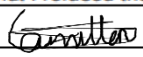
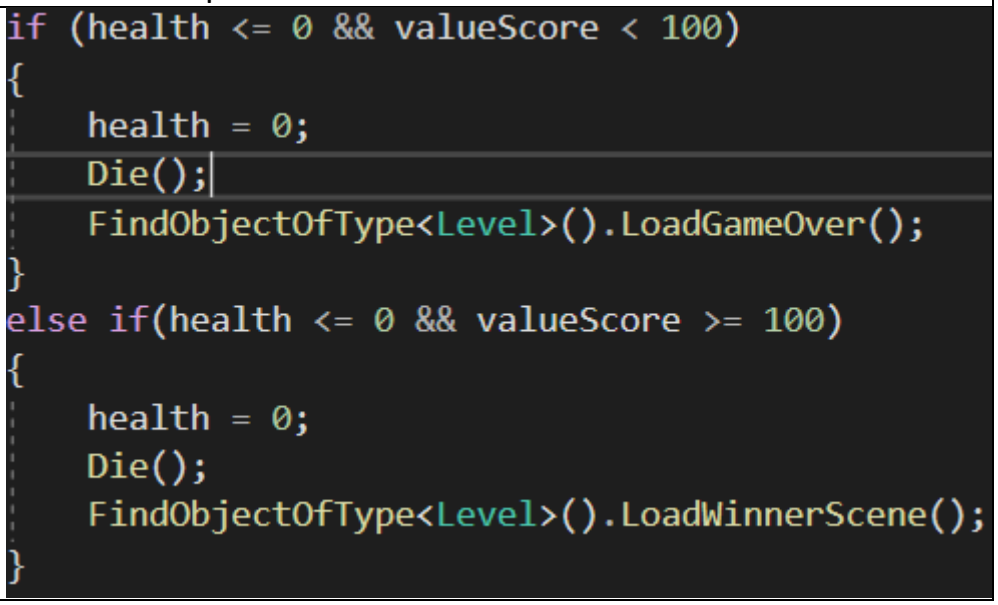
Course Title	**Advanced Diploma**		**Lecturer Name & Surname**	**NEIL AQUILINA**	
Unit Number & Title	**Programming for Computer Games**				
Assignment Number, Title / Type	**Simple 2D Car Game - Home**				
Date Set	09/12/2020	**Deadline Date**	**19/01/2021**		
Student Name	Josue` Camilleri	**ID Number**	116303L	**Class / Group**	4.2B

☐	*Student's declaration prior to handing-in of assignment:* ❖ *I certify that the work submitted for this assignment is my own and that I have read and understood the respective Plagiarism Policy*
☐	***Student's declaration on assessment special arrangements (Tick only if applicable)*** ❖ *I certify that adequate support was given to me during the assignment through the Institute and/or the Inclusive Education Unit.*
☐	❖ *I declare that I refused the special support offered by the Institute.*

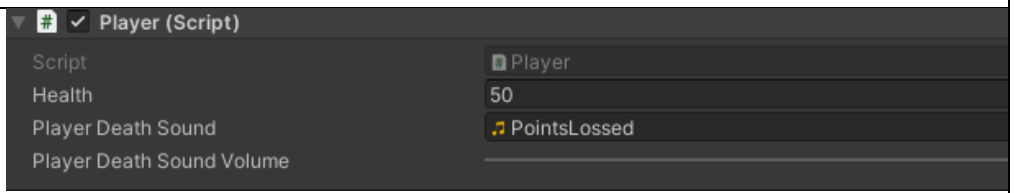
Student Signature:		**Date :**	18/01/2021

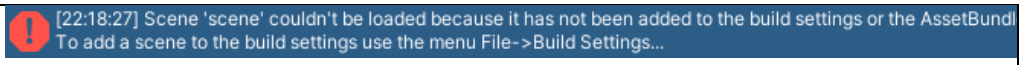
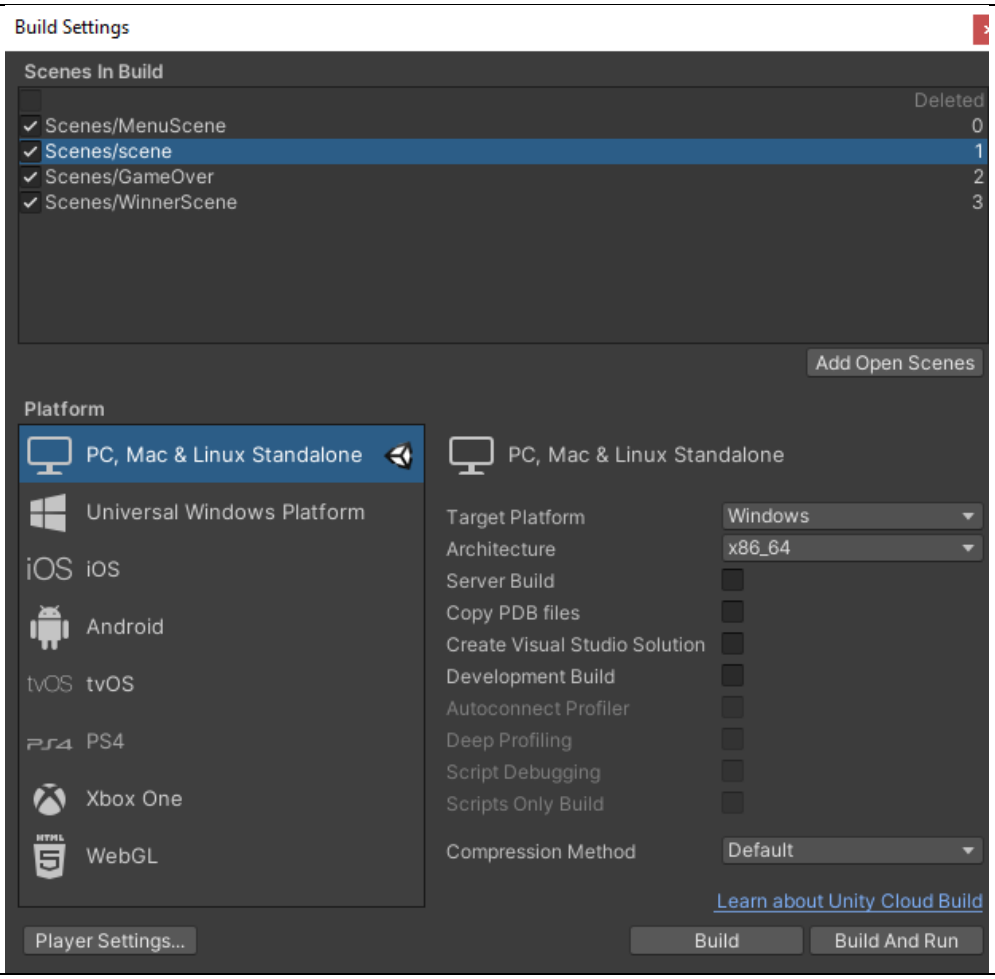
Assessment Criteria	Maximum Mark	Mark Achieved
KU2: Describe asset types	5	
KU5: Identify suitable resolution for images of various types	5	
KU6: Select asset types and settings for a range of media assets for a game design	5	
KU7: Idenitfy resolution issues for the development platforms	5	
KU8: Identify appropriate input devices and methods for development platforms	5	
KU9: Show and explain how to deploy a game to multiple devices	5	
AA1: Examine and apply basic programming techniques for a simple game	7	
AA2: Develop a game with graphical and audio assets	7	
AA3: Demonstrate ability to resolve issues and input devices in the development environment	7	
AA4: Apply coroutines for a more interesting gameplay	7	
AA5: Examine and solve gameplay problems	7	
SE2: Resolve programming issues related to sound, graphics and gameplay	10	
Total Mark	75	

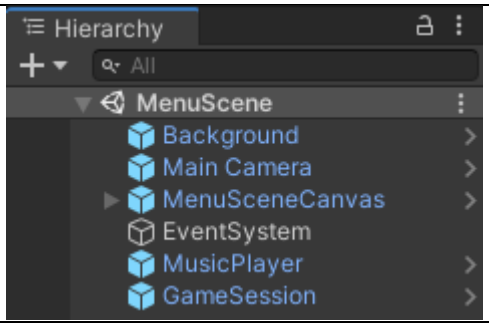
Task 3:

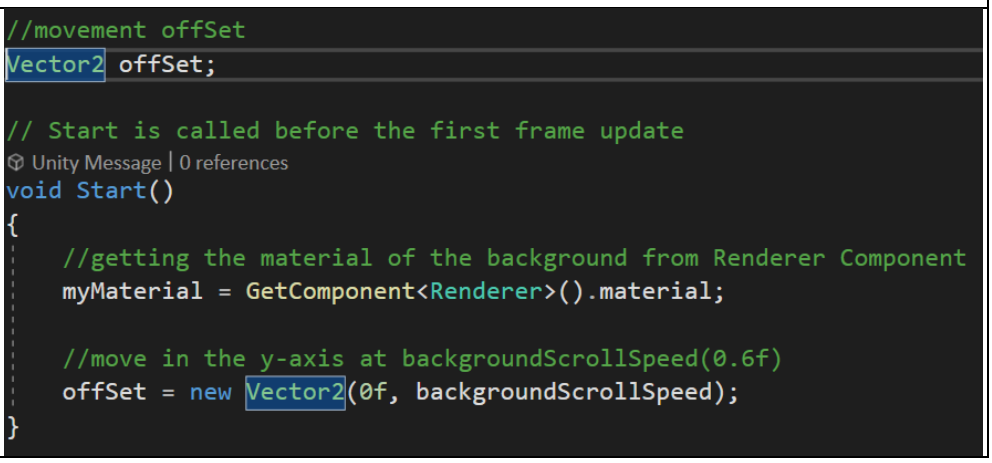
Test Case 1	Assets\Scripts\Player.cs(101,10): error CS1513: } expected
Line Error	if (health <= 0 && valueScore < 100) ;
Error Explanation	In the “Player” script there is an extra semicolon.
Error Correction	The extra semicolon at the end of the line was removed in order to complete the if statement.
Error Correction ScreenShot	

```
if (health <= 0 && valueScore < 100)
{
    health = 0;
    Die();
    FindObjectOfType<Level>().LoadGameOver();
}
else if(health <= 0 && valueScore >= 100)
{
    health = 0;
    Die();
    FindObjectOfType<Level>().LoadWinnerScene();
}
```

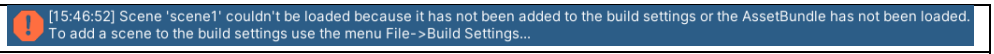
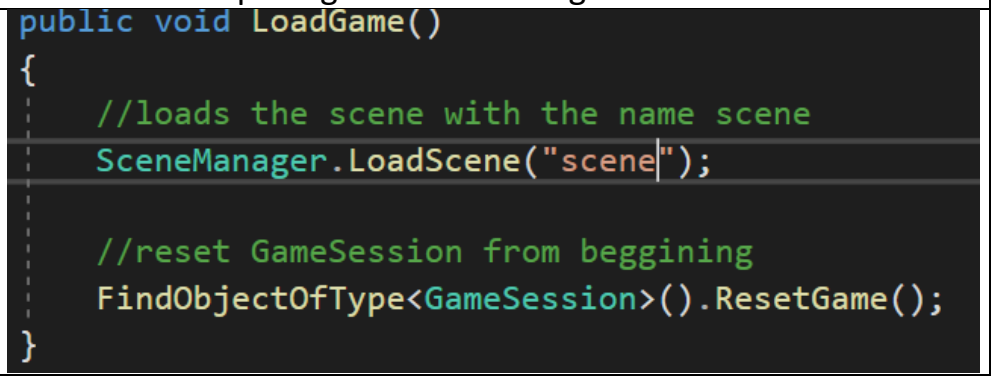
Test Case 2	
Line Error	-- a problem within the Inspector. --
Error Explanation	The playerDeathSound needs to be added to the Player prefab, and into the “Player (Script)” component from the Inspector.
Error Correction	playerDeathSound was added to the Player prefab from the Inspector.
Error Correction ScreenShot	

