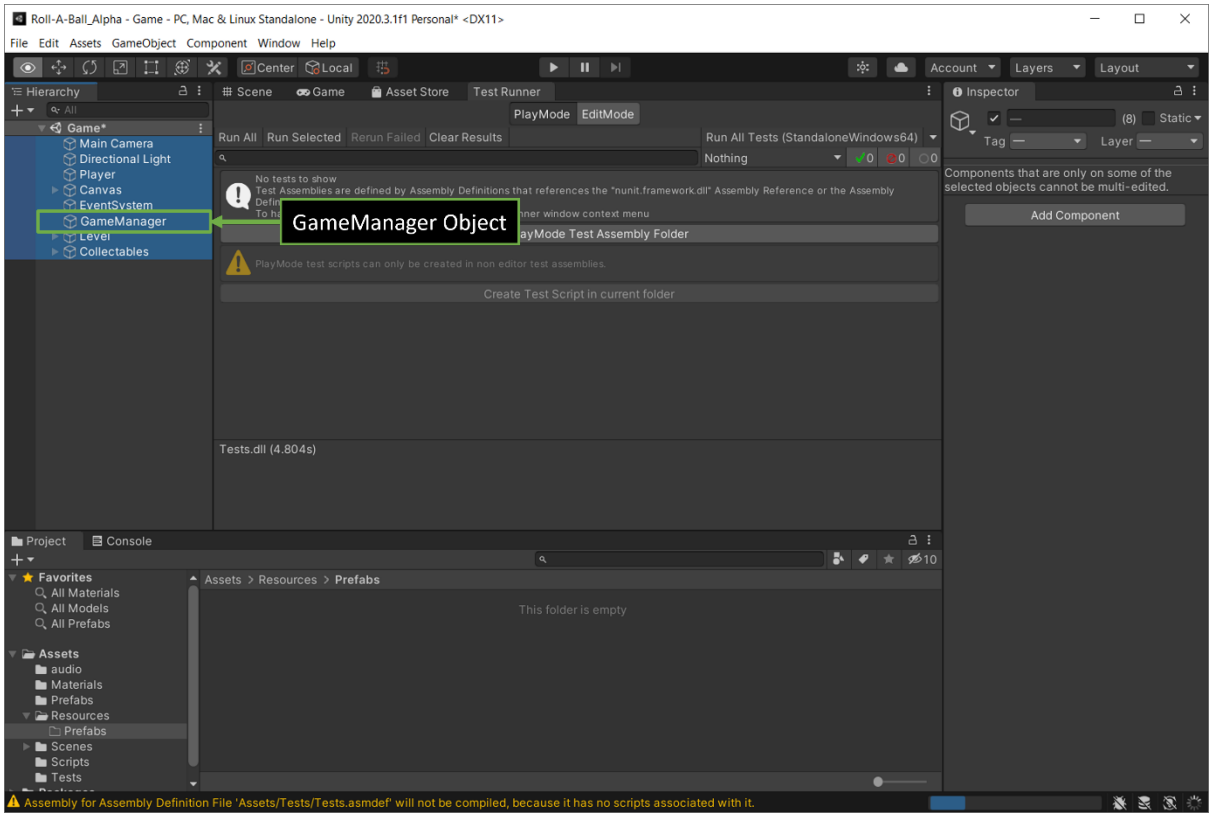
Step 11

➢ Press shift and left click once on the “Collectables” object



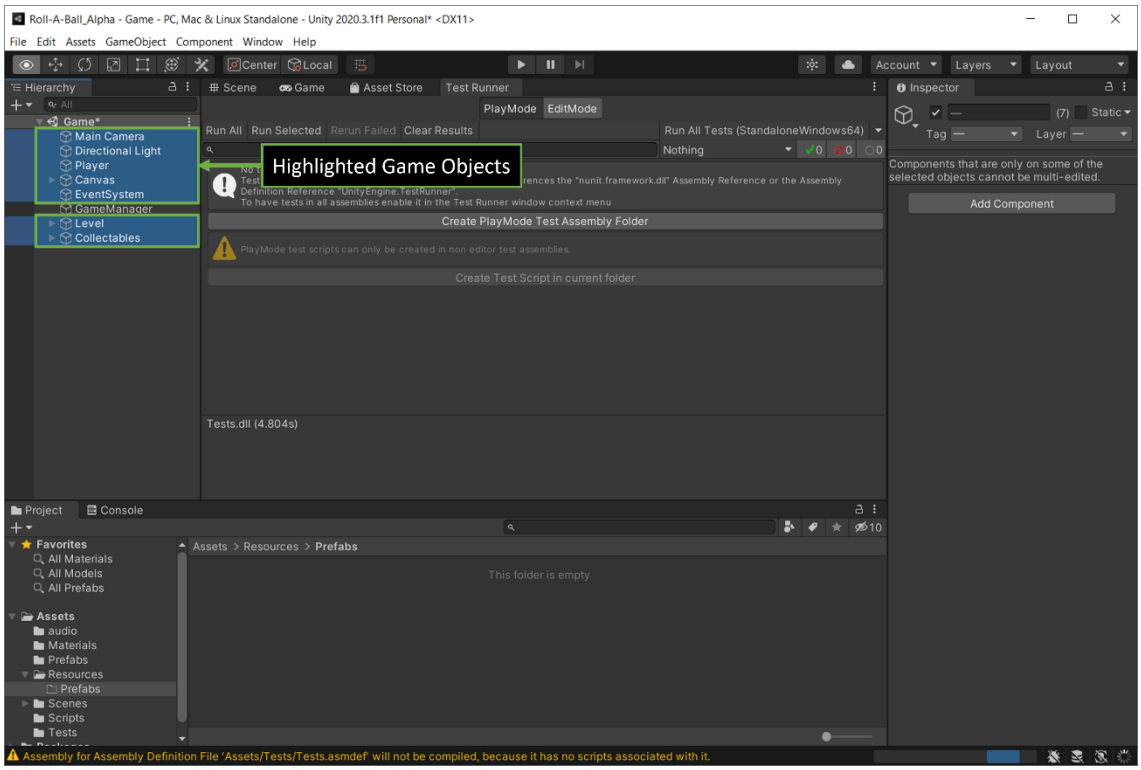
Step 12

➢ Press control (CTRL) and left click once on the “GameManager” object



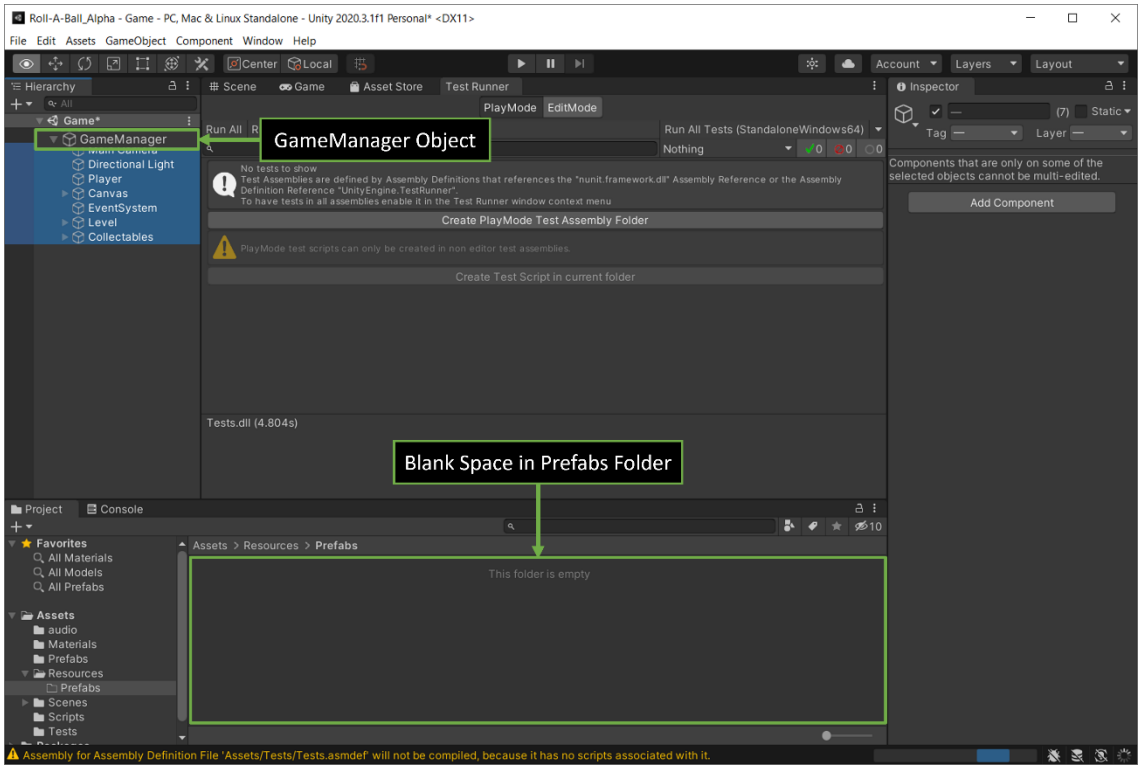
Step 13

- Left press on the highlighted game objects and drag them onto the “GameManager” object



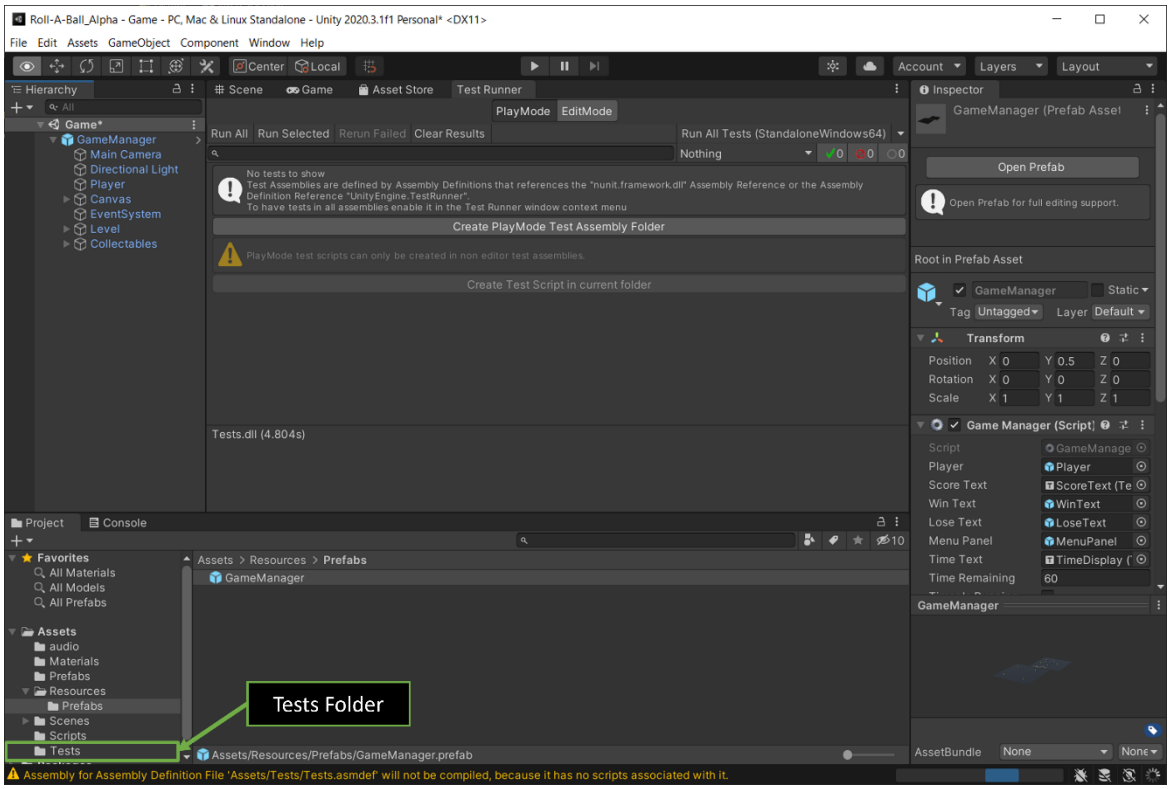
Step 14

- Left press on the “GameManager” object and drag it on to the blank space within “Prefabs” directory



