

# Python Task 2 quiz

7 out of 7 correct

1. What will be the output of the following code?

```
a = [1, 2, 3, 4, 5]  
print(a[0:3])
```

- ☐ [1, 2, 3, 4, 5]
- ☒ [1, 2, 3]
- ☐ [2, 3, 4]
- ☐ [1, 2]

**Explanation:** The slice `a[0:3]` returns a new list containing elements from index 0 up to (but not including) index 3 of the original list `a`. In this case, the slice would return the list `[1, 2, 3]`.

2. What will be the output of the following code?

```
def add_numbers(x, y):  
    return x + y  
  
result = add_numbers(3, 5)  
print(result)
```

- ☒ 8
- ☐ 3, 5
- ☐ None
- ☐ Error

**Explanation:** The code defines a function `add_numbers` that takes two arguments `x` and `y` and returns the sum of the two numbers. The function is then called with arguments 3 and 5, and the result is stored in the variable `result`. When the result is printed, it will display 8, which is the sum of 3 and 5.

3. What will be the output of the following code?

```
numbers = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

```
for number in numbers:
```

```
    if number % 2 == 0:
```

```
        print(number)
```

```
    else:
```

```
        continue
```

- ☐ 1, 3, 5, 7, 9
- ☒ 2, 4, 6, 8, 10
- ☐ 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- ☐ 2, 4, 6, 8, 10, 1, 3, 5, 7, 9

**Explanation:** The code loops through each number in the list `numbers` and checks if the number is even (i.e. if the remainder when divided by 2 is 0). If the number is even, it is printed. If the number is odd, the `continue` statement skips to the next iteration of the loop without printing the number. The output of the code will be the even numbers in the list `numbers`, which are 2, 4, 6, 8, 10.

4. What is inheritance in OOP?

- ☒ The ability of an object to share properties and behaviors with other objects
- ☐ The ability of an object to hide its properties and behaviors from other objects
- ☐ The ability to create objects from a class
- ☐ The ability to overload methods in a class

**Explanation:** Inheritance is a mechanism in OOP that allows an object to inherit properties and behaviors from another object, usually a parent object or class. This allows for code reuse and the creation of more specialized objects that can be treated similarly to their parent objects.

5. What is the output of the following code?

```
x = 10
y = 15
if x > y:
    print("x is greater than y")
elif x == y:
    print("x is equal to y")
else:
    print("x is less than y")
```

- ☐ x is greater than y
- ☐ x is equal to y
- ☒ x is less than y
- ☐ None

6. What is the output of the following code?

```
x = True
y = False
if x and y:
    print("x and y are both true")
else:
    print("x and y are not both true")
```

- ☐ x and y are both true
- ☒ x and y are not both true

- ☐ None
- ☐ Syntax error

**Explanation:** The code checks whether x and y are both True using an if statement and the and operator. Since x is equal to True and y is equal to False, the expression x and y is false, and the code inside the else block is executed, printing "x and y are not both true".

7. What is the output of the following code?

```
x = [1, 2, 3, 4, 5]
for i in x:
    if i % 2 == 0:
        break
    print(i)
```

- ☒ 1
- ☐ 1 2
- ☐ 1 2 3
- ☐ None

**Explanation:** The code uses a for loop to iterate over the values in the list x. The code inside the loop checks whether 'i' is even using the modulus operator %. If 'i' is even, the break statement terminates the loop. If 'i' is odd, the code inside the loop prints 'i'. Since the first value in x is 1, which is odd, the code inside the loop prints 1, and the break statement terminates the loop before it can process the rest of the values in x.

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