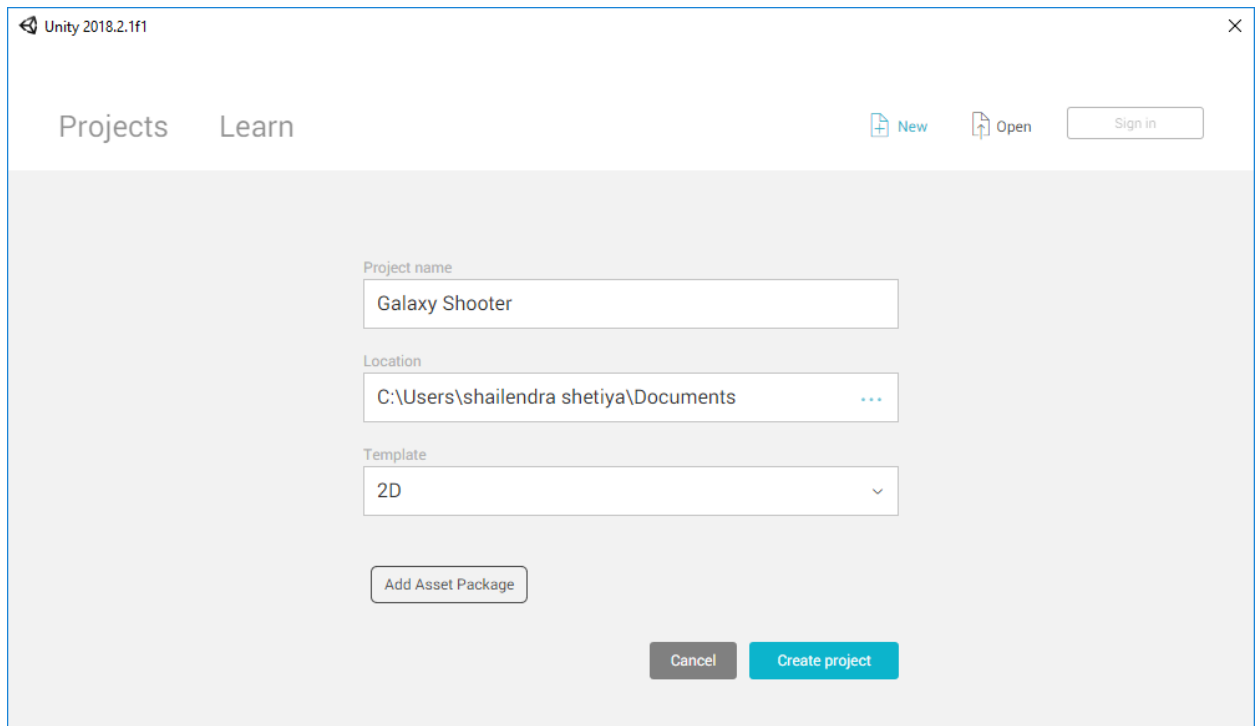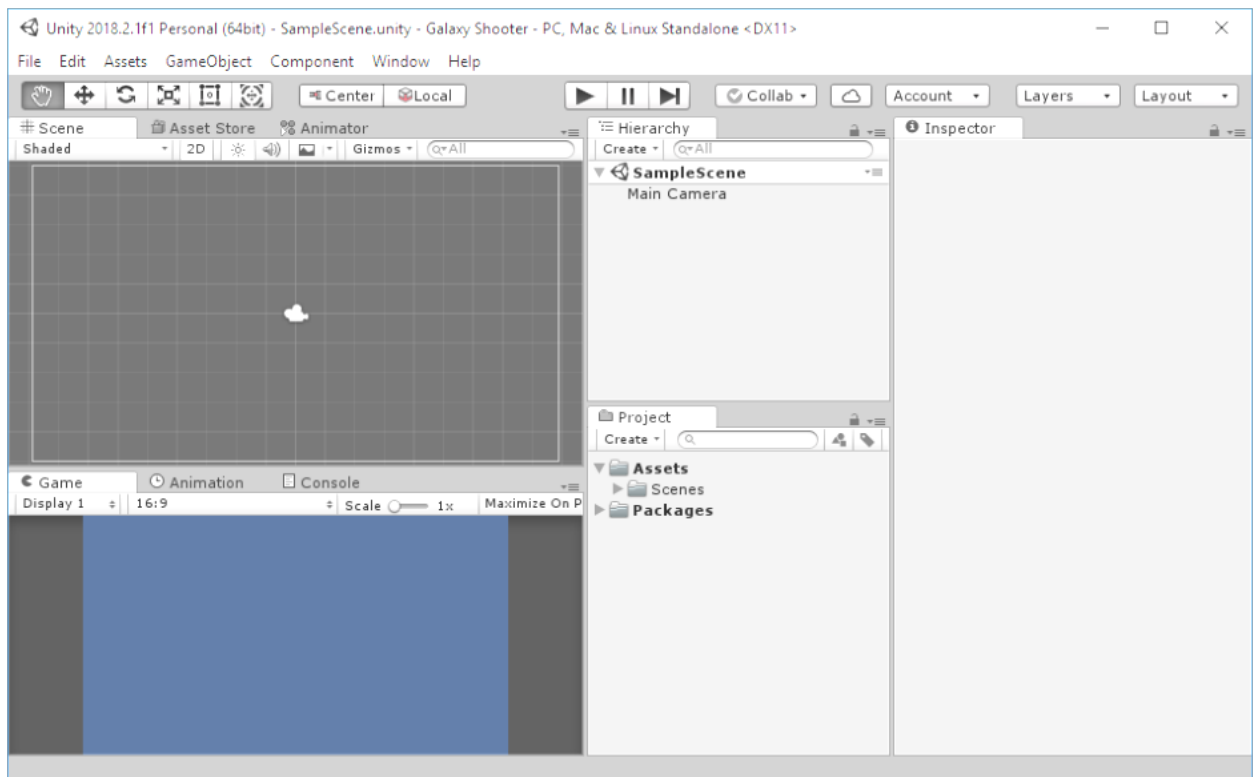# Practical No. 5

