



## Graded Quiz Unit 3

Programming 1 (University of the People)

<b>Started on</b>	Wednesday, 8 July 2020, 7:14 PM
<b>State</b>	Finished
<b>Completed on</b>	Wednesday, 8 July 2020, 7:43 PM
<b>Time taken</b>	28 mins 53 secs
<b>Marks</b>	13.00/20.00
<b>Grade</b>	<b>65.00</b> out of 100.00

**Question 1**

Incorrect Mark 0.00 out of 1.00

In a for loop, how many times does the update run?

Select one:

- ☐ a. At least once, at the end of each iteration.
- ☒ b. At least once, at the beginning of each iteration. ❌
- ☐ c. Zero or more times, at the beginning of each iteration.
- ☐ d. Exactly once.
- ☐ e. Zero or more times, at the end of each iteration.

Your answer is incorrect.

See Section 3.4.1 of Eck (2014).

The correct answer is: Zero or more times, at the end of each iteration.

**Question 2**

Correct Mark 1.00 out of 1.00

Which of the following is NOT an effective strategy when your program does not work?

Select one:

- ☐ a. Add debugging statements to output information about the state of your program while it runs.
- ☐ b. Read through your code and figure out what it does step by step.
- ☐ c. Check each error message generated by the compiler or IDE.
- ☒ d. Make random changes to code that you do not understand until it accidentally works. ✔️
- ☐ e. Use a debugger to pause your program while it is running so you can check its state.

Your answer is correct.

See Section 3.2.3 of Eck (2014).

The correct answer is: Make random changes to code that you do not understand until it accidentally works.

**Question 3**

Correct Mark 1.00 out of 1.00

Consider the following Java program:

```
1 public class HelloWorld {  
2     // My first program!  
3     public static void main(String[] args) {  
4         System.out.println("Hello, World!");  
5     }  
6 }
```

What starts on line 1?

Select one:

- ☐ a. a method (subroutine) definition
- ☒ b. a class definition ✓
- ☐ c. a variable declaration
- ☐ d. a statement
- ☐ e. a comment

Your answer is correct.

See Section 2.1 of Eck (2014).

The correct answer is: a class definition

**Question 4**

Correct Mark 1.00 out of 1.00

Assume that the variables "x" and "y" both have type "int". Which one of the following is NOT a boolean expression?

Select one:

- ☒ a.  $x = y$  ✓
- ☐ b.  $x \geq y$
- ☐ c.  $((x > 0) \ \&\& \ (y > 0))$
- ☐ d.  $(x > 0) ? (x > y) : (x < y)$

Your answer is correct.

" $x = y$ " is an int assignment statement. The other choices are all legal boolean expressions. See Sections 2.5.4 and 2.5.6 of Eck (2014).

The correct answer is:  $x = y$

**Question 5**

Correct Mark 1.00 out of 1.00

Consider the following Java program:

```
1 public class HelloWorld {  
2     // My first program!  
3     public static void main(String[] args) {  
4         System.out.println("Hello, World!");  
5     }  
6 }
```

What starts on line 4?

Select one:

- ☐ a. a class definition
- ☐ b. a method (subroutine) definition
- ☒ c. a statement ✓
- ☐ d. a variable declaration
- ☐ e. a comment

Your answer is correct.

See Section 2.1 of Eck (2014).

The correct answers are: a statement, a class definition

**Question 6**

Correct Mark 1.00 out of 1.00

Which of the following keywords is useful for making a loop that may execute forever or may not execute at all?

Select one:

- ☐ a. break
- ☐ b. do
- ☐ c. switch
- ☐ d. continue
- ☒ e. while ✓

Your answer is correct.

See Section 3.3.1 of Eck (2014).

The correct answer is: while

**Question 7**

Correct Mark 1.00 out of 1.00

1. Consider the following class definition. Which variables can be used in the missing "println" expression on line 12?

```
1 public class PrintStuff
2 {
3     public static void main()
4     {
5         {
6             int i = -1;
7             System.out.println(____);
8         }
9         int j = 1;
10        for (j = 0; j < 10; j++) {
11            System.out.println(____);
12        }
13        {
14            int k;
15            for (k = 0; k < 10; k++) {
16                System.out.println(____);
17            }
18        }
19    }
20    System.out.println(____);
21 }
22 }
```

Select one:

- ☒ a. Only "j" ✓
- ☐ b.
1. Only "i"
- ☐ c. Only "k"
- ☐ d. "j" and "k"
- ☐ e. "i" and "j"

Your answer is correct.

"i" is no longer in scope. "k" has not been declared yet. See Section 3.1.1 of Eck (2014).

The correct answer is: Only "j"

**Question 8**

Incorrect Mark 0.00 out of 1.00

Consider the following class definition. Which variables can be used in the missing "println" expression on line 17?

```
public class PrintStuff
```

```
2 {
3     public static void main()
4     {
5         {
6             int i = -1;
7             System.out.println(____);
8         }
9         int j = 1;
10        for (j = 0; j < 10; j++) {
11            System.out.println(____);
12        }
13        {
14            int k;
15            for (k = 0; k < 10; k++) {
16                System.out.println(____);
17            }
18        }
19        System.out.println(____);
20    }
21 }
22 }
```

Select one:

- ☐ a. Only "i"
- ☒ b. Only "k" ❌
- ☐ c. "i" and "j"
- ☐ d. "j" and "k"
- ☐ e. Only "j"

Your answer is incorrect.

"i" is no longer in scope. "j" and "k" are in scope. See Section 3.1.1 of Eck (2014).

