Programming Simple Functionality

Correct answers needed to pass

19/20

Retake allowed after

0 Hours

To calculate your score, submit your answers to the quiz. A passing score will mark this quiz complete.

Submit answers

**Question 1**

What debug message would be logged to the console if Random.Range returned a value of 8?

int randomInt = Random.Range(0,10);

if(randomInt <= 3)

{

Debug.Log("Low");

}

else if(randomInt > 8)

{

Debug.Log("High");

}

else

{

Debug.Log("Medium");

}

Low

Medium

High

Null

**Question 2**

Which of the following conditions would successfully print “Success”?

1. if (true && !false) { print(“Success”); }
2. if (true || false) { print(“Success”); }
3. if (true && !true) { print(“Success”); }
4. if (false || !true) { print(“Success”); }

Line 1 only

Line 1 and 2 only

Line 1, 2, and 3 only

All

**Question 3**

What code should go in the blank below in order to make the console print “First String” “Second string” “Third string”?

string[] strings = new string[3];

strings[0] = "First string";

strings[1] = "Second string";

strings[2] = "Third string";

foreach (\_\_\_\_\_\_\_\_\_\_)

{

print (item);

}

item in string[3]

string in items[]

string item in strings

string in strings[3]

**Question 4**

What will appear in the console if the following code is run?

void Start()

{

StartCoroutine(MyCoroutine());

}

private IEnumerator MyCoroutine()

{

yield return new WaitForSeconds(5);

Debug.Log("Test");

StartCoroutine(MyCoroutine());

}

“Test” will appear at start and then after 3 seconds.

“Test” will never appear because of an error in the code

“Test” will appear at start.

“Test” will appear after 5 seconds and will continue to appear every 5 seconds after that.

**Question 5**

What code would you use to fill in the blank in order to print “Incorrect dialogue value” to the console?

int dialogue = 3;

void Start()

{

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

{

case 2:

print("Goodbye, old friend");

break;

case 1:

print("Hello there");

break;

default:

print("Incorrect dialogue value");

break;

}

}

if (3)

switch (3)

switch (dialogue)

case (default)

**Question 6**

When the player object collides with a coin object, the coin object should instantly disappear without impacting the player object’s physics. Which event function should you use to detect the collision between these two objects in order to destroy the coin?

OnTriggerExit

OnCollisionExit

OnTriggerEnter

OnCollisionEnter

**Question 7**

According to Unity’s scripting API, the following are valid options for the Component.GetComponent method:

public Component GetComponent(Type type);

public Component GetComponent(string type);

Which of the following would be a correct implementation of this method?

GetComponent(”Player”);

GetComponent(Type: Player);

GetComponent(Player);

GetComponent(<Player>);

**Question 8**

According to the Unity Scripting API, the following are valid options for the Transform.Translate method:

public void Translate(Vector3 translation);

public void Translate(Vector3 translation, Transform relativeTo);

public void Translate(float x, float y, float z);

public void Translate(float x, float y, float z, Transform relativeTo);

Which of the following method calls would result in an error?

transform.Translate(Vector3.up);

transform.Translate(Vector3.up, 90f);

transform.Translate(0f, 0f, 90f);

transform.Translate(0f, 0f, 90f, gameObject.transform);

**Question 9**

Given the animation transition shown below, which code will make the character transition from the “Idle” state to the “Walk” state?

Graphical user interface, text, application

Description automatically generated

setInt(“Speed\_f”, 1);

setFloat(“Speed\_f”, 0.1f);

setFloat(“Speed\_f”, 0.3f);

setTrigger(“Speed\_f”);

**Question 10**

According to Unity’s Scripting API, the following is a valid option for the Input.GetButtonDown method:

public static bool GetButtonDown(string buttonName);

Let’s say you wanted to launch a projectile when the user presses the “Fire1” button, what would you put in the blank below:

public GameObject projectile;

void Update()

{

if (\_\_\_\_\_\_\_\_\_\_)

Instantiate(projectile, transform.position, transform.rotation);

}

GetButtonDown.Input(“Fire1”)

Input.GetButtonDown(true)

Input.GetButtonDown("Fire1")

Input(“Fire1”).GetButtonDown

**Question 11**

The script below is attached to the Player GameObject in the scene. What would be displayed in the Console as a result of the code below?

public class PlayerManager : MonoBehaviour

{

string playerName = "Frank";

void Start()

{

Debug.Log("Hello: " + gameObject.name + playerName);

}

}

Hello: + PlayerManager Frank

Hello: PlayerFrank

Hello: Player.name Frank

Hello: Frank

**Question 12**

Which of the following is NOT true about data types?