Performing Practical to define Space Shooter Game
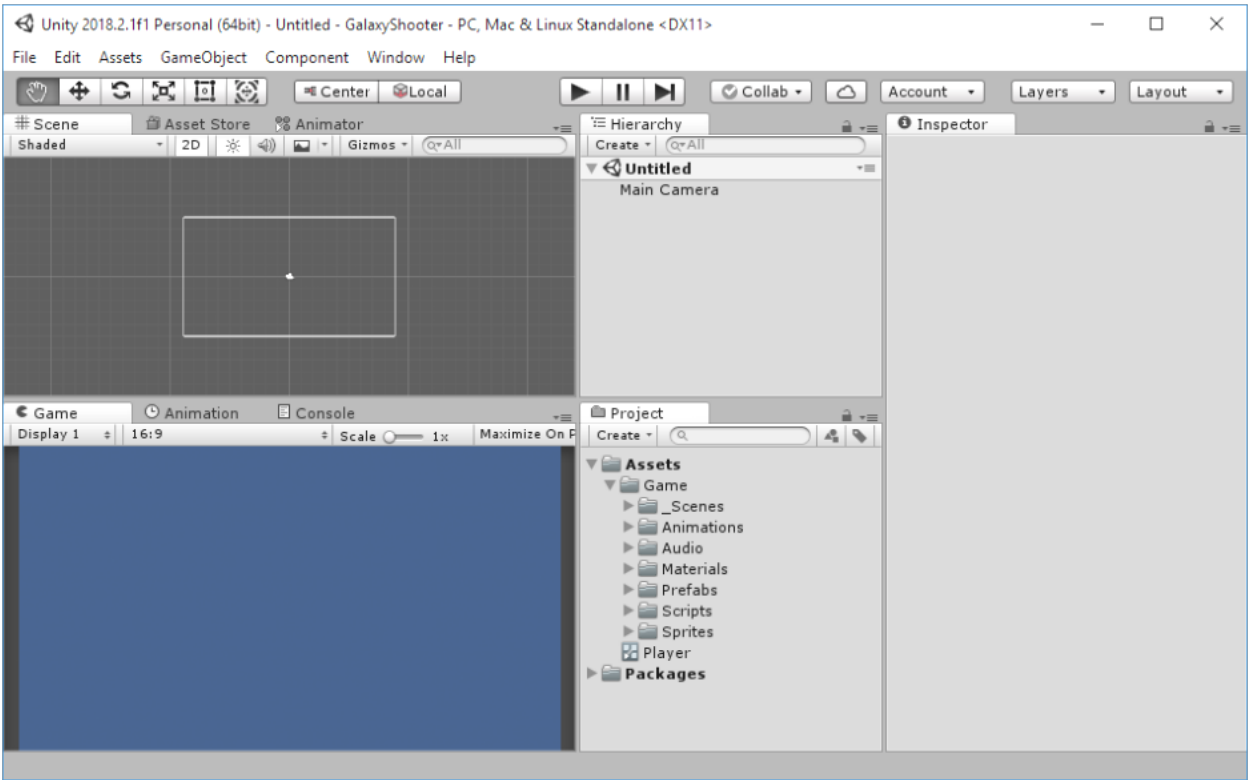
A) Create new 2D project in Unity :

