Python Flow Control:

for loop

REVIEW: for Loop

```
for iteration_variable in range(start, stop, step):
        body of for loop
        to be repeated
```

#start - starting integer
#stop - stopping integer – 1
#step (Optional) - increase or #decrease integer value(can #be a positive or negative #number)

```
for num in range(5):
    print(num)
```

#Iteration variable num

#Num starts at 0 up to
#**NOT** including 5.

num
0
1
2
3
4

```
for salary in range(10000, 50500, 500):
    print(salary)
```

#salary starts at 10000 up to
#**NOT** including 50500,
#incrementing by 500.

#Iteration variable salary

salary
10000
10500
11000
11500
12000
12500
…
…
…
…
49500
50000

```
for tempC in range(100, -10, -10):
    print(tempC)
```

#Iteration variable tempC

#tempC starts at 100 up to #**NOT** including -10, decreasing by -10.

tempC
100
90
80
70
60
50
40
30
20
10
0

for Loops and **(range** values are exactly) what you want.

- FOR Statement
  - When range is exactly what you want,
  - **NO** range keyword
  - **(Values can be numbers or “strings”)**
  - **[lists]**

for Loops and range values are exactly what you want.

```
for steps in (11, 13, 22, 54):
    print(steps)
```

What is OUTPUT?

OUTPUT steps
11
13
22
54

```
#**NO range
#steps is the
iteration variable
used to go
through each
number one by
one
```

```
for character in “banana”:
    print(character)
```

What is OUTPUT?

OUTPUT character
b
a
n
a
n
a

#**NO range

#character is the iteration variable to go through the string character by character

Open forloop.py, **Save As: rank.py**

1. Write a for loop to print the year [1 – 10]. Use **year** as your iteration variable.
2. ***University of XYZ uses the following table for Advancement in Rank.*** ***Inside your for loop****, use a* ***if block*** *for the following:*

if year is	Display
1 to 5	Qualified to advance to Assistant Professor
6 to 10	Qualified to advance to Associate Professor
Above 10	Qualified to advance to Professor

Open forloop.py, **Save As: salary.py**

1. Write a for loop to print the salary from [$10,000 - $50,000] in increments of 500. Use **salary** as your iteration variable.
2. ***CompanyXYZ has lifted the freeze on increments on employee's salaries, inside your for loop***:

   - **calculate the new salary** (use the variable **newSalary**) at 2% of the current salary.

   - Display the **Salary** then the **New Salary**.

Open forloop.py, **Save As: tempConversion.py**

1. Write a for loop to print temperature from [100 – 0], decreasing by 10. Use **tempC** as your iteration variable.
2. ***Inside your for loop***:
   - **convert Celsius to Fahrenheit** (use the variable **tempF**).
   - Display the **Celsius** then the **Fahrenheit**.