1 Tasks

1.1 Writing your first program - hello.py

Note: Due to the length of your name, the number of #'s in your result may not be exactly the same as the one above. Don't worry as long as you get a similar layout.

```
# using 5 separate print statements, we can create the box
print("############################")
print("#                          #")
print("#  Greetings, Kylie!!!     #")
print("#                          #")
print("############################")
```

1.2 Adding comments

> *Checkoff #1—Show off your hello.py file! Why are comments so important?*

Answer: Comments can be useful in many cases, such as

- explaining 'tricky' pieces of code
- reminding yourself or others of what you wrote
- defining functions clearly
- noting what a variable means
- and in so many more cases!

1.3 String operators - stringop.py

String operators are less intuitive than those on numbers. Given the following variables, what are the values of these expressions? (Try getting the answer on your own and use IDLE (interactively) only to check your answer. Create a file called **stringop.py** and write your answers in it using comments.)

```
# Variables
look = "Look at me!"
now = " NOW"


# Expressions
look[:4]
#'Look'
look[-1]
#'!'
look*2
#'Look at me!Look at me!'
look[:-1] + now + look[-1]
#'Look at me NOW!'
now[1]
#'N'
```

```
now[4]
# IndexError: string index out of range
look*2 + look[:-1] + now + look[-1]
#'Look at me!Look at me!Look at me NOW!'
```

1.4 Doing math - calculator.py

We can also use Python as a calculator. The basic operations are:

```
km_per_mile = 1.61 #1km = 1/1.61 miles
time = 20.5 #time in minutes
num_miles = 5/km_per_mile
print(time/num_miles)
#should see about 6.6 or 6.6 minutes/mile!!
#note there are MANY different solutions to one problem
```

> *Checkoff #2—Why is giving variables helpful names important?*

1.5 Greetings - greetings.py

Print a phrase and greeting using only the variables provided in **greetings.py**. Complete instructions are in the file.

```
#one possible solution could be
saying_1 = 'Let Them Eat Cake'
saying_2 = 'The Rich get Richer'
greeting = 'Hello, world!'
name = 'Cynthia Skier'
space = ' '
star = '*'

eat = saying_1[9:13] #includes space
the_rich = saying_2[0:8]
hello = greeting[0:7] #includes space
cynthia = name[0:8]

print(eat + the_rich)
print(hello + cynthia)
```

2 Optional Challenge[1]:

Revisit Problem 1.1, and write a program that prints "Greetings, name!!!" in a box of stars for ANY name.

```
name = #FILL IN NAME HERE
greetings = 'Greetings, ' + name + '!!!'
length = len(greetings)

print('#'*(length+4)) #leaves space for 1 blank on each side of the greeting
print('#' + ' '*(length+2) + '#')
print('#' + ' ' + greetings + ' ' + '#')
print('#' + ' '*(length+2) + '#')
print('#'*(length+4))
```

[1] optional problems are provided for those who have further interests and want to explore more. You are not responsible for those questions, however.