B) Main screen :

C) Downloading assets from Unity website https://unity3d.com/ and
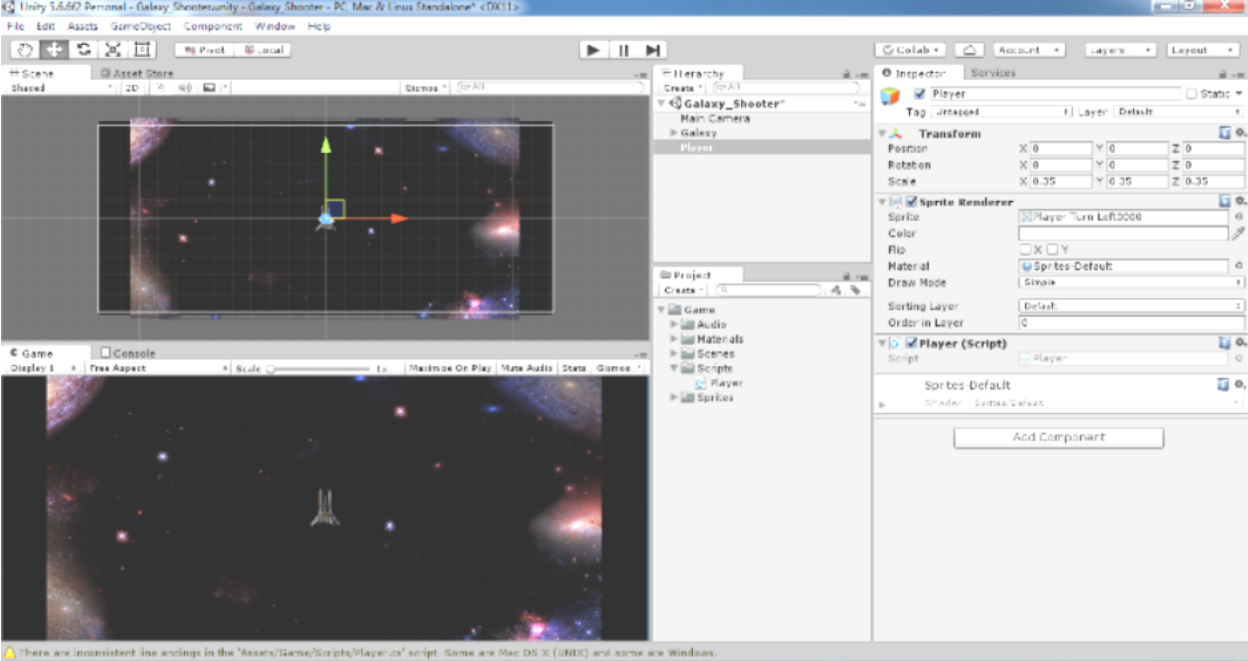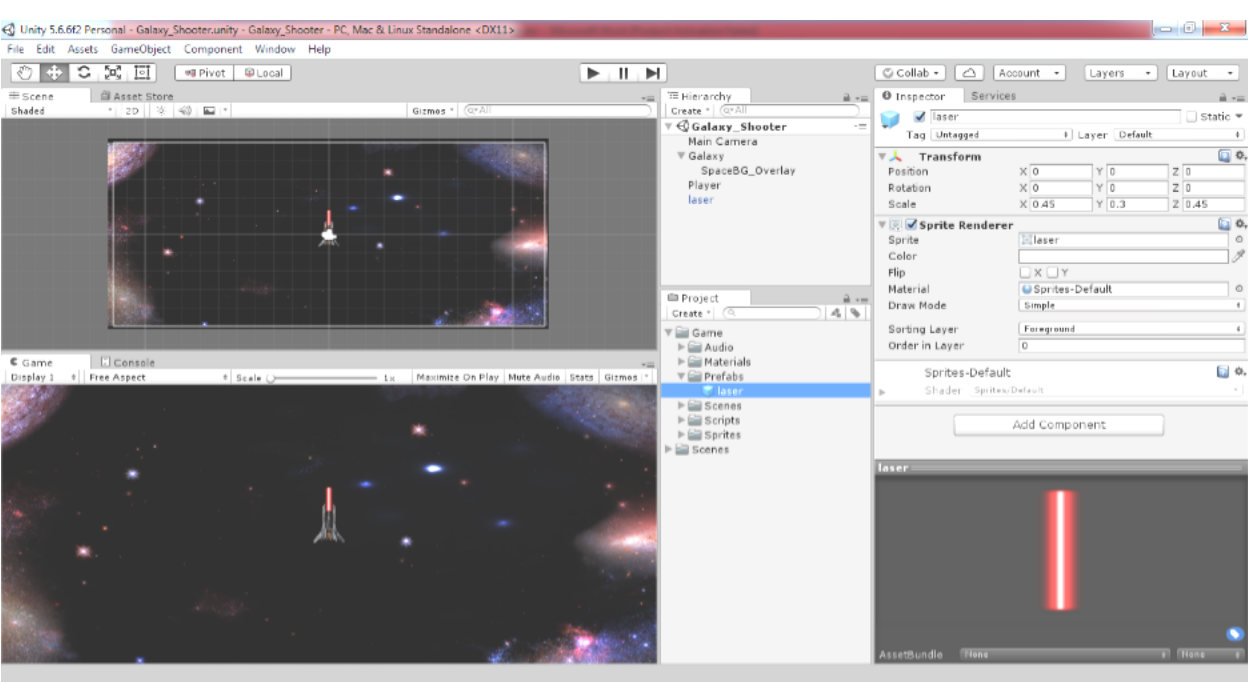   Importing assets from the folder by dragging it into Assets window :

