Python Task quiz

8 out of 8 correct

1. What is the output of the following Python code?

```
x = 10
y = 20
if x == 10:
    x = x + y
print(x)
```

- ○ 10
- ○ 20
- ◉ 30
- ○ None of the above

Explanation: In this code, x is first defined as 10. Then y is defined as 20. In the if statement, x is reassigned to x + y, which evaluates to 10 + 20 = 30. Finally, x is printed, resulting in 30.

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

```
def print_square(x):
    print(x * x)
print_square(10)
```

- ◉ 100
- ○ 10
- ○ '10'

- ◯ None of the above

Explanation: The code defines a function print_square which takes an argument x and prints its square. When the function is called with 10 as an argument, the output will be 10 * 10 = 100.

3. What is the output of the following code?

```
class Car:
    def __init__(self, color, model):
        self.color = color
        self.model = model

    def get_color(self):
        return self.color

my_car = Car("red", "sedan")
print(my_car.get_color())
```

- ◉ red
- ◯ sedan
- ◯ Car
- ◯ None of the above

Explanation: The code defines a class Car with an __init__ method that sets the color and model attributes, and a get_color method that returns the value of the color attribute. An instance of the Car class, my_car, is then created with "red" and "sedan" as arguments for color and model, respectively. The get_color method is then called on my_car, which returns the value of the color attribute, which is "red".

4. What is the output of the following code?

```
my_dict = {"a": 1, "b": 2, "c": 3}
my_set = set(my_dict.keys())
my_set.add("d")
```

```
print(my_dict)
```

- ○ {'a': 1, 'b': 2, 'c': 3, 'd': None}
- ◉ {'a': 1, 'b': 2, 'c': 3}
- ○ {'a': 1, 'b': 2, 'c': 3, 'd'}
- ○ Error

Explanation: In this code, a dictionary my_dict is created with keys "a", "b", and "c" and values 1, 2, and 3, respectively. Then, a set my_set is created from the keys of my_dict using the set() constructor. Finally, the value "d" is added to my_set using the add() method. However, adding a value to my_set does not change my_dict. Printing my_dict shows that it remains unchanged.

5. What is the output of the following code?

```
x = 10
if x < 20:
    print("x is less than 20")
else:
    print("x is greater than or equal to 20")
```

- ◉ x is less than 20
- ○ x is greater than or equal to 20
- ○ x
- ○ None of the above

Explanation: In this code, x is defined as 10. Then an if statement is used to check if x is less than 20. Since 10 < 20 is True, the code in the first block of the if statement is executed and "x is less than 20" is printed.

6. What is the mutable data type in Python?

- ○ Tuple

- [x] List
- [ ] Numbers
- [ ] String

Explanation: Lists are mutable, meaning their contents can be changed after they are created. Tuples, sets, and dictionaries are also collection data types in Python, but they are not mutable.

7. What does the range() function do in a for loop?

- [ ] Determines the number of times the loop will run
- [ ] Specifies the values that the loop variable will take on
- [ ] Determines the starting and ending values of the loop
- [x] All of the above

Explanation: The range() function in a for loop determines the number of times the loop will run, specifies the values that the loop variable will take on, and determines the starting and ending values of the loop. The range() function can take one, two, or three arguments, and the arguments determine the starting value, ending value, and step size of the range.

8. What is the output of the following code?

```
i = 1
while i < 5:
    print(i)
    i = i + 1
```

- [ ] 0 1 2 3 4
- [x] 1 2 3 4
- [ ] 5 6 7 8
- [ ] 1 2 3 4 5

Explanation: The while loop runs as long as the condition "i < 5" is true. The variable "i" is initially set to 1, and in each iteration of the loop it is incremented by 1 using "i = i + 1". The loop will run 4 times, printing the values 1, 2, 3, and 4. The value of "i" will be 5 after the loop is finished, so the condition "i < 5" will be false and the loop will stop.

Submit