

A Few More Practice Questions (improvised by Rob)

True/False:

____ You can concatenate lists with the "+" operator

____ $y += 1$ is always equivalent to $y = y + 1$

____ `string_variable[::-1]` will return the original string variable in reverse order

Fill In:

The data type that can represent any real number is called a _____.

A function will immediately stop executing and exit with a _____ statement.

A _____ is an ordered collection of zero or more values of any type.

A conditional must always start with the _____ keyword, but can have any number of _____ branches after that, and may or may not have one _____ branch at the end.

Short Answers:

Write the value of each slice for the following list: `lst = [1, 2, 3, 4, 5, 6, 7, 8]`.

`lst[4:]`

`lst[:-2]`

`lst[1:10:3]`

Write the output that will be produced by the following code:

```
x = 10
y = 3
while x < 100 and y > -2:
    print(f"{x} & {y + x}")
    x *= 2
    y = y - 1
print("All done")
```

Find and describe the two bugs that would cause issues in this function and explain how you would fix each of them. You can assume the input will always be a list of numbers.

```
def double_if_not_eight(lst):
    output = list()
    for value in range(len(lst)):
        if value == 8:
            output.append(value)
        else:
            output.append(value*2)
    return output
```

Long Answers:

Write a function `swap` that takes a list `lst` as a parameter and returns a new list with the first half of `lst` swapped with the second half. E.g. `swap([1, 2, 3, 4])` would return `[3, 4, 1, 2]`. You can assume `lst` will always have an even length.

Implement the following pseudocode:

Take in user integer input

Make a list with the integer 10 in it

While the input is not even

 Add the input to the front and back of the list

 Get a new integer from the user

Create a new csv file named "output.csv"

Add the list contents to the first line of the file