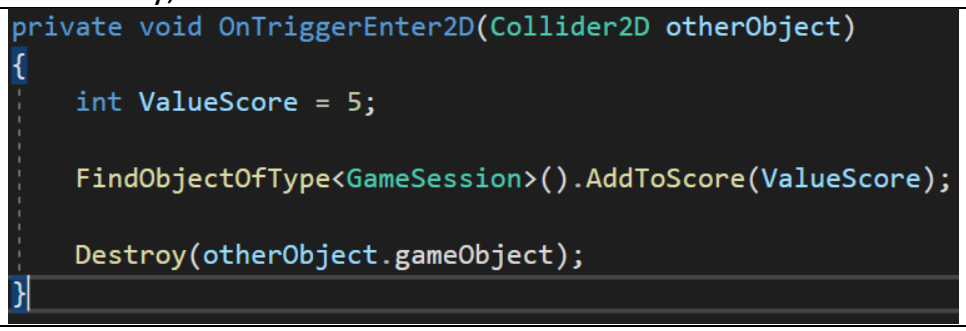
Test Case 3	
Line Error	--Need to add a scene--
Error Explanation	The “scene” could not be loaded because it has not been added to the build settings.
Error Correction	The “scene” scene was accidentally unticked from the Build Settings.
Error Correction ScreenShot	

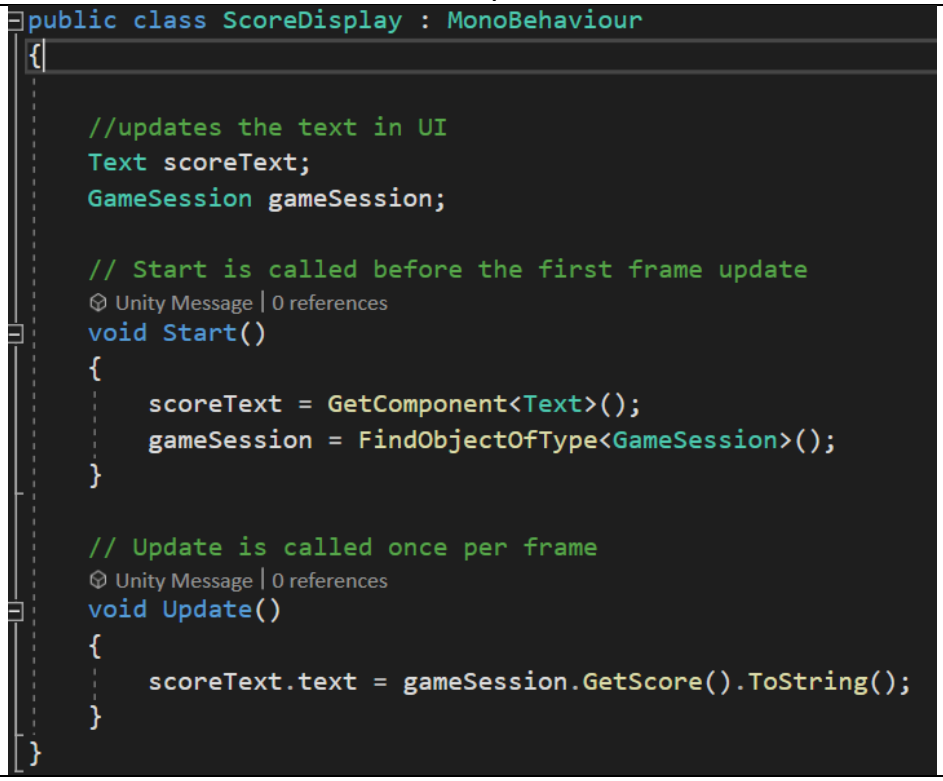
Test Case 4	[22:29:12] NullReferenceException: Object reference not set to an instance of an object Level.LoadGame () (at Assets/Scripts/Level.cs:35)
Line Error	FindObjectOfType<GameSession>().ResetGame();
Error Explanation	The game cannot find the GameSession in the Scene
Error Correction	GameSession prefab was moved in the Hierarchy
Error Correction ScreenShot	

