

Python and Scientific Python

Experiment 3: Working With Lists and Making Table with Formula

Pr. Lab

1. What is the range() function? Give example.

Soln. The range() function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and stops before a specified number.

eg:

```
x = range(0, 6)
```

```
# Returns sequence starting from 0, till 5.
```

2. What is the importance of indentation in Python loops? Give example.

Soln. Indentation is important in loops as Python reads each indented code as a part of a block. So, if a part is not to be looped and is kept inside the loop indentation, that part would also be looped.

eg: print finish only when the list is looped through.

```
list = [1, 2, 3]
```

```
for num in list:
```

```
    print(num)
```

```
    print("Finished")
```

```
# 1
```

```
# "Finished"
```

```
# 2
```

```
# "Finished"
```

```
...so on
```

```
list = [1, 2, 3]
```

```
for num in list:
```

```
    print(num)
```

```
print("Finished")
```

```
# 1
```

```
# 2
```

```
# 3
```

```
# "Finished"
```

3. Select which is the for loop.

Soln. 1) We use a for loop when we want to perform a task indefinitely until a particular condition is met.

II Post Lab.

1. Where are triple quoted strings used?

soln. Triple quoted strings (""" """) are used to assign a multiline string to a variable.

2. What is the role of the 'Continue' statement in the while loop?

soln. A Continue Statement ends the current iteration of a loop. Program control is passed from the Continue Statement to the end of the loop body.

3. Can ~~if-else~~ and while loop be used interchangeably. Explain

soln. Python supports to have an else statement associated with a loop statement. If the ~~if~~ statement is used with a while loop, the else statement is executed when condition becomes false.