

# ***Multiplayer Shooting Game***

## **Unity:**

### **Scenes:**

1. Lobby
  - 1.1. Components:

Lobby Manager: Imported from Asset Store. Package contains some prefab to use .We created empty scene Lobby and added Lobby Manager named prefab in it. The References of Lobby . Play Scenes and Game Player Prefab are assigned.
2. MainScene2
  - 2.1. Components:
    - 2.1.1. SpawnPoints: Are empty GameObjects where the Player will be spawned. Network Start Position Component has been added on it.
    - 2.1.2. Surrounding: It is simply a plane on which the player moves around.
    - 2.1.3. Canvas: Has the mobile joystick for player movement and turn and look component which allows us to rotate the player whose prefabs are available in Standard Package called CrossPlatformInputManager.

### **Prefabs:**

1. Player (Assets/Widget/TPS Templates)
  - 1.1 Scripts on Player:
    - 1.1.1. User Input: Moves the player according to the user input.
    - 1.1.2. Free Look Camera: Moves the camera according to the Mouse(or Touch Input).
    - 1.1.3. New Shot Effects: It has a RayCastHit object which checks the tag of the object hit, if the object is Enemy then it instantiates blood and decreases health else dust and other objects are instantiated.
    - 1.1.4. Assign Enemy: If Player is not a local player it's tag is changed to "Enemy"
    - 1.1.5. Player Assign in Camera: It integrates camera to the local player.
    - 1.1.6. Local Identity: If not a local player it destroys the health canvas.
    - 1.1.7. Player Health: It has the current health value of the player and when any player is hit, it decreases the current health of the player as well as the slider.
  - 1.2 Components:
    - 1.2.1 Network Animator: To sync the player animations in the network this component has been added.
    - 1.2.2 Network Transform: To sync the player movement and rotation this component has been added.
    - 1.2.3 Network Identity: To make the all player local this component has been added.
    - 1.2.4 HUDCanvas: It has the health slider and 2 textboxes added for testing of health bugs.

## **Android:**

### **Classes:**

1. WifiManager: This class provides the primary API for managing all aspects of Wi-Fi connectivity.
  2. WifiConfiguration: This class is used to configure our hotspot, as soon as the hotspot is on it is configured to our configurations i.e. ssid = Game and key = 12345678 with other specifications like status, protocols etc.
  3. Method:
    - 3.1. A Method provides information about, and access to, a single method on a class or interface. The reflected method may be a class method or an instance method (including an abstract method).
    - 3.2. A Method permits widening conversions to occur when matching the actual parameters to invoke with the underlying method's formal parameters, but it throws an `IllegalArgumentException` if a narrowing conversion would.
  4. WifiReciever: A custom built class which extends `BroadcastReciever` class and is called when no. of connections change and is used for scanning of devices and are added in list.
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