Test Case 5	[15:40:18] Assets\Scripts\BackgroundScroller.cs(22,9): error CS0103: The name 'offSet' does not exist in the current context
Line Error	offSet = new Vector2(0f, backgroundScrollSpeed);
Error Explanation	There is no name “offset” in the BackgroundScroller.cs.
Error Correction	An “offset” was set and its type was Vector2.
Error Correction ScreenShot	

```
//movement offSet
Vector2 offSet;

// Start is called before the first frame update
Unity Message | 0 references
void Start()
{
    //getting the material of the background from Renderer Component
    myMaterial = GetComponent<Renderer>().material;

    //move in the y-axis at backgroundScrollSpeed(0.6f)
    offSet = new Vector2(0f, backgroundScrollSpeed);
}
```

Test Case 6	
Line Error	SceneManager.LoadScene("scene1");
Error Explanation	‘scene1’ is not added in the build settings.
Error Correction	From the build settings everything was good, check the code and noticed a spelling mistake. Arranged ‘scene1’ to ‘scene’.
Error Correction ScreenShot	

Test Case 7	
Line Error	FindObjectOfType<GameSession>().AddToScore(ValueScore);
Error Explanation	There is no variable named ‘ValueScore’ in ShredderPoints.cs.
Error Correction	In the ShredderPoints.cs the ‘ValueScore’ was named differently, so therefore I named them the same.
Error Correction ScreenShot	

Test Case 8	[16:05:58] Assets\Scripts\ScoreDisplay.cs(16,21): error CS0103: The name 'GetComponent' does not exist in the current context
Line Error	scoreText = GetComponent<Text>();
Error Explanation	There is no variable named 'GetComponent' in ScoreDisplay.cs.
Error Correction	The public class did not have ': MonoBehaviour' attached to it, so therefore added it to the script.
Error Correction ScreenShot	

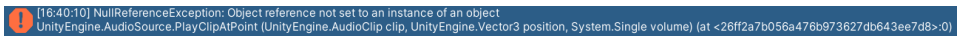
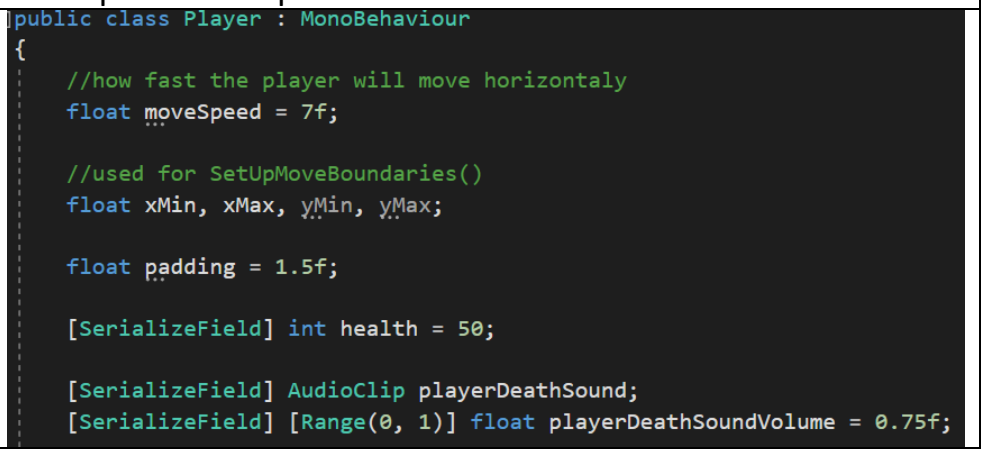
```
public class ScoreDisplay : MonoBehaviour
{

    //updates the text in UI
    Text scoreText;
    GameSession gameSession;

    // Start is called before the first frame update
    Unity Message | 0 references
    void Start()
    {
        scoreText = GetComponent<Text>();
        gameSession = FindObjectOfType<GameSession>();
    }

    // Update is called once per frame
    Unity Message | 0 references
    void Update()
    {
        scoreText.text = gameSession.GetScore().ToString();
    }
}
```

Test Case 9	[16:05:58] Assets\Scripts\ScoreDisplay.cs(17,23): error CS0103: The name 'FindObjectOfType' does not exist in the current context
Line Error	gameSession = FindObjectOfType<GameSession>();
Error Explanation	There is no variable named 'FindObjectOfType' in ScoreDisplay.cs.
Error Correction	The public class did not have ': MonoBehaviour' attached to it, so therefore added it to the script.
Error Correction ScreenShot	

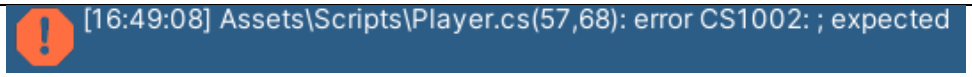
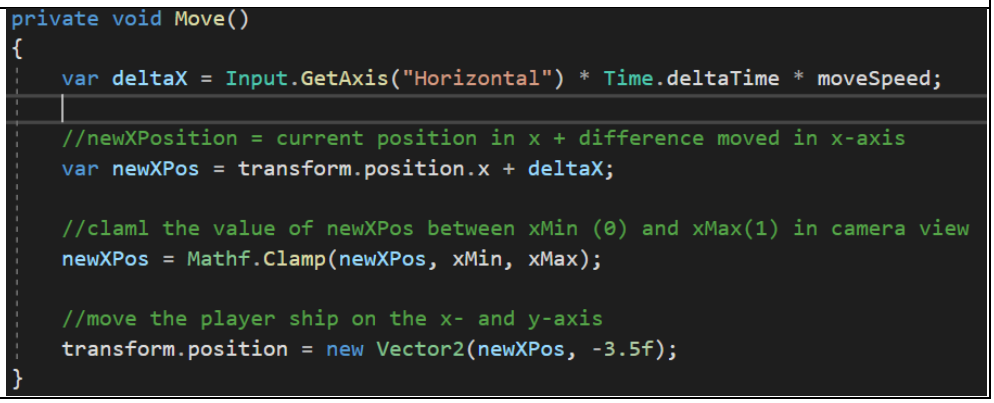
```
public class ScoreDisplay : MonoBehaviour
{

    //updates the text in UI
    Text scoreText;
    GameSession gameSession;

    // Start is called before the first frame update
    Unity Message | 0 references
    void Start()
    {
        scoreText = GetComponent<Text>();
        gameSession = FindObjectOfType<GameSession>();
    }

    // Update is called once per frame
    Unity Message | 0 references
    void Update()
    {
        scoreText.text = gameSession.GetScore().ToString();
    }
}
```

Test Case 10	[16:31:15] Assets\Scripts\Player.cs(44,29): error CS0119: 'Camera' is a type, which is not valid in the given context
Line Error	Camera gameCamera = Camera;
Error Explanation	The type 'Camera' is not valid in this script
Error Correction	Arranged 'Camera' as 'Camera.main;'
Error Correction ScreenShot	