Using a dictionary, you can look up elements with strings, but with arrays or lists, you can only look up elements with integers.

bools can only have two values: true or false.

A double is more precise than a float

It is easier to increase the size of an array at runtime than it is for lists.

**Question 13**

Which of the following variables is NOT initialized correctly?

1. List<GameObject> objectList = new List<GameObject>();
2. GameObject[] objectArray = new GameObject[];
3. Dictionary<string, GameObject> objectDict = new Dictionary<string, GameObject>();
4. bool isTrue = true;

Line 1 - the list

Line 2 - the array

Line 3 - the dictionary

Line 4 - the bool

**Question 14**

Which of the following is NOT true about variable modifiers?

Constant (const) variables cannot be modified after they have been initialized.

Private variables cannot be accessed from other classes.

Protected variables can only be accessed from static classes.

Public variables can be accessed from any class.

**Question 15**

What would be the result of the following code?

public class ExampleClass : MonoBehaviour

{

void Start()

{

SceneManager.LoadScene(Random.Range(0, SceneManager.sceneCount));

}

}

Load a random range of scenes from all available scenes

Provide a random number for the currently loaded scene.

Load a random scene from all currently loaded scenes

Randomly arrange the scenes within the Scene Manager

**Question 16**

In order to construct a method that takes a number and returns a duplicate of that number rounded to the nearest integer, what code would you put in the following blanks, in order of appearance:

\_\_\_\_\_ DuplicateNumber(float \_\_\_\_\_)

{

number \*= 2;

int newNumber = Mathf.RoundToInt(number);

\_\_\_\_\_ newNumber;

}

void

return

int

float

number

return

int

number

return

int

static

int

**Question 17**

What should be the method declaration to fill in the blank below, which should return the higher of two imputed float values?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

{

float result;

if (num1 > num2)

result = num1;

else

result = num2;

return result;

}

void FindMax(float, return)

float FindMax(float num1, float num2)

void FindMax(float num1, float num2)

float FindMax(num1, num2)

**Question 18**

You want to create a loading scene sequence that works as follows. On a level select screen, there are a number of buttons, each corresponding to a different level. When the user clicks a level, you want to bring up a new loading screen, which displays the level number you selected, and after 5 seconds loads the scene corresponding to that level. How would you implement this, at a high level?

When the user clicks a button, add the level number to a private list, then load the loading scene. In the loading scene, use the DontDestroyOnLoad method to delay the loading of the level.

When the user clicks a button, store the level number as a private float variable, then load the loading scene. In the loading scene, use the InvokeRepeating method to delay the loading of the level using that integer variable.

When the user clicks a button, store the level number as a public integer variable, then load the loading scene. In the loading scene, use a Coroutine to delay the loading of the level using that integer variable.

**Question 19**

Which of the following guidelines about the use of variables and methods is NOT true?

1. Variable names should be longer and include complete words rather than being shorter (e.g. “int secondsElapsed” would be better than “int secElpsd”).
2. Methods names should usually include a verb or action in them (e.g. “void GenerateRandomObject” would be better than “RandomObject”).
3. Methods should usually do two or three things - if there are methods that only do one thing each, it makes sense to combine them.
4. When naming booleans, use common words like ”is”, “has”, and “can” (e.g. “isRaining”, “hasStarted”, “canMove”) to indicate that it is a boolean.

Line 1 is not true

Line 2 is not true

Line 3 is not true

Line 4 is not true

**Question 20**

True or False:

The code snippet below is using Unity’s Entity Component System (ECS) as opposed to the more standard Object-oriented framework.

using System;

using Unity.Entities;

namespace Shooter.ECS

{

[Serializable]

public struct MoveSpeed : IComponentData

{

public float Value;

}

public class MoveSpeedComponent : ComponentDataWrapper<MoveSpeed> { }

}

True

False