Python List, Continued

Instructions

1. Read each code snippet
2. Predict what it will output → write your prediction
3. Type out the code and run it → write the actual output
4. If your prediction was wrong, try to figure out why

Once you're finished, answer the questions at the end.

Snippet 1

```
items = ["apple", 42, True, 3.14]
print(items[0:2])
```

Prediction

Actual

Snippet 2

```
items = ["apple", 42, True, 3.14]
print(items[1:3])
```

Prediction

Actual

Snippet 3

```
items = ["apple", 42, True, 3.14]
print(items[0:4])
```

Prediction

Actual

Snippet 4

```
items = ["apple", 42, True, 3.14]
print(items[2:2])
```

Prediction

Actual

Snippet 5

```
items = ["apple", 42, True, 3.14]
print(items[:2])
```

Prediction

Actual

Snippet 6

```
items = ["apple", 42, True, 3.14]
print(items[2:])
```

Prediction

Actual

Snippet 7

```
items = ["apple", 42, True, 3.14]
print(items[-3:-1])
```

Prediction

Actual

Snippet 8

```
numbers = [10, 20, 30, 40, 50]
print(30 in numbers)
```

Prediction

Actual

Snippet 9

```
numbers = [10, 20, 30, 40, 50]
print(35 in numbers)
```

Prediction

Actual

Snippet 10

```
mixed = ["hello", 99, False]
print("hello" in mixed)
print(99 in mixed)
print(True in mixed)
```

Prediction

Actual

Snippet 11

```
mixed = ["hello", 99, False]
print("99" in mixed)
```

Prediction

Actual

Questions

1. What is returned when, instead of a single number, you include two numbers separated by a colon colon (`:`) inside index brackets?

2. What does the number *before* the colon signify?

3. What does the number *after* the colon signify?

4. What happens if:
    - you leave out the number before the colon?
    - you leave out the number after the colon?

5. What happens if the start and end numbers are the same (for example, `[2:2]`)?

6. What does the keyword `in` check for when used with a list?

7. Explain why you got the output you did for Snippet 11.