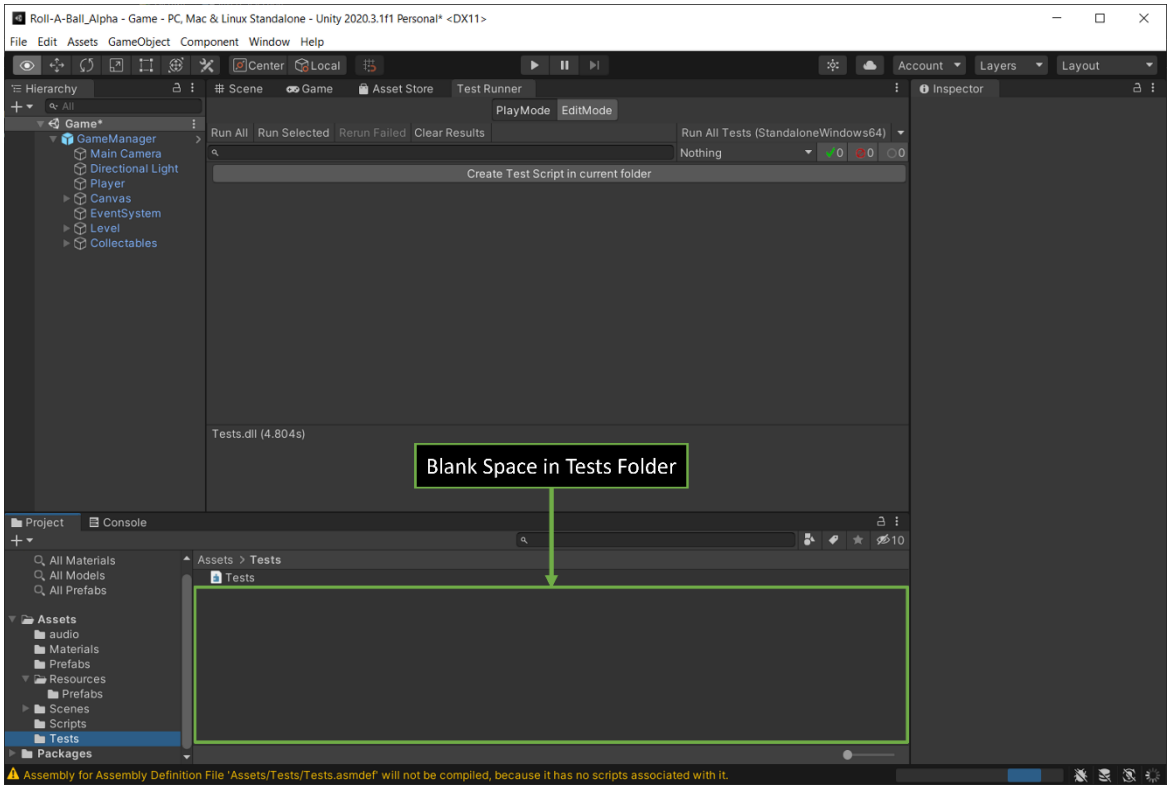
Step 15

➢ Left click once on the “Tests” folder within the project window hierarchy



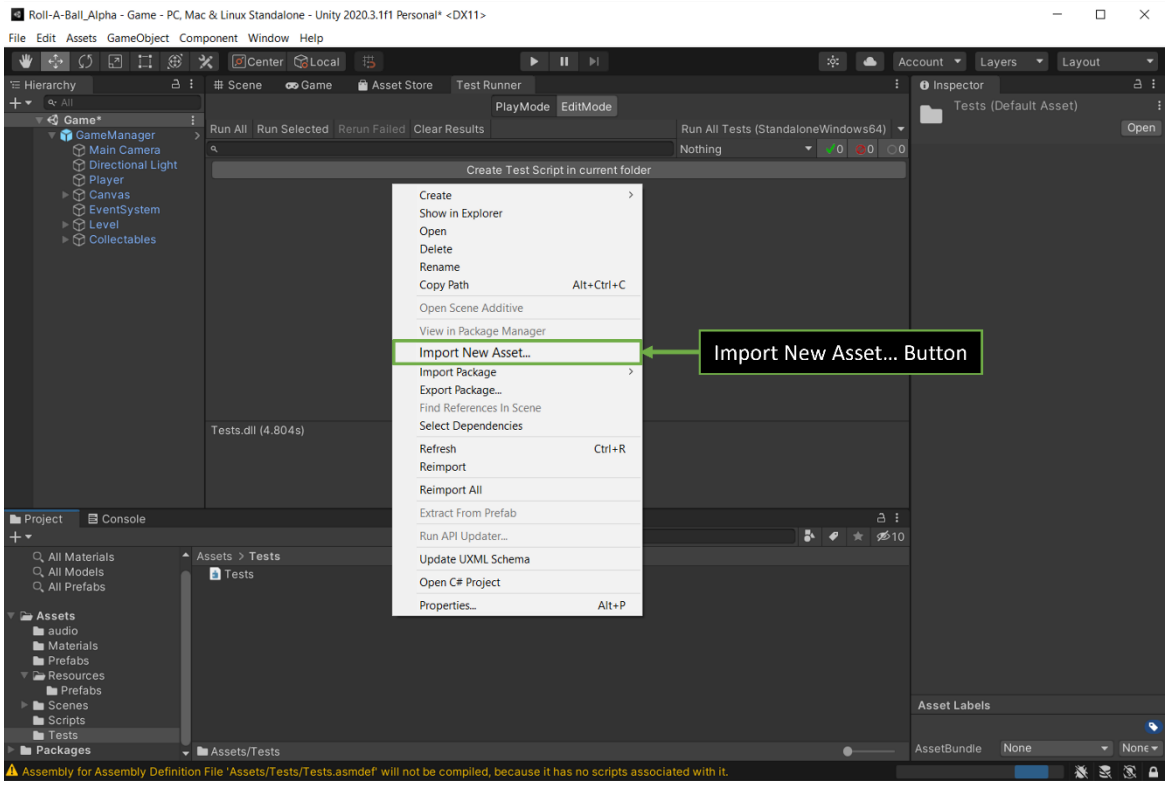
Step 16

➢ Right click once on the blank space within the Tests folder directory



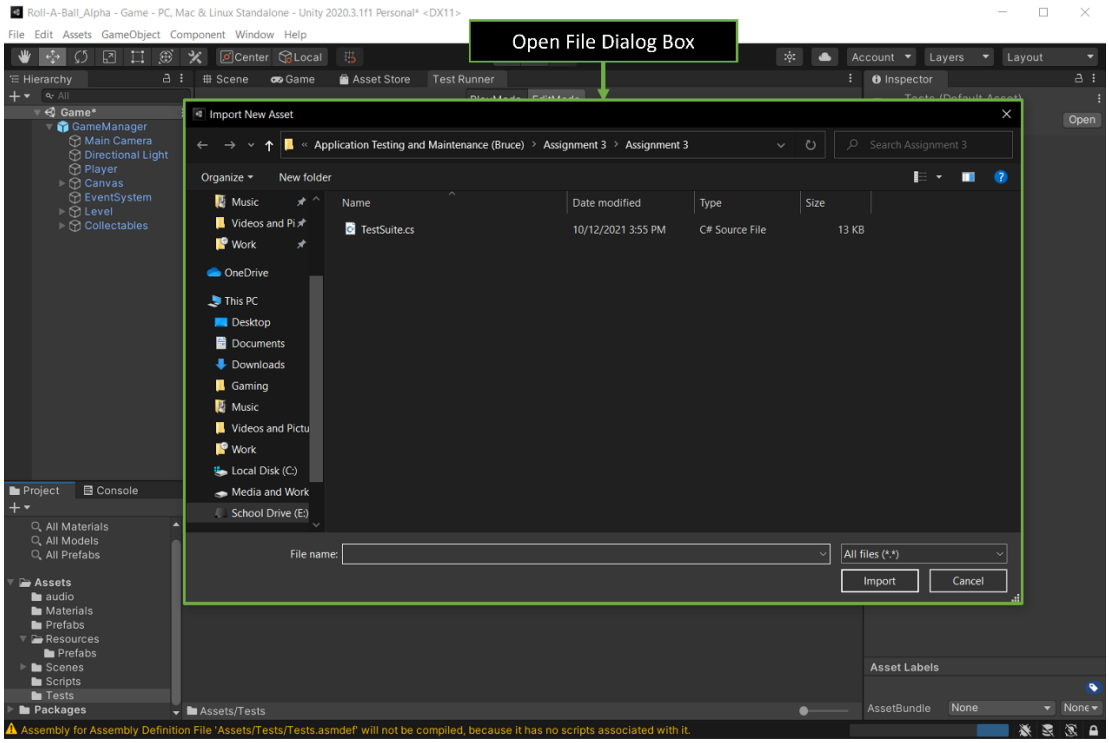
Step 17

- On the menu that appears, left click once on the “Import New Asset…” button



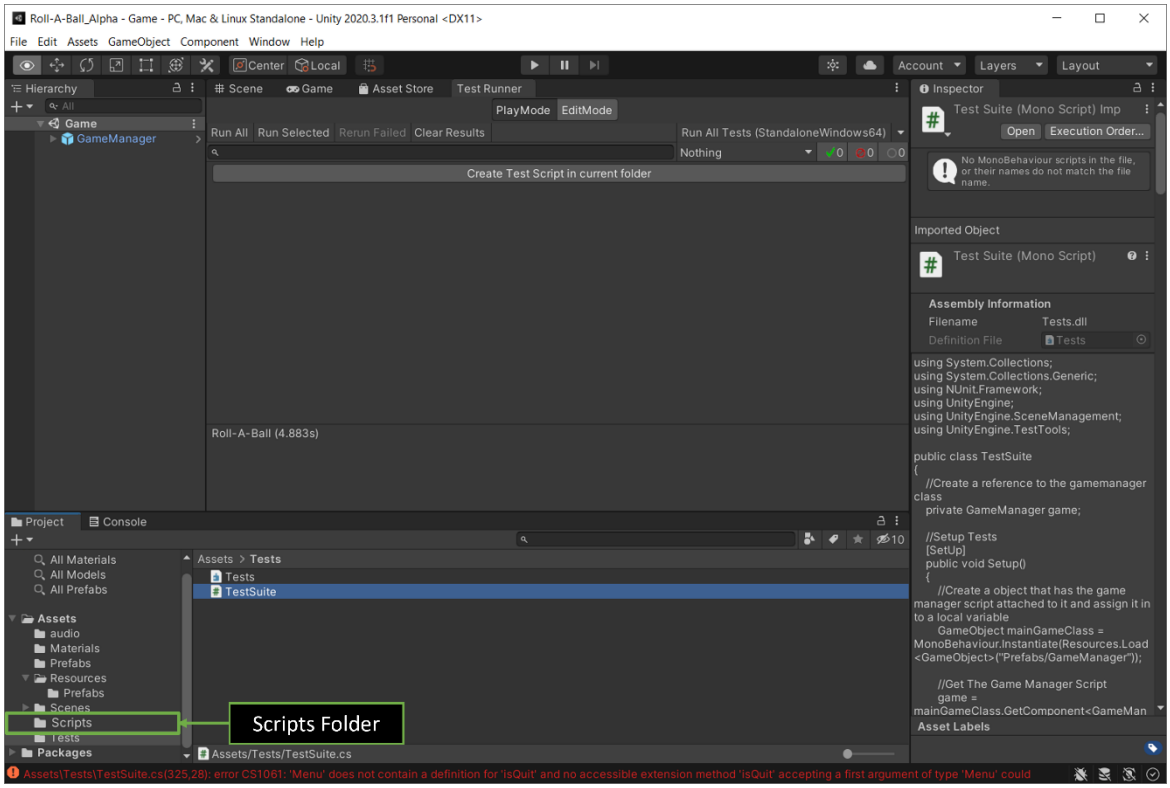
Step 18

- Once the open file dialog box appears, navigate to the TestSuite.cs file included in the assignment folder
- Left click twice on the file to import it into unity



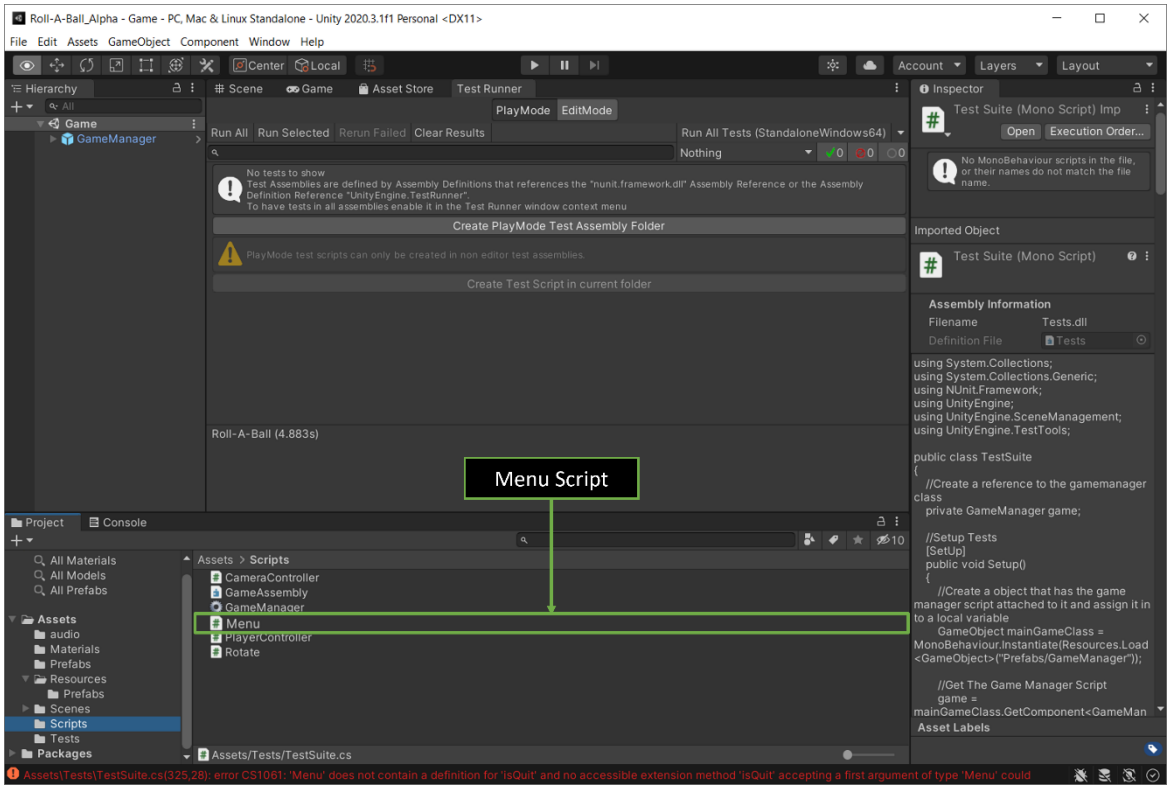
Step 19

➢ Left click once on the “Scripts” folder within the project window hierarchy



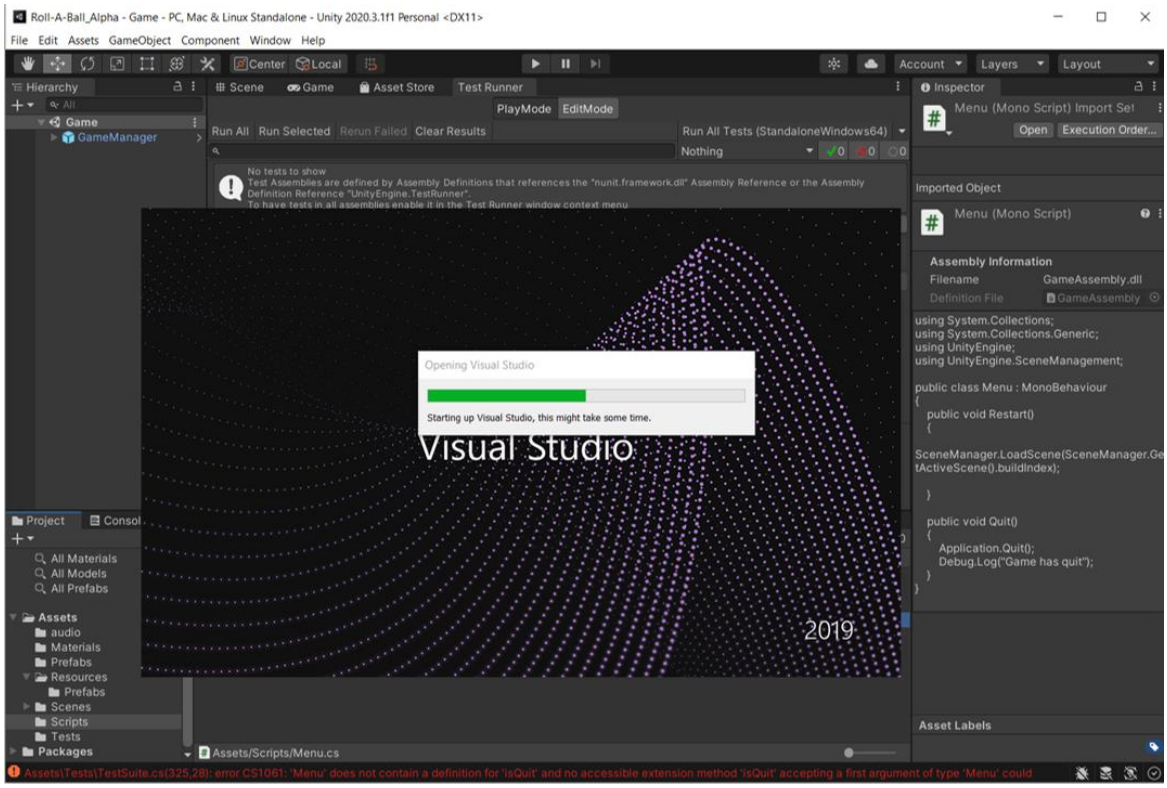
Step 20

➢ Left click twice on the “Menu” script to open it



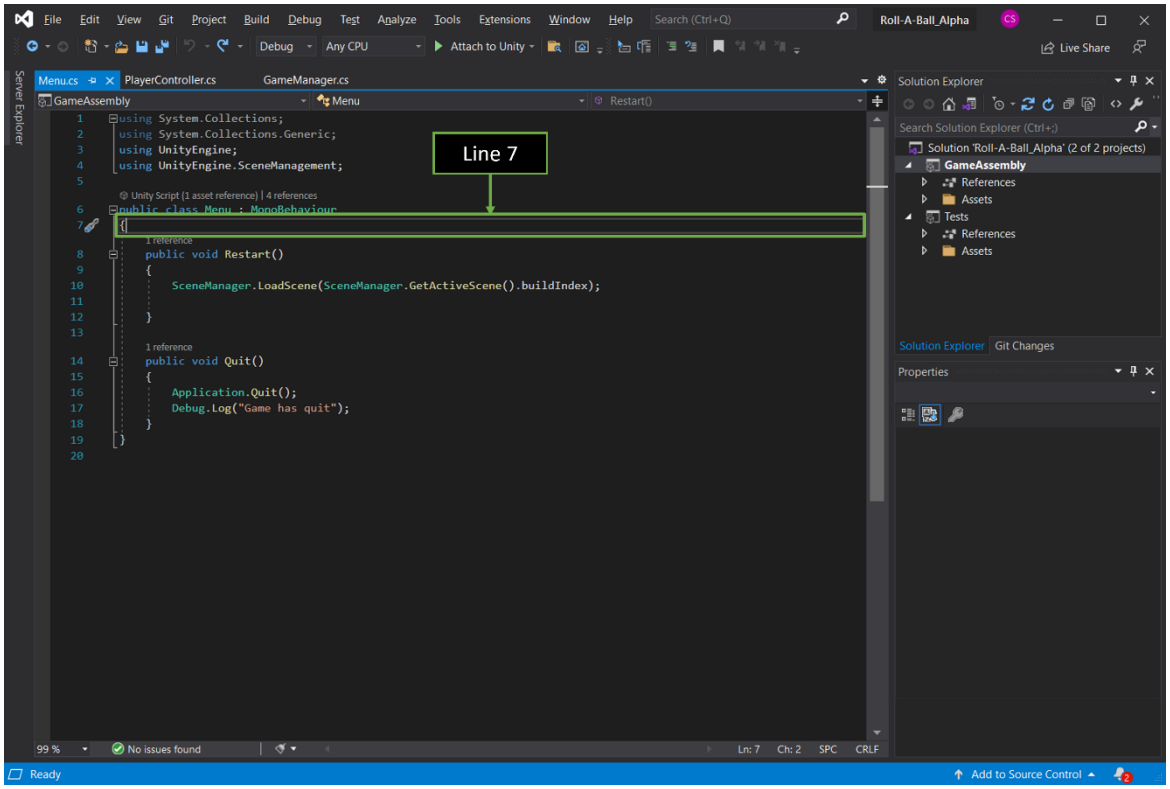
Step 21

➢ Wait for the menu script to open



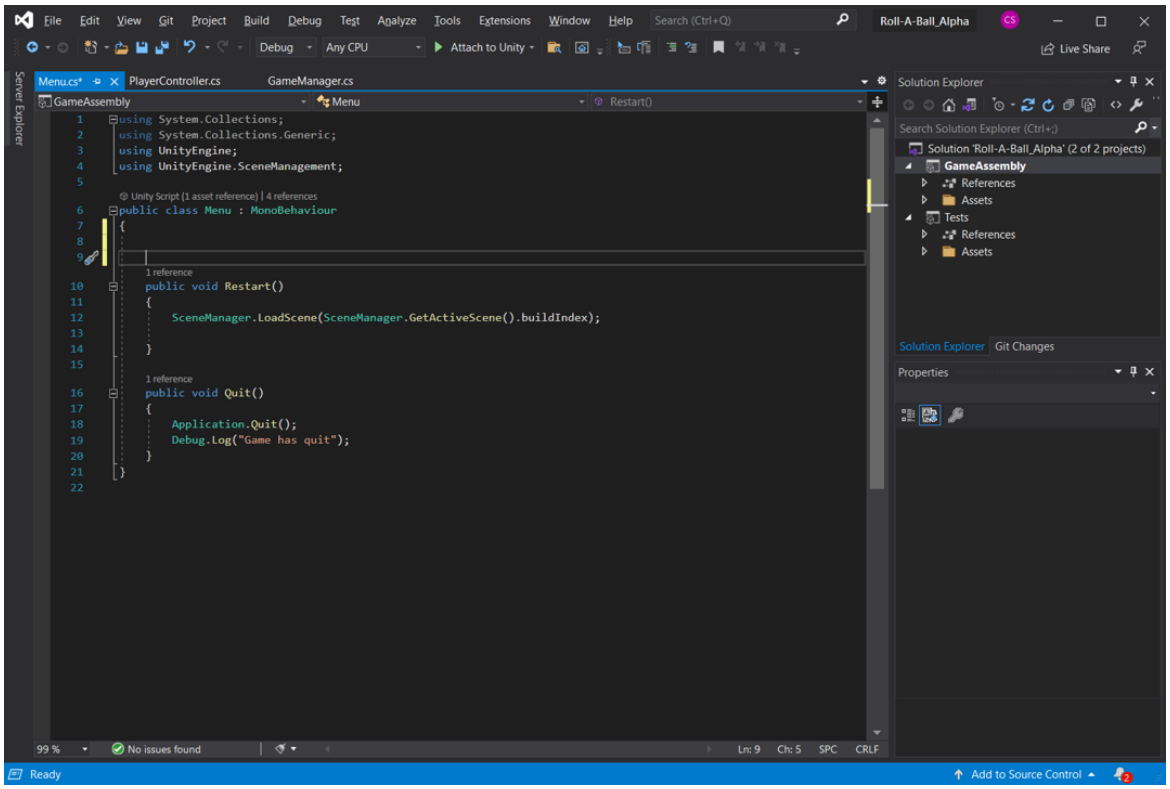
Step 22

➢ Once the menu script opens, left click once on line 7 ensuring that your mouse cursor is placed after the curl bracket



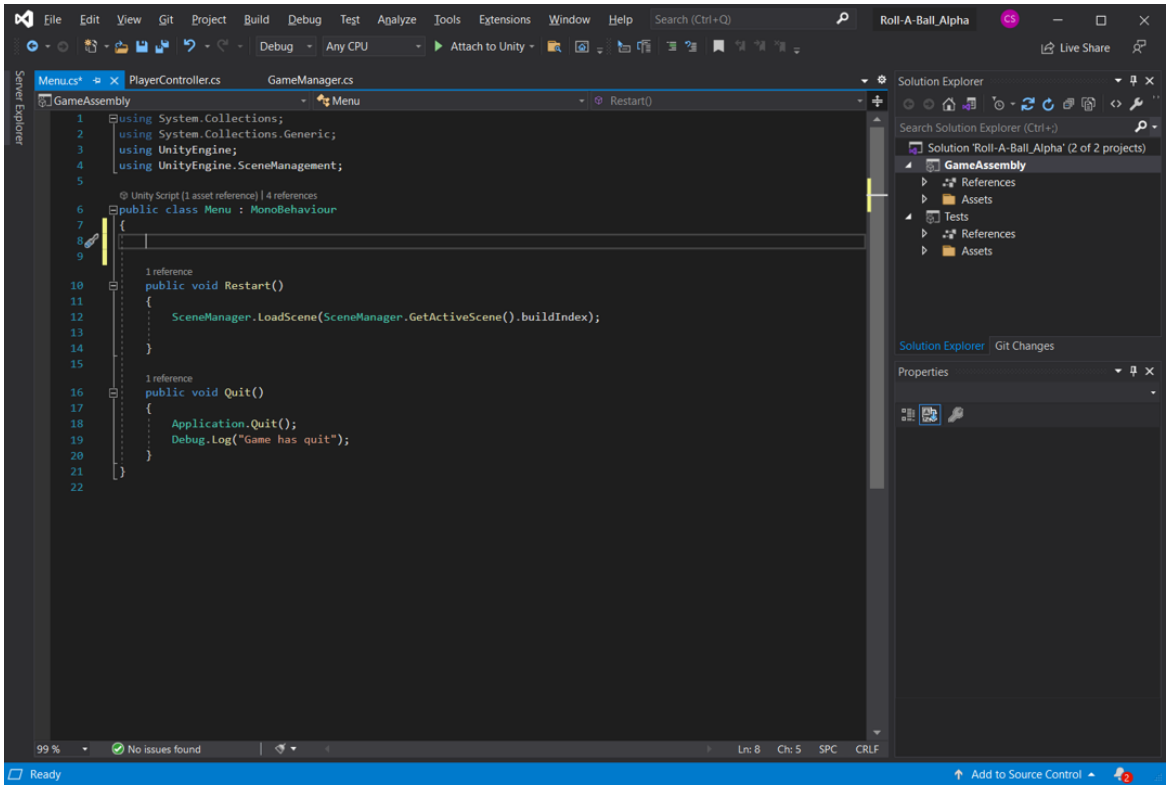
Step 23

- Press enter twice



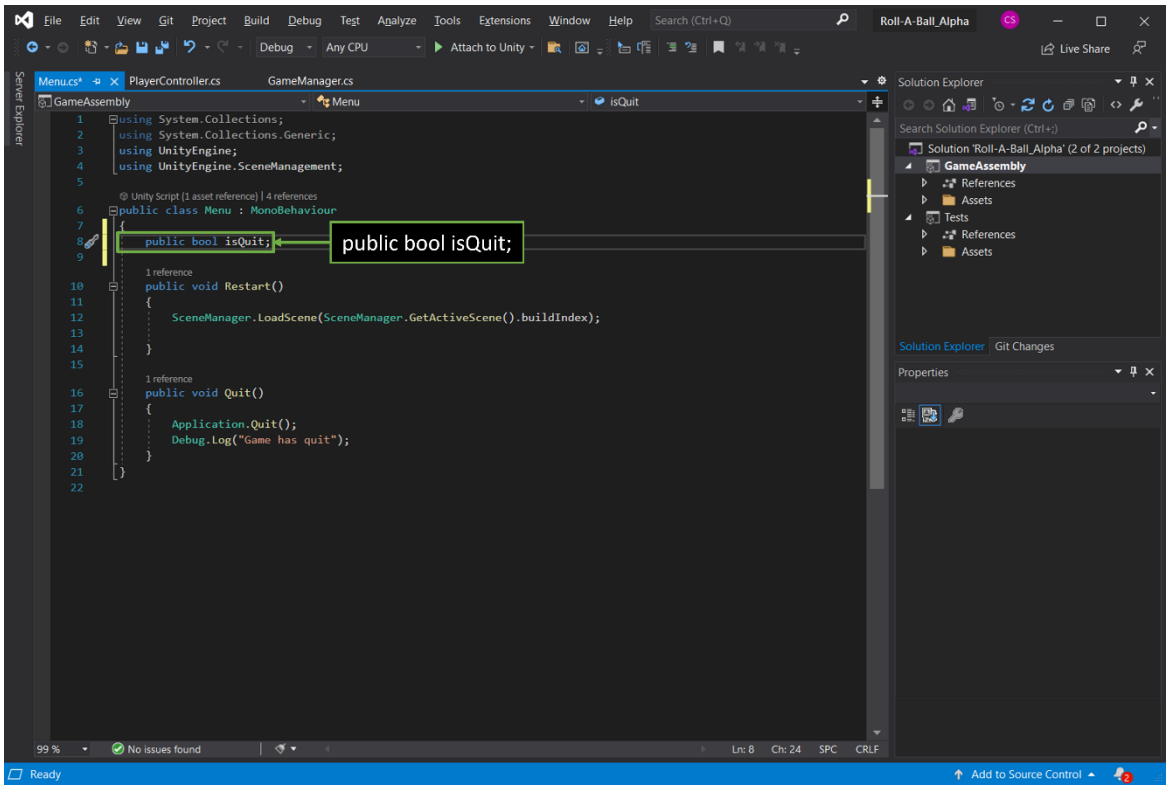
Step 24

- Press the up arrow once



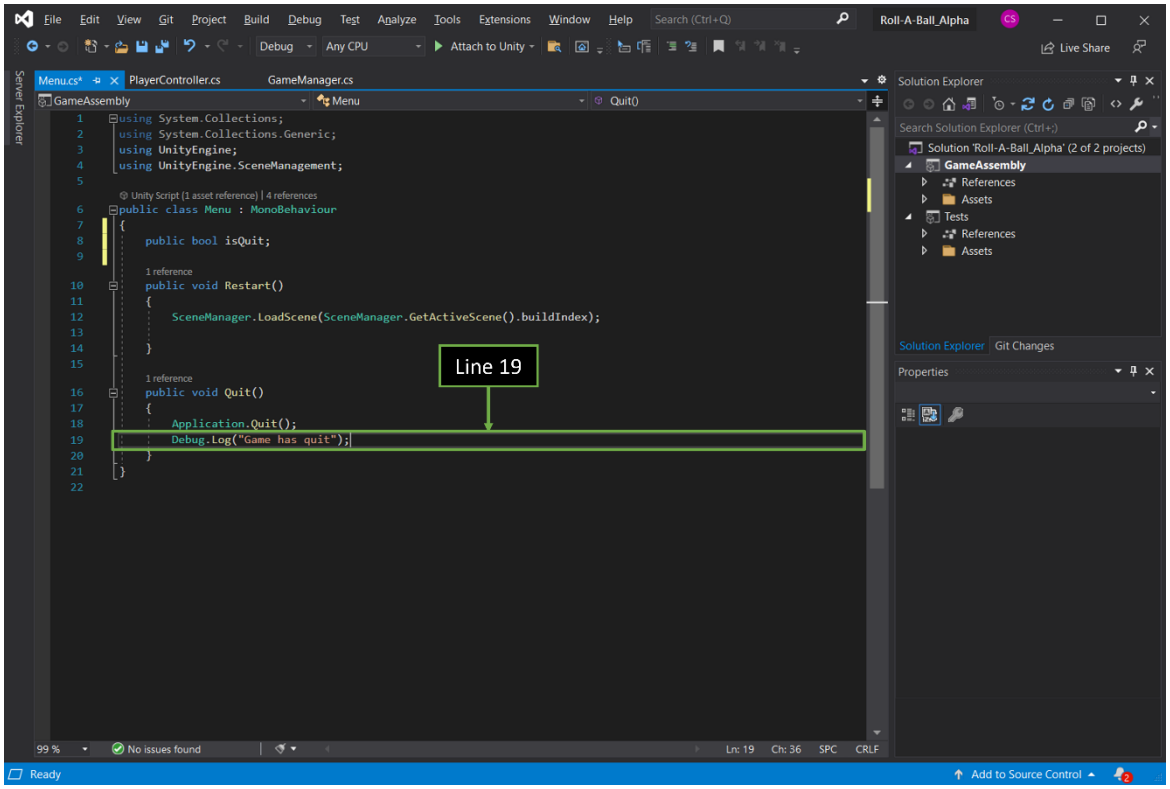
Step 25

➢ Type in “public bool isQuit;” without the quotation marks



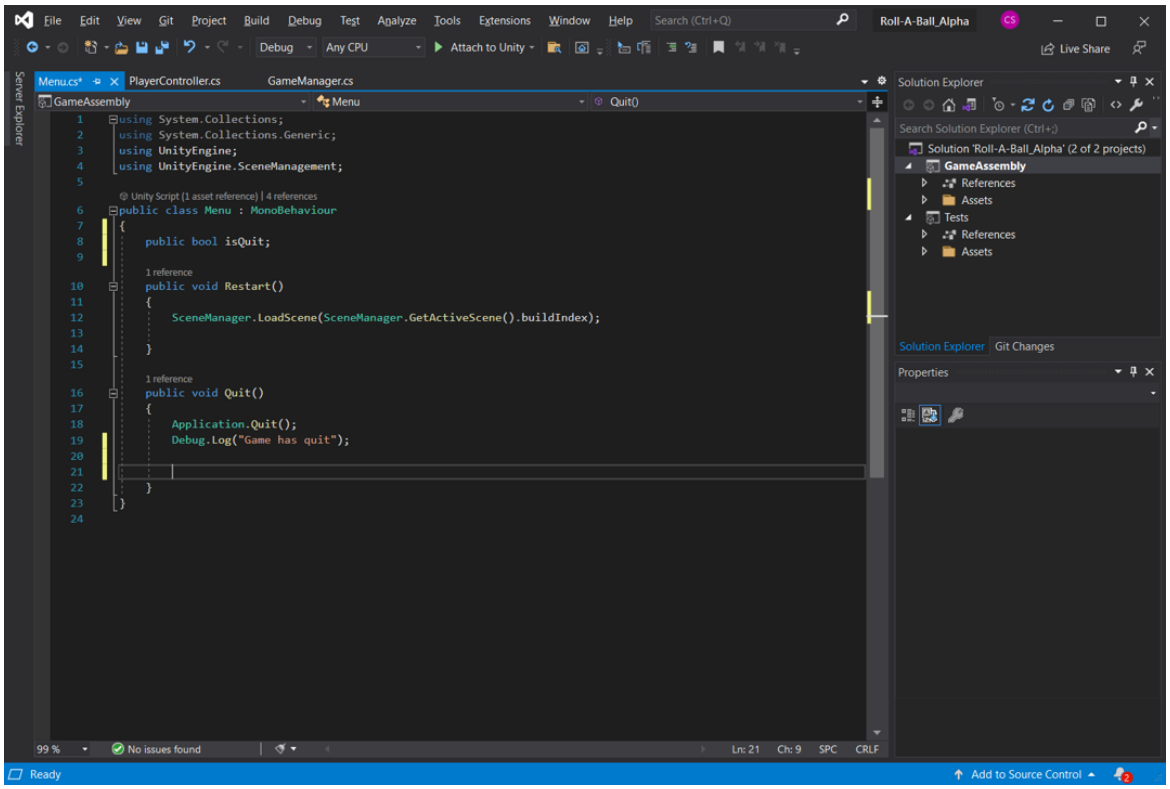
Step 26

➢ Left click once on line 19, ensuring that your mouse cursor is placed after the semicolon



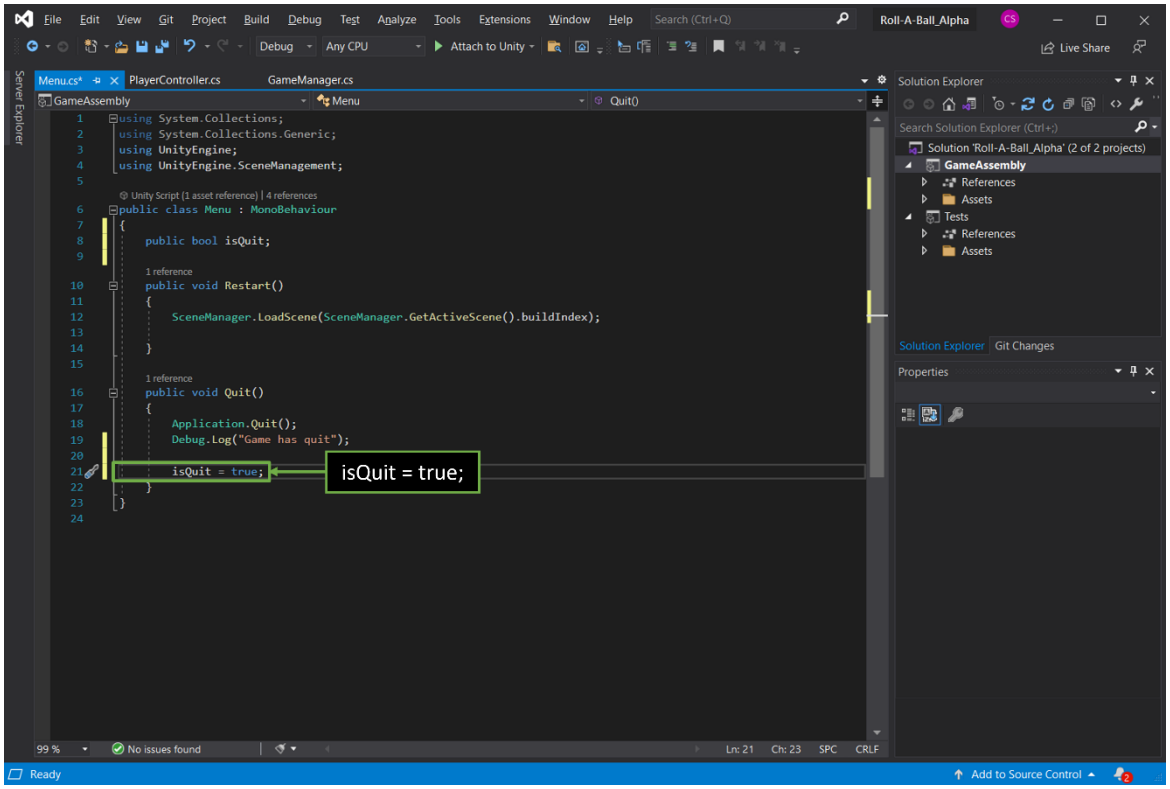
Step 27

Press enter twice



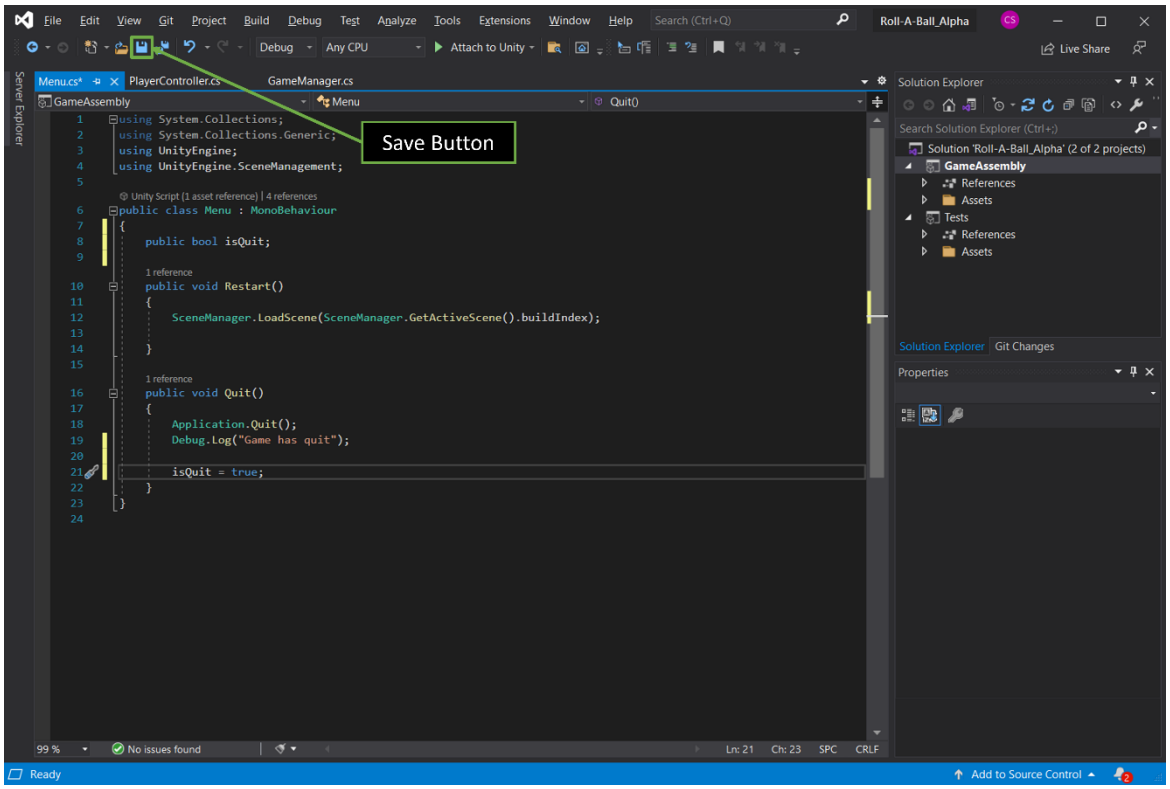
Step 28

➢ Type in “isQuit = true;” without the quotation marks



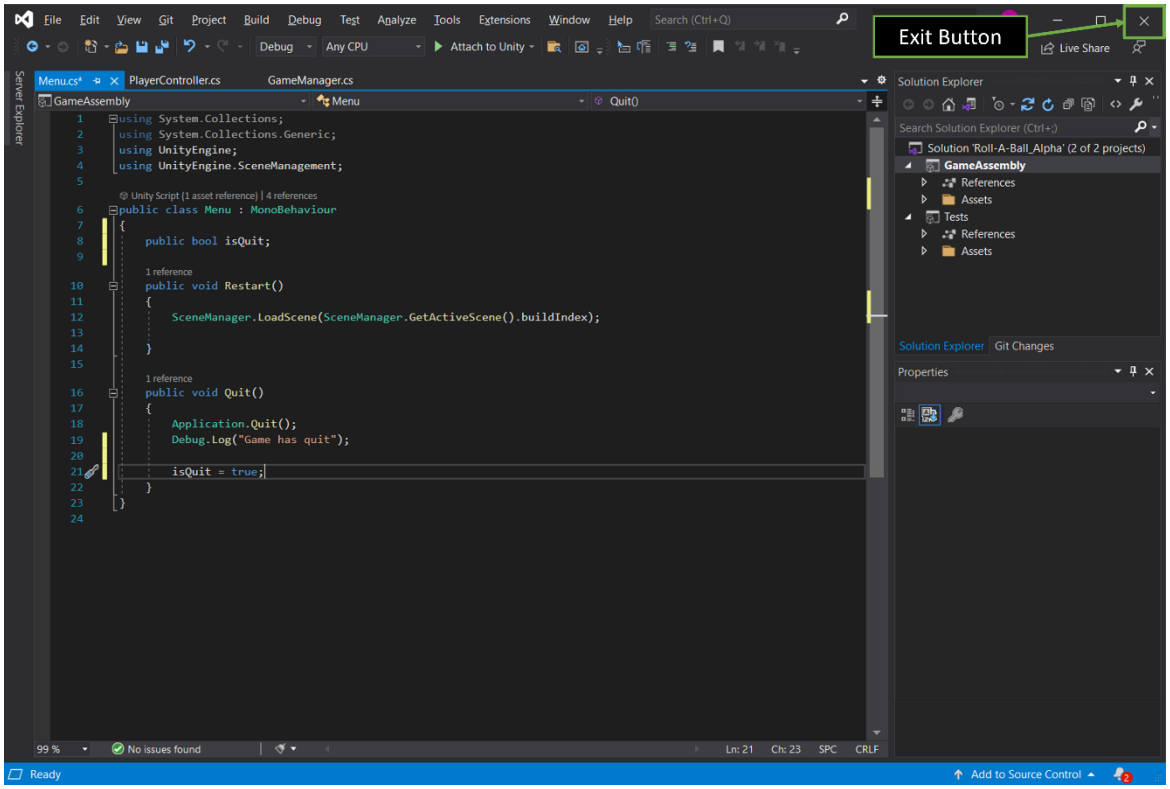
Step 29

➢ Left click the save button once



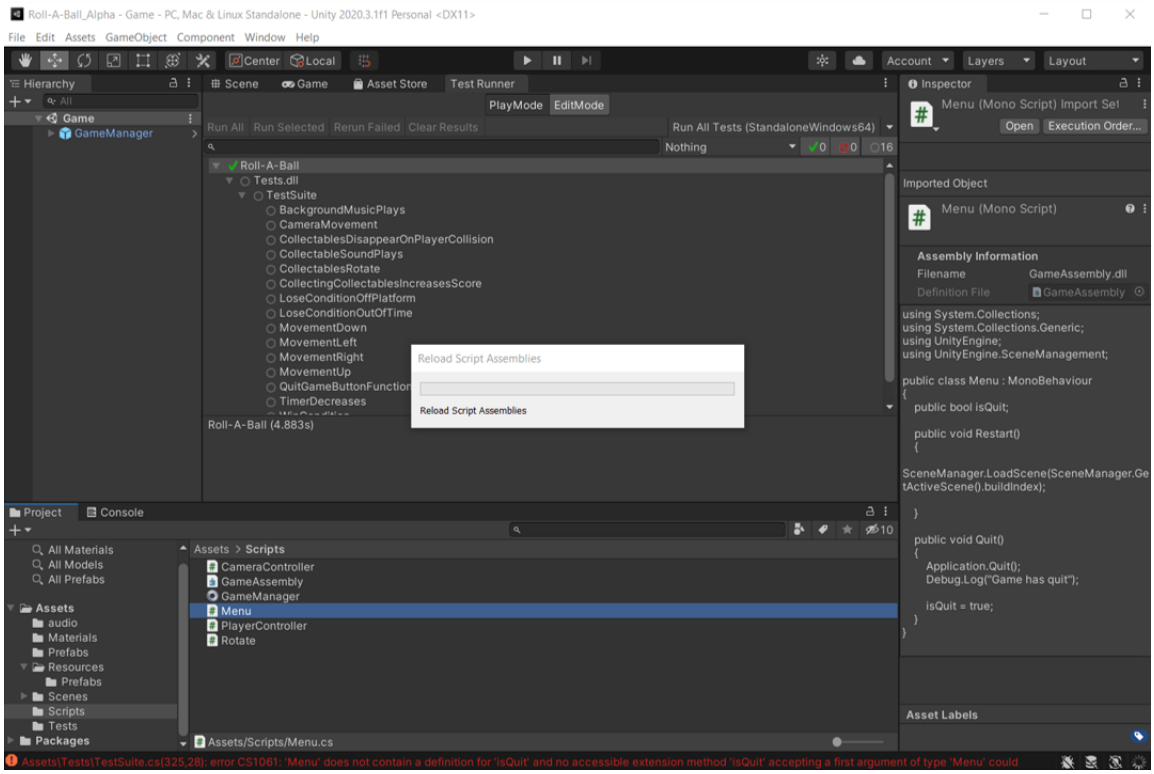
Step 30