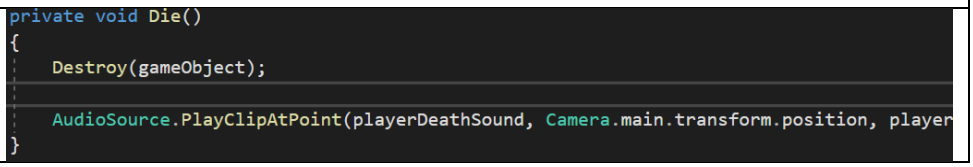
```
private void SetUpMoveBoundaries()
{
    //getting the camera from unity
    Camera gameCamera = Camera.main;

    //xMin = 0, xMax = 1
    xMin = gameCamera.ViewportToWorldPoint(new Vector3(0, 0, 0)).x + padding;
    xMax = gameCamera.ViewportToWorldPoint(new Vector3(1, 0, 0)).x - padding;

    //yMin = 0, yMax = 1
    yMin = gameCamera.ViewportToWorldPoint(new Vector3(0, 0, 0)).y + padding;
    yMax = gameCamera.ViewportToWorldPoint(new Vector3(0, 1, 0)).y - padding;
}
```

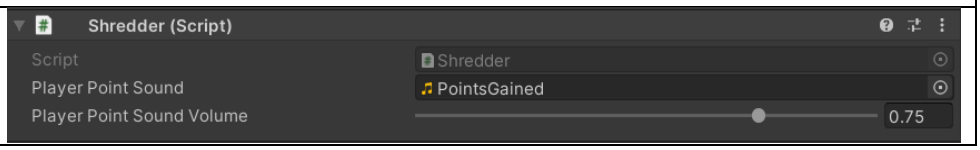
Test Case 11	
Line Error	AudioSource.PlayClipAtPoint(playerDeathSound, Camera.main.transform.position, playerDeathSoundVolume);
Error Explanation	Object reference is not set to an instance of playerDeathSound.
Error Correction	Had to add '[SerializeField] AudioClip playerDeathSound;' at the top of the script.
Error Correction ScreenShot	

```
public class Player : MonoBehaviour
{
    //how fast the player will move horizontaly
    float moveSpeed = 7f;

    //used for SetUpMoveBoundaries()
    float xMin, xMax, yMin, yMax;

    float padding = 1.5f;

    [SerializeField] int health = 50;

    [SerializeField] AudioClip playerDeathSound;
    [SerializeField] [Range(0, 1)] float playerDeathSoundVolume = 0.75f;
```

Test Case 12	
Line Error	var deltaX = Input.GetAxis("Horizontal") * Time.deltaTime moveSpeed;
Error Explanation	The code is expecting a semicolon somewhere in the line.
Error Correction	Had to add an '*' between 'deltaTime' and 'moveSpeed'
Error Correction ScreenShot	

```
private void Move()
{
    var deltaX = Input.GetAxis("Horizontal") * Time.deltaTime * moveSpeed;

    //newXPosition = current position in x + difference moved in x-axis
    var newXPos = transform.position.x + deltaX;

    //claml the value of newXPos between xMin (0) and xMax(1) in camera view
    newXPos = Mathf.Clamp(newXPos, xMin, xMax);

    //move the player ship on the x- and y-axis
    transform.position = new Vector2(newXPos, -3.5f);
}
```

Test Case 13	[16:55:15] Assets\Scripts\Player.cs(113,17): error CS0119: 'Object' is a type, which is not valid in the given context
Line Error	Destroy(Object);
Error Explanation	Object is not valid in this script.
Error Correction	Had to be more specific and change ‘Object’ to ‘gameObject’
Error Correction ScreenShot	

```
private void Die()
{
    Destroy(gameObject);

    AudioSource.PlayClipAtPoint(playerDeathSound, Camera.main.transform.position, player
}
```

Test Case 14	[17:05:11] UnassignedReferenceException: The variable playerPointSound of Shredder has not been assigned. You probably need to assign the playerPointSound variable of the Shredder script in the inspector.
Line Error	N/A
Error Explanation	The sound for the Shredder was not set.
Error Correction	Added the sound to the shredder from the inspector.
Error Correction ScreenShot