py101_lesson_3_easy_3

December 4, 2024

0.1 Question 1

Write two different ways to remove all of the elements from the following list:

[18]:
```
numbers = [1, 2, 3, 4]
print(numbers)
numbers.clear()
print(numbers)

numbers = [1, 2, 3, 4]
print(numbers)
while numbers:
    numbers.pop()
print(numbers)
```

```
[1, 2, 3, 4]
[]
[1, 2, 3, 4]
[]
```

0.2 Question 2

What will the following code output?

```
print([1, 2, 3] + [4, 5])
```

Try to answer without running the code

[21]:
```
print([1, 2, 3] + [4, 5])

# I was correct
```

```
[1, 2, 3, 4, 5]
```

0.3 Question 3

What will the following code output? Try to answer without running the code

```
str1 = "hello there"
str2 = str1
str2 = "goodbye!"
print(str1)
```

[27]:
```
str1 = "hello there"
str2 = str1
str2 = "goodbye!"
print(str1)

# I was correct
```

```
hello there
```

0.4 Question 4

What will the following code output? Try to answer without running the code

```
my_list1 = [{"first": "value1"}, {"second": "value2"}, 3, 4, 5]
my_list2 = my_list1.copy()
my_list2[0]['first'] = 42
print(my_list1)
```

[29]:
```
my_list1 = [{"first": "value1"}, {"second": "value2"}, 3, 4, 5]
my_list2 = my_list1.copy()
my_list2[0]['first'] = 42
print(my_list1)

# Again, no problem
```

```
[{'first': 42}, {'second': 'value2'}, 3, 4, 5]
```

0.5 Question 5

The following function unnecessarily uses two return statements to return boolean values. Can you rewrite this function so it only has one return statement and does not explicitly use either True or False? Try to come up with two different solutions

```
def is_color_valid(color):
    if color == "blue" or color == "green":
        return True
    else:
        return False
```

[37]:
```
def is_color_valid(color):
    return color == "blue" or color == "green"

print(is_color_valid("blue"))
print(is_color_valid("green"))
print(is_color_valid("yellow"))

def is_color_valid(color):
    valid_colors = ["blue",
                    "green",
                   ]
```

```
    return color in valid_colors

print(is_color_valid("blue"))
print(is_color_valid("green"))
print(is_color_valid("yellow"))
```

```
True
True
False
True
True
False
```

[ ]: