

# Lab 2 - New Project with Primitives

## 1. Create a new Unity Project and rename your scene

*"Just like we did with the Prototype, the first thing we need to do is create a new blank project"*

1. [Create a new Unity project](#) called "Personal Project" using the **3D template** and setting the location to the "**Create with Code**" folder
2. After Unity opens, select your custom **Layout**
3. In the Project window, *Assets > Scenes*, rename "**SampleScene**" to "My Game"

## 2. Create a background plane

*"To orient yourself in the scene and not feel like you're floating around in mid-air, it's always good to start by adding a background / ground object"*

1. In the Hierarchy, *Right-click > 3D Object > **Plane*** to add a plane to your scene
2. In the Plane's Inspector, in the top-right of the Transform component, click on the three dots icon **> Reset**
  1. **Note:** the three dots will appear as a gear icon in older versions of Unity.
3. Increase the **XYZ scale** of the plane to (5, 1, 5)
4. Adjust your position in Scene view so you have a good view of the Plane

## 3. Create primitive Player with a new material

*"Now that we have the empty plane object set up, we can add the star of the show: the player object"*

1. In the Hierarchy, *Right-click > 3D Object > **Sphere***, then rename it "Player"
2. In Assets, *Right-click > Create > **Folder*** named "Materials"
3. Inside "Materials", *Right-click > Create > **Material*** and rename it "Blue"
4. In Blue's Inspector, click on the **Albedo color** box and change it to a blue
5. **Drag** the material from your Assets onto the Player object

## 4. Position camera based on project type

*"Now that we have the player in there, we need the best view of it, depending on our type of project"*

1. For a **top-down** game, position the camera at (0, 10, 0) directly over the player and rotate it 90 degrees on the **X axis**
2. For a **side-view** game, rotate the **Plane** by -90 degrees on the **X axis**
3. For an **third-person** view game, move the camera up on the **Y and Z axes** and increase its **rotation on the X axis**

## 5. Enemies, obstacles, projectiles & materials

*"Now that we know how to make primitives, let's go ahead and make one for each object in our project"*

1. In the Hierarchy, create new **Cubes**, **Spheres**, and **Capsules** for all other main objects, **renaming** them, **repositioning** them, and **scaling** them
2. In your Materials folder, create **new materials** for as many colors as you have unique objects, editing their color to match their name, then **apply** those materials to your objects
3. Position all of your objects in locations relative to each other that make sense

## 6. Export a Unity Package backup file

*"Since we're going to be putting our hearts and souls into this project, it's always good to make backups"*

1. **Save** your Scene
2. In the Project window, Right-click on the "Assets" folder > **Export Package**, then click Export
3. Create a **new "Backups" folder** in your Personal Project folder, then **save** it with your name and the version number (e.g. Carl\_V0.1.unitypackage")

## 7. Lesson Recap

New progress

- New project for your Personal Project
- Camera positioned and rotated based on project type
- All key objects in scene with unique materials

New concepts & skills:

- Primitives
  - Create new materials
  - Export Unity packages
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