

# How to measure the codes using Big O

## 5 Rules

| No     | Description  | Complexity  |
|--------|--|-------------|
| Rule 1 | Any assignment statements and if statements that are executed once regardless of the size of the problem | $O(1)$      |
| Rule 2 | A simple “for” loop from 0 to n ( with no internal loops)  | $O(n)$      |
| Rule 3 | A nested loop of the same type takes quadratic time complexity   | $O(n^2)$    |
| Rule 4 | A loop, in which the controlling parameter is divided by two at each step                                | $O(\log n)$ |
| Rule 5 | When dealing with multiple statements, just add them up  |             |

You should be warned that some declarations may include initializations and some of these  
ithm.

SAMPLE



# Python range() Function

## Definition and Usage

The **range()** function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and ends at a specified number.

## Syntax

```
range(start, stop, step)
```

## Parameter Values

| Parameter    | Description   |
|--------------|---|
| <i>start</i> | Optional. An integer number specifying at which position to start. Default is 0 |
| <i>stop</i>  | Required. An integer number specifying at which position to end.                |
| <i>step</i>  | Optional. An integer number specifying the incrementation. Default is 1         |

SAMPLE

item in the sequence:

