




Quiz Unit 2

QUESTION

- 1 If it says, "Hello there!" in the console, what was the code used to create that message?

 Hello there!

- 2 If you want to destroy an object when its **health reaches 0**, what code would be best in the blank below?

```
private int health = 0;

void Update() {
    if (_____) {
        Destroy(gameObject);
    }
}
```

- 3 The code below creates an error that says, "error CS1503: Argument 1: cannot convert from 'UnityEngine.GameObject[]' to 'UnityEngine.Object'". What could you do to remove the errors?

```
1. public GameObject[] enemyPrefabs;
2.
3. void Start()
4. {
5.     Instantiate(enemyPrefabs);
6. }
```

CHOICES

- a. Debug("Hello there!");
- b. Debug.Log("Hello there!");
- c. Debug.Console("Hello there!");
- d. Debug.Log(Hello there!);

- a. health > 0
- b. health.0
- c. health < 1
- d. health < 0

- a. On line 1, change "GameObject[]" to "GameObject"
- b. On line 1, change "enemyPrefabs" to "enemyPrefabs[0]"
- c. On line 3, change "Start()" to "Update()"
- d. On line 5, change "enemyPrefabs" to "enemyPrefabs[0]"
- e. Either A or D
- f. Both A and D
- g. Both B and C

4 Which comment best describes the following code?

```
public class PlayerController : MonoBehaviour
{
    // Comment
    private void OnTriggerEnter(Collider other) {
        Destroy(other.gameObject);
    }
}
```

- a. // If player collides with another object, destroy player
- b. // If enemy collides with another object, destroy the object
- c. // If player collides with a trigger, destroy trigger
- d. // If player collides with another object, destroy the object

5 If you want to move the character **up continuously** as the player presses the **up arrow**, what code would be best in the two blanks below:

```
if (Input._____(_____))
{
    transform.Translate(Vector3.up);
}
```

- a. GetKey(KeyCode.UpArrow)
- b. GetKeyDown(UpArrow)
- c. GetKeyUp(KeyCode.Up)
- d. GetKeyHeld(Vector3.Up)

6 Read the documentation from the Unity Scripting API and the code below. Which of the following are possible values for the randomFloat and randomInt variables?

```
public static float Range(float min, float max);
```

Description

Return a random float number between min [inclusive] and max [inclusive] (Read Only).

Note max is inclusive. Random.Range(0.0f, 1.0f) can return 1.0 as the value. The Random.Range distribution is uniform. Range is a Random Number Generator.

```
public static int Range(int min, int max);
```

Description

Return a random integer number between min [inclusive] and max [exclusive] (Read Only).

Note max is exclusive. Random.Range(0, 10) can return a value between 0 and 9. Return min if max equals min. The Random.Range distribution is uniform. Range is a Random Number Generator.

```
float randomFloat = Random.Range(0, 100);
int randomInt = Random.Range(0, 100);
```

- a. randomFloat = 100.0f; randomInt = 0;
- b. randomFloat = 100.0f; randomInt = 100;
- c. randomFloat = 50.5f; randomInt = 100;
- d. randomFloat = 0.0f; randomInt = 50.5;

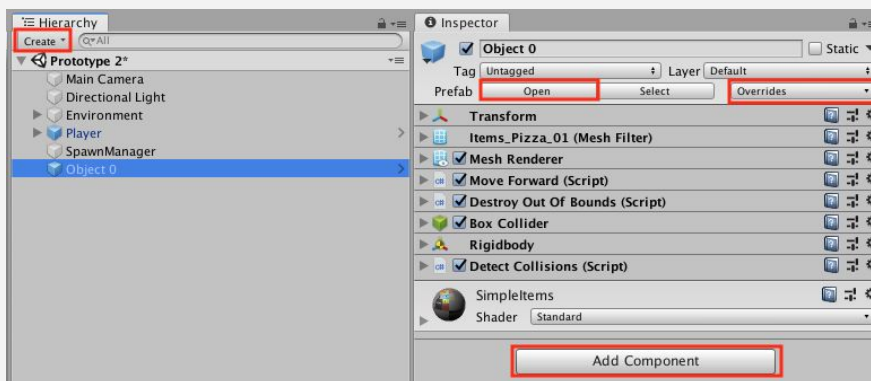
- 7 Your game is running and you see an error in the console that says there was an “error at Assets/Scripts/SpawnManager.cs:5. IndexOutOfRangeException: Index was outside the bounds of the array.” Which line of code needs to be edited to fix this?

