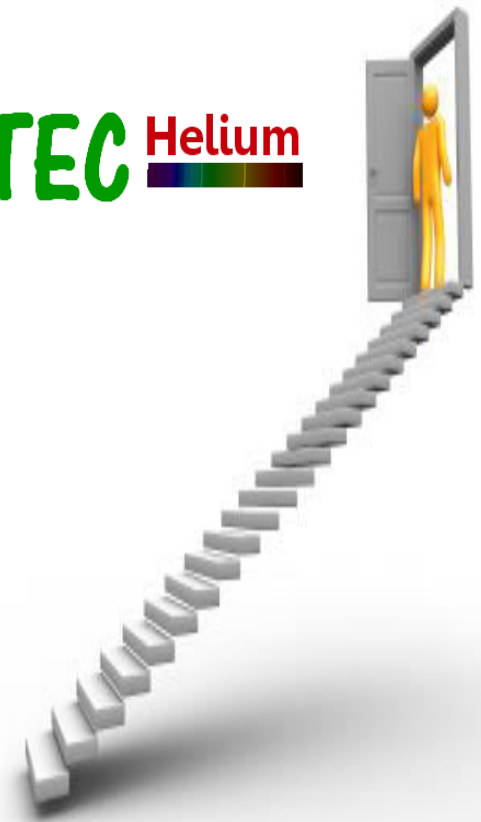


Lets Face it, now

Project Oriented Python

Python For Loop & Programs

TEC Helium



The for loop

- **for loop:** Repeats a set of statements over a group of values.

- Syntax:

```
for variableName in groupOfValues:  
    statements
```

- We indent the statements to be repeated with tabs or spaces.
 - ***variableName*** gives a name to each value, so you can refer to it in the ***statements***.
 - ***groupOfValues*** can be a range of integers, specified with the `range` function.
- Example:

```
for x in range(1, 6):  
    print x, "squared is", x * x
```

Output:

```
1 squared is 1  
2 squared is 4  
3 squared is 9  
4 squared is 16  
5 squared is 25
```

range

- The range function specifies a range of integers:
 - range(***start***, ***stop***) - the integers between ***start*** (inclusive) and ***stop*** (exclusive)
- It can also accept a third value specifying the change between values.
 - range(***start***, ***stop***, ***step***) - the integers between ***start***(inclusive) and ***stop*** (exclusive) by ***step***
- Example:

```
for x in range(5, 0, -1):  
    print x  
print "Blastoff!"
```

Output:

```
5  
4  
3  
2  
1  
Blastoff!
```

Cumulative loops

- Some loops incrementally compute a value that is initialized outside the loop. This is sometimes called a *cumulative sum*.

```
sum = 0
for i in range(1, 11):
    sum = sum + (i * i)
print "sum of first 10 squares is", sum
```

Output:

```
sum of first 10 squares is 385
```

Exercise

1. Write a program to print even number between 1 and 30.
2. Write a program to print prime number between 1 and 50
3. Write a program to print numbers that is divisible by 3 as well as 5 between 1 and 50

Thanks