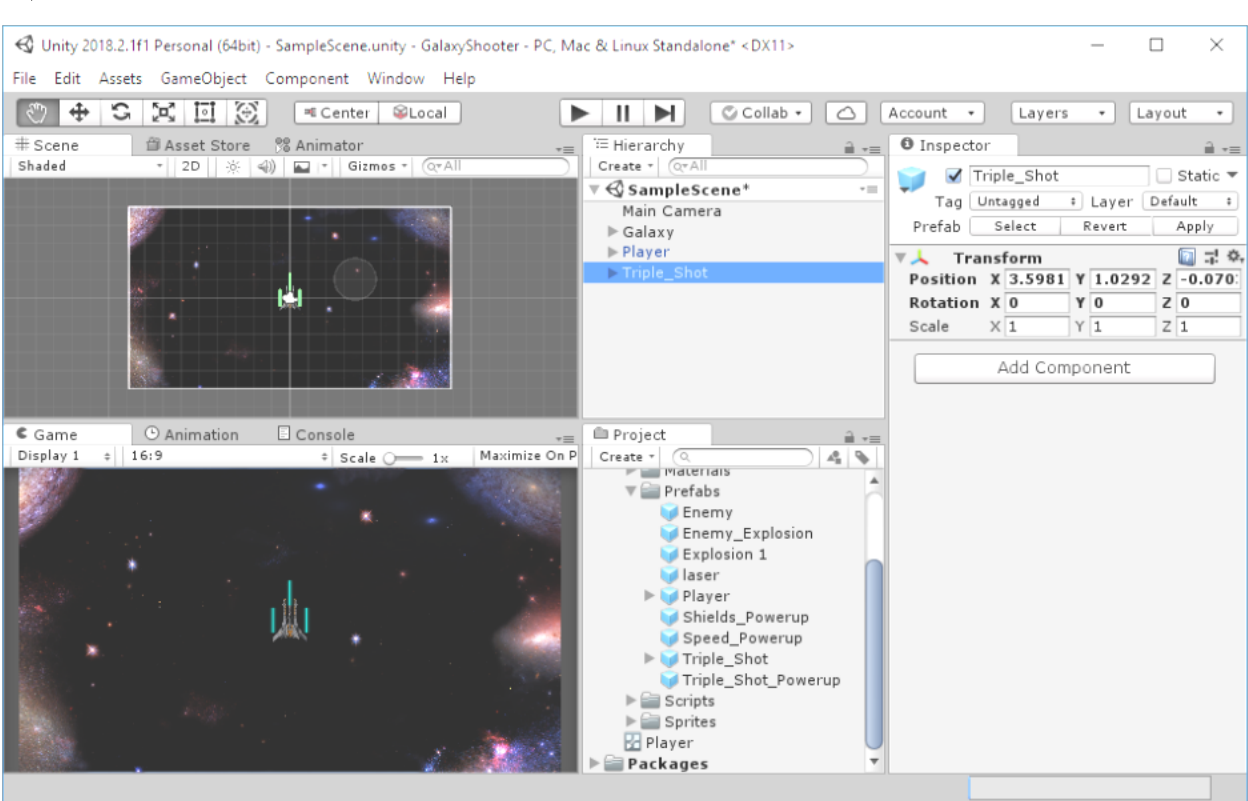D) Adding Quad for Galaxy and Adding background (SpaceBG_Overlay)
