

For Loops

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Python

for loops in Python are just
built different!

for loops Review

Loops provide the option to **repeat** code over and over again

```
for (int i = 0; i < 5; i++)
```

The code above starts at 0 and counts until 5.
The loop runs 5 times.

for loops Python

- Syntax is different than Java/C++
- Requires a list
- We are using a list of numbers via the range() function

range function Python

- `range(number1, number2)`

The code above **starts** counting at **number1**.

We then **count up by 1** at a time.

The code **ends** at **number2**. Not including number2.

Example:

`range(0 , 4)` This starts at 0 then counts up to 4.

Range produced: **0, 1, 2, 3**

Loop example in Python

```
for x in range(0,4):  
    print(x)
```

The code above produces this output:

0
1
2
3

Let's combine **range** and **for loops** in Python

```
for x in range(0,4):  
    print(x)
```

This writes out to:

for each number (x) in the range 0 to 4

Print out that number.

x starts at 0, counting
up to 4. As stated here.

X
0
1
2
3

Print function more!

Normally we print like

```
print("potato")
```

This prints out **"potato"** then a new line.

But we can **stop** the print statement from **creating a new line** after "potato" by doing the following:

```
print("potato", end="")
```

This defines the end of our print to do nothing.

Print function, end

This means we can **change what the end of our prints look like!**

We can **separate by commas** with the following, kind of cool!

```
for x in range(0,4):  
    print(x, end=", ")  
print (4)
```

Output: 0, 1, 2, 3, 4

Lab: For Loops

Write an app that draws a line. Ask the user for line length and if they want a horizontal line or vertical line.

Example output:

Please enter line length: **4**

Do you want a horizontal or vertical line? **Vertical**

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