The correct answer is: "j" and "k"

**Question 9**

Correct Mark 1.00 out of 1.00

Consider the following line of Java code.  
`System.out.println("Hello, World!");`  
"out" is which of the following?

Select one:

- ☐ a. a parameter
- ☐ b. a class
- ☐ c. a method (subroutine)
- ☒ d. an object ✓
- ☐ e. a statement

Your answer is correct.

"out" is a static member object of the class "System". See Section 2.3.2 of Eck (2014).

The correct answer is: an object

**Question 10**

Incorrect Mark 0.00 out of 1.00

Consider the following Java method, which term best describes "static"?

```
public static void main(String[] args) {  
    System.out.println("Hello, World!");  
}
```

Select one:

- ☒ a. method call ✗
- ☐ b. modifier
- ☐ c. formal parameter
- ☐ d. return type
- ☐ e. actual parameter or argument

Your answer is incorrect.

See Section 4.2.1 of Eck (2014).

The correct answer is: modifier

**Question 11**

Correct Mark 1.00 out of 1.00

What is output by the following Java program?

```
class Compute {  
    static int compute() { return 42; }  
    static int compute(int i) { return i+1; }  
    public static void main(String[] args) {  
        System.out.println(compute(compute(0)));  
    }  
}
```

Select one:

- ☐ a. 0
- ☒ b. 2 ✓
- ☐ c. 43
- ☐ d. 42
- ☐ e. 1

Your answer is correct.

The inner call to "compute" has an argument, so it uses the second method definition, which returns 0+1, or 1. This 1 becomes the argument to the outer call, which then returns 1+1, or 2. The first definition of "compute" is never used. See Section 4.3.3 of Eck (2014).

The correct answer is: 2

**Question 12**

Correct Mark 1.00 out of 1.00

Which of the following types is NOT a primitive type?

Select one:

- ☐ a. double
- ☒ b. String ✓
- ☐ c. char
- ☐ d. boolean
- ☐ e. short

Your answer is correct.

The correct answer is: String



**Question 13**

Incorrect Mark 0.00 out of 1.00

Consider the following Java declaration and assignment statement.

```
float x = y;
```

Which one of the following types is "y" NOT allowed to be?

Select one:

- ☐ a. long
- ☒ b. short ❌
- ☐ c. int
- ☐ d. double
- ☐ e. float

Your answer is incorrect.

Java automatically converts values from short, int, and long to float. It does not automatically convert double to float. See Section 2.5.6 of Eck (2014).

The correct answer is: double

**Question 14**

Correct Mark 1.00 out of 1.00

Which of the following can a class NOT be used for?

Select one:

- ☐ a. a container for static methods (subroutines)
- ☐ b. a container for static variables
- ☒ c. a primitive type ✔️
- ☐ d. a type for method parameters
- ☐ e. a type for variables

Your answer is correct.

Primitive types are not classes. See Section 2.3 of Eck (2014).

The correct answer is: a primitive type

**Question 15**

Correct Mark 1.00 out of 1.00

Consider the following line of Java code.  
`System.out.println("Hello, World!");`  
"Hello ,World" is which of the following?

Select one:

- ☐ a. a class
- ☐ b. a method (subroutine)
- ☐ c. an object
- ☒ d. a parameter ✓
- ☐ e. a statement

Your answer is correct.

"Hello, World!" is a parameter passed to the method "println". See Section 2.2.5 of Eck (2014).

The correct answer is: a parameter

**Question 16**

Incorrect Mark 0.00 out of 1.00

Which of the following keywords is useful for skipping to the next iteration of a loop?

Select one:

- ☒ a. switch ✗
- ☐ b. break
- ☐ c. continue
- ☐ d. do
- ☐ e. while

Your answer is incorrect.

See Section 3.3.3 of Eck (2014).

The correct answer is: continue

**Question 17**

Correct Mark 1.00 out of 1.00

Which of the following keywords is useful for loops that should always execute at least once?

Select one:

- ☐ a. break
- ☐ b. while
- ☐ c. switch
- ☐ d. continue
- ☒ e. do ✓

Your answer is correct.

See Section 3.3.2 of Eck (2014).

The correct answer is: do

**Question 18**

Incorrect Mark 0.00 out of 1.00

In a for loop, how many times does the continuation condition run?

Select one:

- ☒ a. Zero or more times, at the beginning of each iteration. ✗
- ☐ b. At least once, at the beginning of each iteration.
- ☐ c. Exactly once.
- ☐ d. At least once, at the end of each iteration.
- ☐ e. Zero or more times, at the end of each iteration.

Your answer is incorrect.

See Section 3.4.1 of Eck (2014).

The correct answer is: At least once, at the beginning of each iteration.

**Question 19**

Incorrect

Mark 0.00 out of 1.00

Which one of the following lines of Java code does NOT include a method call?

Select one:

- ☐ a. `if (i < 1) { compute(); }`
- ☐ b. `int x = compute(y);`
- ☐ c. `void compute() {}`
- ☒ d. `compute();` ✖
- ☐ e. `compute(x,y,z);`

Your answer is incorrect.

Answer is a method definition, not a method call. See Sections 4.2.1 and 4.2.2 of Eck (2014).

The correct answer is: `void compute() {}`

**Question 20**

Correct

Mark 1.00 out of 1.00

Consider the following line of Java code.

```
System.out.println("Hello, World!");
```

"println" is which of the following?

Select one:

- ☐ a. a class
- ☒ b. a method (subroutine) ✔
- ☐ c. an object
- ☐ d. a parameter
- ☐ e. a statement

Your answer is correct.

"println" is a method of the object "out". See Section 2.3.2 of Eck (2014).

The correct answer is: a method (subroutine)