

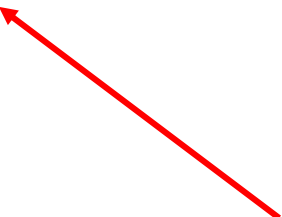
# **Python Flow Control:**

## **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)
```

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

#Iteration variable num

num
0
1
2
3
4

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

#Iteration variable salary

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

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
<b>steps</b>
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**,

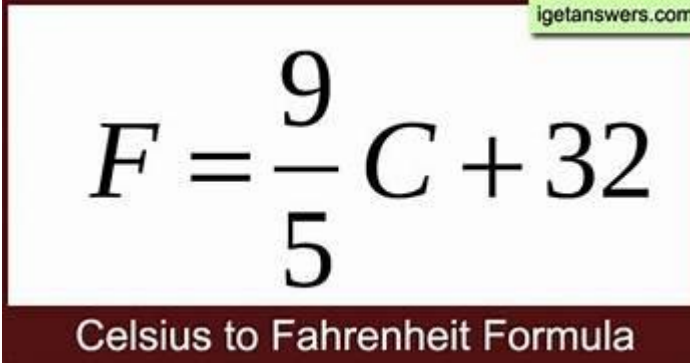
Save As: **salary.py**

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**.

A graphic showing the formula for converting Celsius to Fahrenheit. It features a large equation  $F = \frac{9}{5}C + 32$  in a serif font. The equation is centered within a white rectangular box with a thin black border. In the top right corner of this box, the text 'igetanswers.com' is written in a small, green, sans-serif font. Below the white box, there is a dark red horizontal bar containing the text 'Celsius to Fahrenheit Formula' in a white, sans-serif font.
$$F = \frac{9}{5}C + 32$$

Celsius to Fahrenheit Formula