

CSCI-UA-0002

Intro to Computer Programming (No Prior Experience)

Workshop # 5

Professor Emily Zhao

Section 008 Section 012

T/R 12:30-1:45PM T/R 4:55-6:10PM



Adding variable to your formatting spec string

```
# Problem: I want all names to be right aligned and 15 spaces wide
# Expected Output:
           Mabel
            Greg
             Min
           Peter
name1 = "Mabel"
name2 = "Greg"
name3 = "Min"
name4 = "Peter"
# Here's how I would hardcode it
print(format(name1, ">15s"))
print(format(name2, ">15s"))
print(format(name3, ">15s"))
print(format(name4, ">15s"))
# How would I implement a variable into my formatting spec instead?
width = 15
# This won't work:
```

print(format(name1, ">widths"))

print(format(name1, ">widths"))
ValueError: Invalid format specifier

```
# The answer: concatenation!
# The formatting spec is a string
# Just as we would recreate the following string "October28":
month = "October"
date = 28
date_string = month + str(28)
# We can do the same thing with our formatting spec
width = 15
formatting_spec = ">" + str(width) + "s"
print(format(name1, formatting_spec))
print(format(name2, ">" + str(width) + "s"))
# ^ Both work!
# Output:
           Mabel
            Greg
```

- for loops can also have an else clause
- The else clause executes after the loop completes normally.
- This means that the loop did not encounter a break statement.

```
for x in range(1, 4):
    print(x)
else:
    print("Out of the loop")
```

```
1
2
3
Out of the loop
```

```
for x in range(1, 4):
    print(x)
else:
    print("Out of the loop")

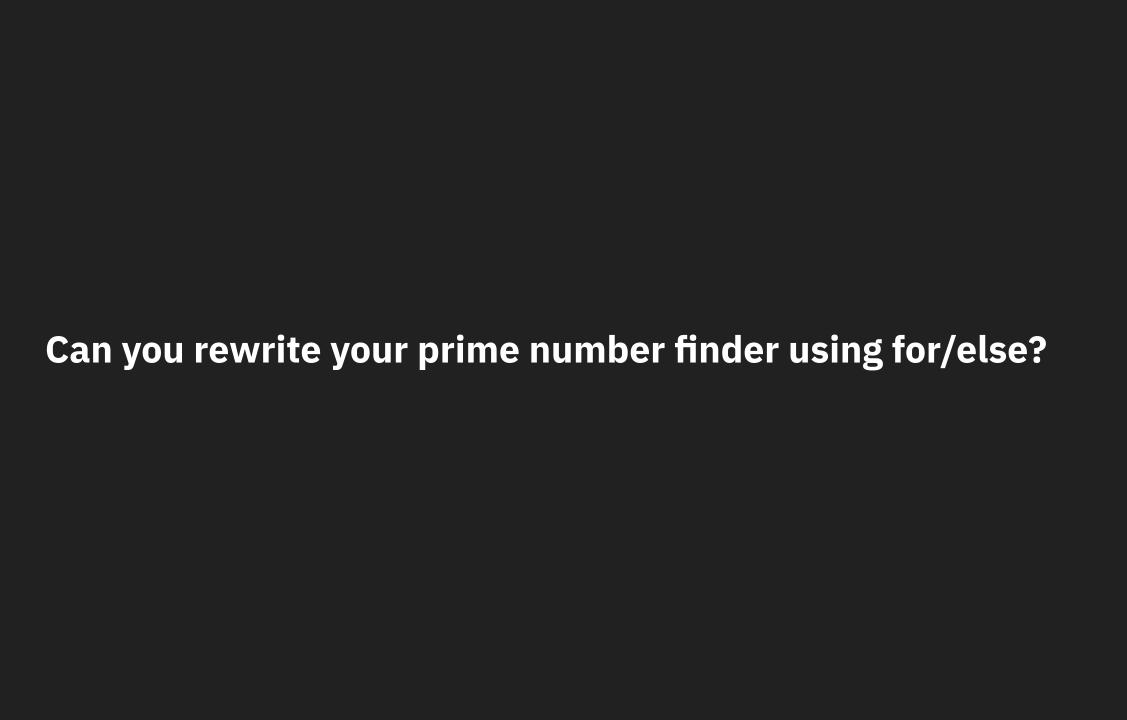
1
2
Out of the loop
Out of the loop
```

```
for x in range(1, 4):
    print(x)
    if x == 2:
        break
else:
    print("Out of the loop")
```

1 2

```
user_input = "kiwi"
for fruit in ["apple", "banana", "peach"]:
    if fruit == user_input:
        print("Your fruit is in the list!")
        break
else:
    print("We could not find your fruit.")
```

We could not find your fruit



```
# Program to check if a number is prime or not
num = 407
# To take input from the user
#num = int(input("Enter a number: "))
# prime numbers are greater than 1
if num > 1:
   # check for factors
   for i in range(2, num):
       if (num % i) == 0:
           print(num,"is not a prime number")
           print(i,"times",num//i,"is",num)
           break
   else:
       print(num,"is a prime number")
```

Midterm Prep Quiz

Homework

- Assignment #5 (due midnight)
- Midterm Prep Quiz
- Start reviewing for the midterm
 - Come to class with questions you might have

Reminder: TA review session on Friday October, 20th!