

# Python Programming

## For Loops 1

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# From **while** to **for**

```
3 pos = 0
4 while pos < 5:
5     print(pos, end=' ')
6     pos += 1
7     print()
```

- The `range()` **function** returns a **sequence** of numbers:
  - **starting** from 0 by default
  - **increments** by 1 (by default)
  - **stops** before a specified number.

```
3 for pos in range(5):
4     print(pos, end=' ') # 0 1 2 3 4
5     print()
6
7 for pos in range(2, 5):
8     print(pos, end=' ') # 2 3 4
9     print()
10
11 rng = range(1, 21, 4)
12 for pos in rng:
13     print(pos, end=' ') # 1 5 9 13 17
14     print()
```

# Iterating backward

```
2
3  for pos in range(5, 0, -1):
4      print(pos, end=' ') # 5 4 3 2 1
5  print()
6
7  for pos in range(10, 0, -2):
8      print(pos, end=' ') # 10 8 6 4 2
9  print()
10
11  # pass just for simple useless statement
12  for pos in range(5):
13      pass
14
15  # ... just for simple useless statement
16  for pos in range(5):
17      ...
18
```

# For with string

```
2  # string is a sequence of chars
3  # Strings is an iterable
4  # So we can iterate over it with for loop
5  mystr = 'Me!'
6
7  for char in mystr:
8      print(char) # Note it is a string
9
10  """
11  M
12  e
13  !
14  """
```

*“Acquire knowledge and impart it to the people.”*

*“Seek knowledge from the Cradle to the Grave.”*