    from Sprites folder :
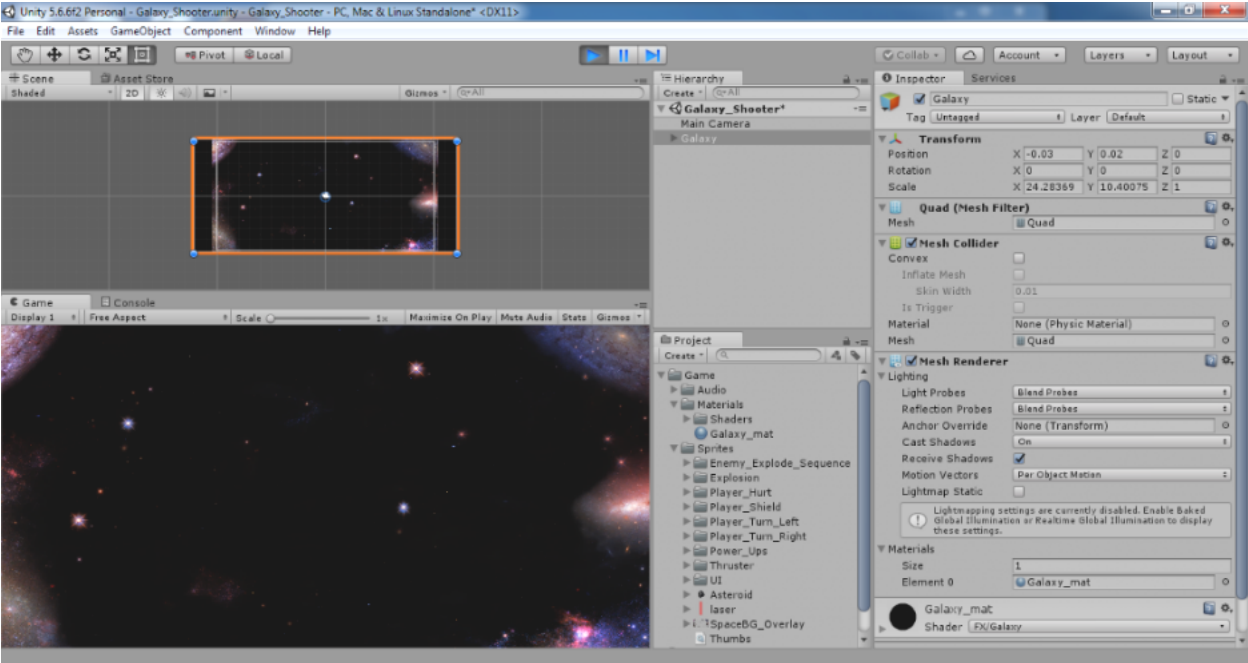
E) Adding Player from Sprites to Hierarchy window :

F) Adding Laser from Sprites to Hierarchy window :

G) Adding Triple Shot :

H) Program Scripts :

a. Player.cs

```csharp
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class Player : MonoBehaviour
{
    [SerializeField]
    private GameObject _laserPrefeb;
    [SerializeField]
    private GameObject _tripleShotPrefab;

    [SerializeField]
    private float _fireRate = 0.25f;
    private float _canFire = 0.0f;

    [SerializeField]
    private float _speed = 5.0f;

    void Start ()
    {
        transform.position = new Vector3(0, 0, 0);
    }

    void Update ()
    {
        Movement();

        if(Input.GetKeyDown(KeyCode.Space) || Input.GetMouseButton(0))
        {
            Shoot();
        }
    }

    private void Shoot()
    {
        if (Time.time > _canFire)
        {
            if(canTripleShot==true)
            {
                //left
                Instantiate(_laserPrefeb, transform.position + new Vector3(-0.55f, 0, 0), Quaternion.identity);
                //center
                Instantiate(_laserPrefeb, transform.position + new Vector3(0, 0.88f, 0), Quaternion.identity);
                //right
                Instantiate(_laserPrefeb, transform.position + new Vector3(0.55f, 0, 0), Quaternion.identity);
                ////Instantiate(_tripleShotPrefab, transform.position, Quaternion.identity);
            }
```

```csharp
        Instantiate(_laserPrefeb, transform.position + new Vector3(0, 0.88f, 0),
Quaternion.identity);
        _canFire = Time.time + _fireRate;
    }
  }

  private void Movement()
  {
    float horizontalInput = Input.GetAxis("Horizontal");
    float verticalInput = Input.GetAxis("Vertical");

    //bounds for vertical y axis
    if (transform.position.y > 4.2f)
    {
      transform.position = new Vector3(transform.position.x, 4.2f, 0);
    }
    else if (transform.position.y < -4.2f)
    {
      transform.position = new Vector3(transform.position.x, -4.2f, 0);
    }

    //bounds for horizontal x axis
    if (transform.position.x > 8.3f)
    {
      transform.position = new Vector3(8.3f, transform.position.y, 0);
    }
    else if (transform.position.x < -8.3f)
    {
      transform.position = new Vector3(-8.3f, transform.position.y, 0);
    }
  }
```

b. Laser.cs

```csharp
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class Laser : MonoBehaviour
{
  [SerializeField]
  private float _speed = 10.0f;

    // Use this for initialization
    void Start ()
    {

    }
```

```
    // Update is called once per frame
    void Update ()
{
    transform.Translate(Vector3.up * _speed * Time.deltaTime);

    if(transform.position.y>=6)
    {
        if(transform.parent!=null)
        {
            Destroy(transform.parent.gameObject);
        }
        Destroy(this.gameObject);
    }
}
}
```

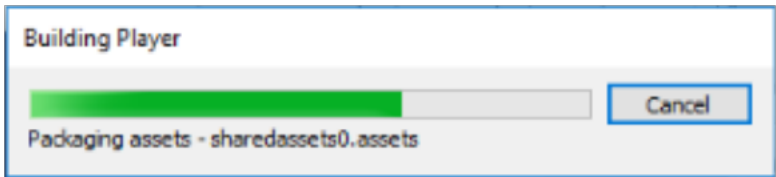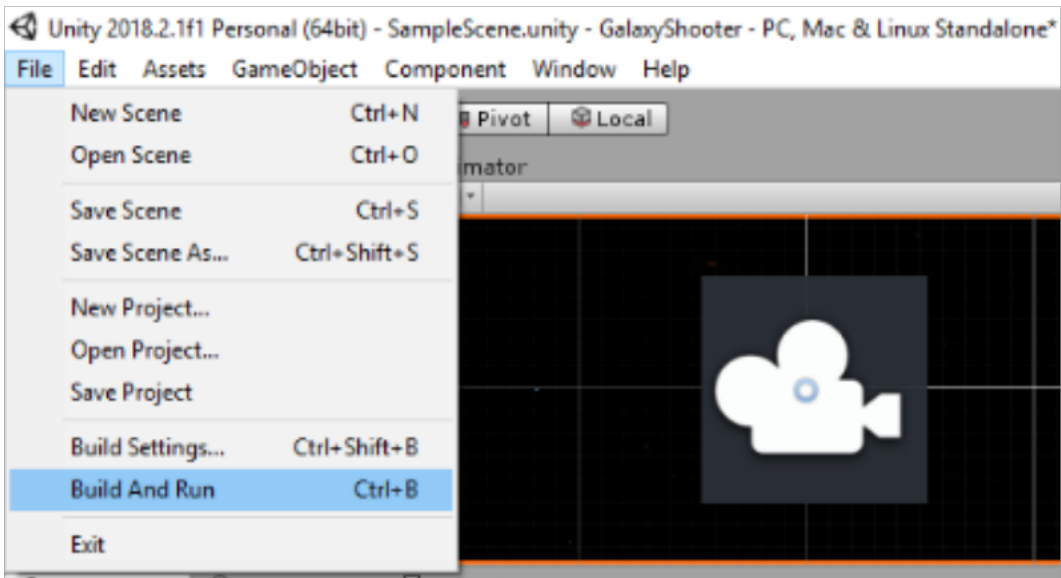## I) Output of game after Play :