- Line 2
- Line 3
- Line 4
- Line 5

```
1. public GameObject[] randomObjects;
2.
3. void SpawnRandomObject() {
4.     int objectIndex = Random.Range(0, 3);
5.     Instantiate(randomObjects[objectIndex]);
6. }
```

- 8 If you have made changes to a prefab in the scene and you want to apply those changes to all prefabs, what should you click?

- The “Create” drop-down at the top of the Hierarchy
- The “Open” button at the top of the Inspector
- The “Override” drop-down at the top of the Inspector
- The “Add Component” button at the bottom of the Inspector



- 9 Read the documentation from the Unity Scripting API below. Which of the following is a correct use of the InvokeRepeating method.

```
public void InvokeRepeating(string methodName, float time, float repeatRate);
```

Description

Invokes the method methodName in time seconds, then repeatedly every repeatRate seconds.

- InvokeRepeating("Spawn, 0.5f, 1.0f");
- InvokeRepeating("Spawn", 0.5f, 1.0f);
- InvokeRepeating("Spawn", gameObject, 1.0f);
- InvokeRepeating(0.5f, 1.0f, "Spawn");

- 10** You're trying to create some logic that will tell the user to speed up if they're going too slow or to slow down if they're going too fast. How should you arrange the lines of code below to accomplish that?

```
1. Debug.Log(speedUp); }  
2. else if (speed > 60) {  
3. private string speedUp = "Speed up!";  
4. void Update() {  
5. Debug.Log(slowDown); }  
6. if (speed < 10) {  
7. private float speed;  
8. private string slowDown = "Slow down!";  
9. }
```

- a. 4, 6, 1, 2, 5, 9, 7, 8, 3
- b. 6, 1, 2, 5, 7, 8, 3, 4, 9
- c. 7, 8, 3, 4, 6, 5, 2, 1, 9
- d. 7, 8, 3, 4, 6, 1, 2, 5, 9

Quiz Answer Key

#	ANSWER	EXPLANATION
1	B	Debug.Log() prints messages to the console and can accept String parameters between quotation marks, such as "Hello there!"
2	C	Since the "health" variable is an int, anything less than 1 would be "0". The sign for "less than" is "<".
3	E	"GameObject[]" is a GameObject array. You cannot instantiate an array, but you <i>can</i> instantiate an object inside an array. So you could either remove the array and have Instantiate use an individual object (option A) or you could use an GameObject index of that Array (option D), but both would not work.
4	D	Since it's inside the PlayerController class, and it is destroying other .gameObject, it is destroying something that the player collides with.
5	A	"Input.GetKey" tests for the user holding down a key (as opposed to KeyKeyDown, which test for a single press down of a Key).
6	A	As it says in the documentation, Random.Range does <i>not</i> include the maximum value for integers, but <i>does</i> include the maximum value for floats. This means that randomInt <i>cannot</i> be 100, but randomFloat can be.
7	C	Line 4, which generates the objectIndex, must be generating an index value that is too high for the number of objects in the array. The best thing to do would be to change it to "Random.Range(0, randomObjects.Length);
8	C	The "Override" drop-down will allow you to apply any changes you've made to your individual prefab to the original prefab object.
9	B	According to the Scripting API, InvokeRepeating requires a string parameter, then two floats.
10	D	All variables should be declared first, then the void method, then the if-condition telling them to speed up, then the else condition telling them to slow down.