➢ Left click once on the exit button on the top right of the window



Step 32

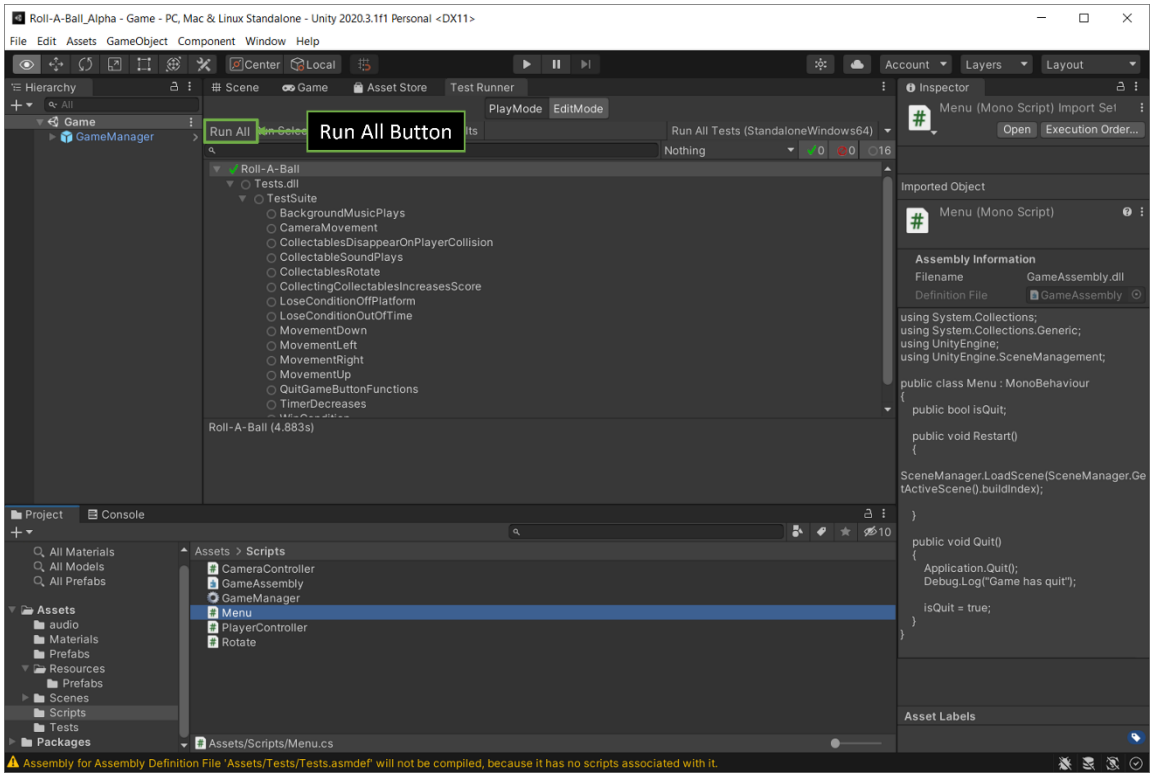
➢ Wait for the script assemblies to reload



Running The Unit Tests

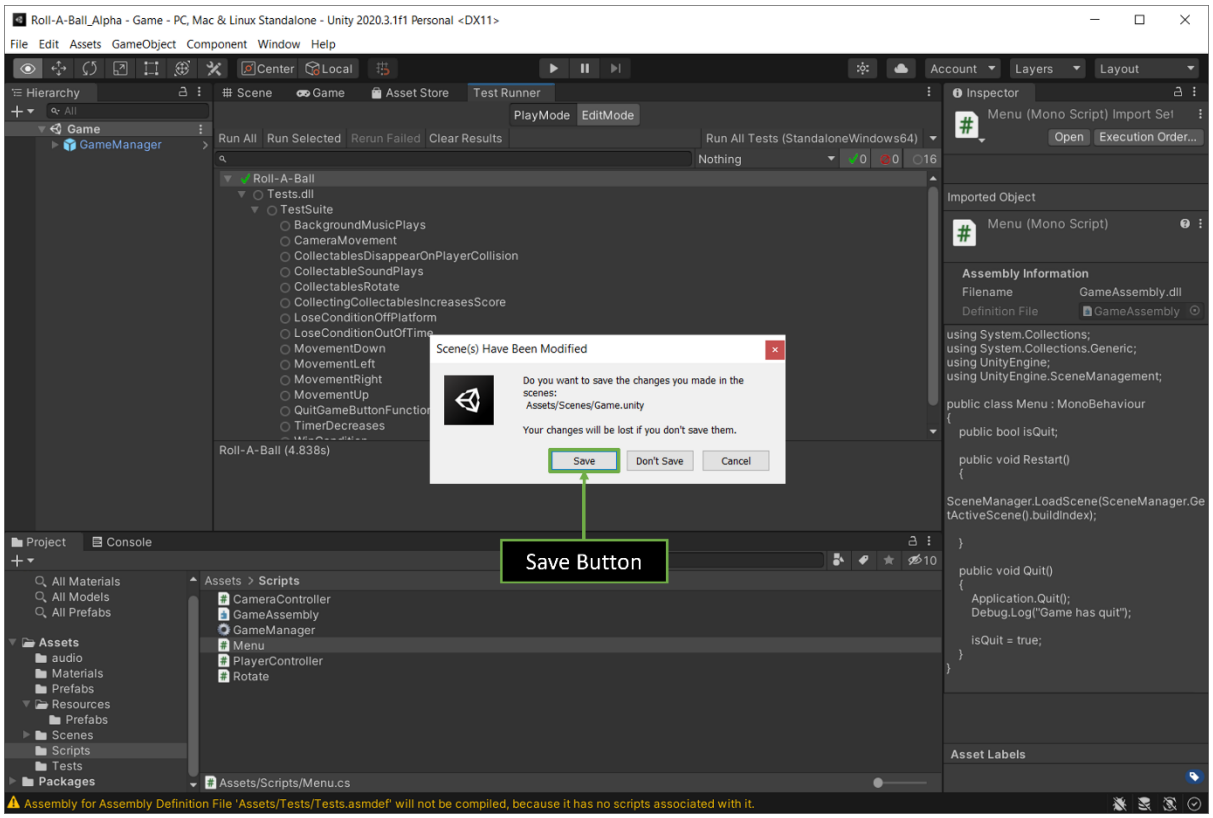
Step 1

➢ Left click once on the “Run All” button within the test runner window



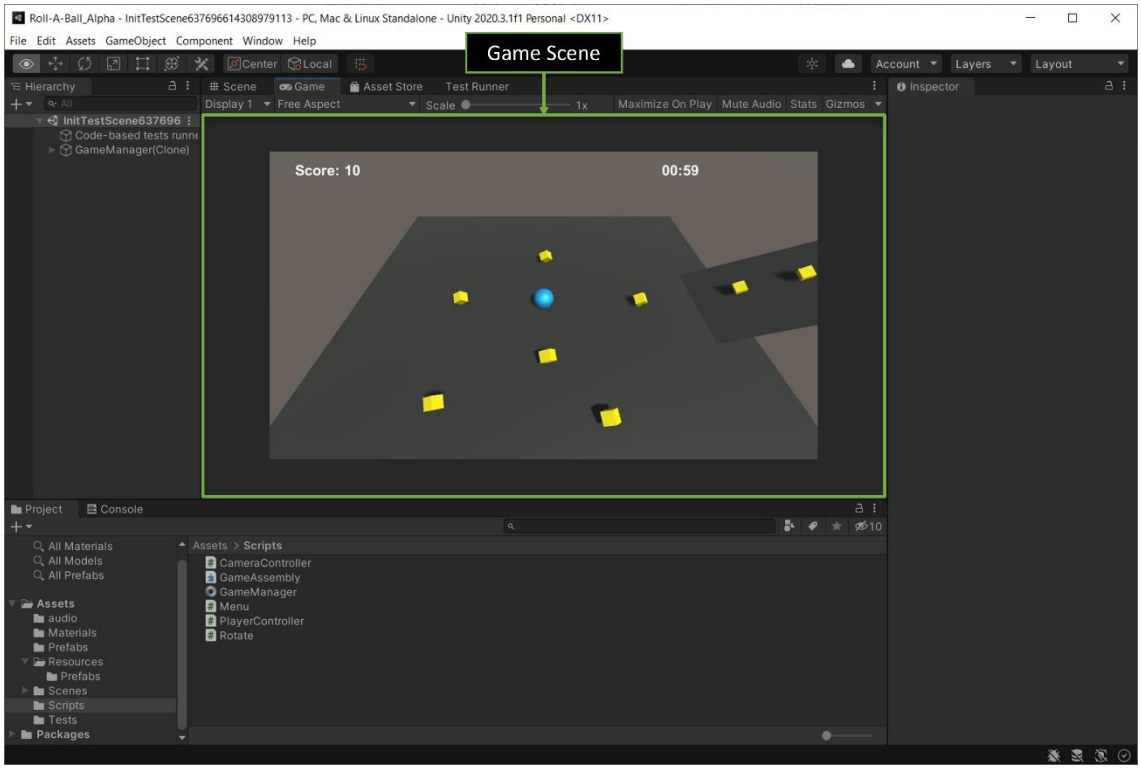
Step 2

- Once the Scene(s) Have Been Modified window appears, left click once on the “Save” button



Step 3

- Once you have clicked the save button, the center tab will change to the “Game” scene and run the unit tests



Step 4

- Once the unit tests have ran, left click once on the “Test Runner” tab to see the unit test results