Single Shot by Player -
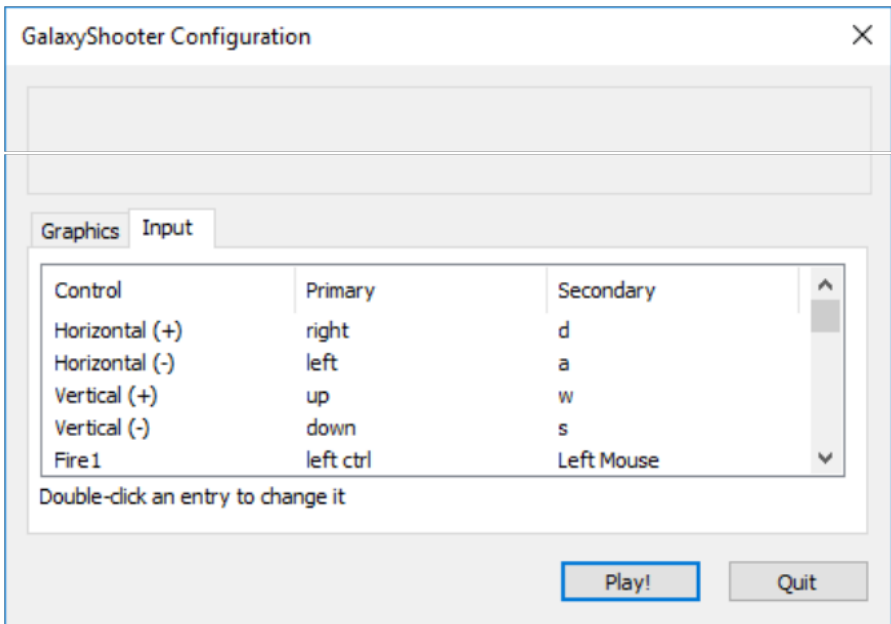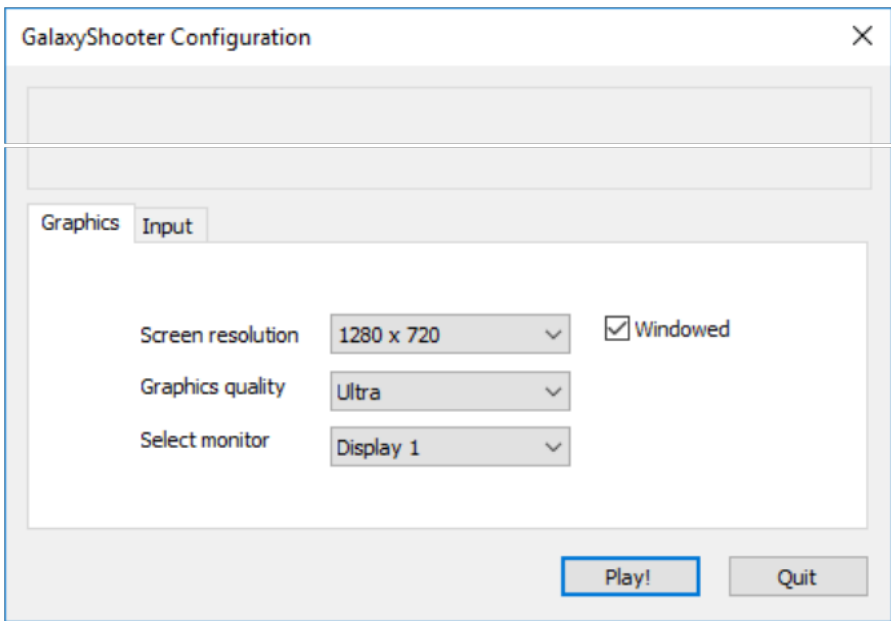

Triple Shot by Player -

J) Build and Run game :

a. Go to File and click on Build And Run and select folder -

b. Choose configuration :

c. Go to the folder and open GalaxyShooter application :

Name	Date modified	Type	Size
GalaxyShooter	10/22/2018 10:10 ...	File folder	
GalaxyShooter_Data	10/22/2018 9:50 PM	File folder	
Mono	10/22/2018 9:50 PM	File folder	
GalaxyShooter	7/19/2018 5:35 PM	Application	634 KB
UnityCrashHandler64	7/19/2018 5:43 PM	Application	1,365 KB
UnityPlayer.dll	7/19/2018 5:42 PM	Application extens...	22,283 KB