

# The range () function in Python

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The range () function built into Python is used to create a sequence of numbers starting at 0 by default, incrementing 1 (by default) and ending at a specified number. Put simply, the function takes an integer and returns a range object (iterable).

In this article, TipsMake.com will learn about range (), syntax, parameters and examples with you. Invites you to read the track.

## The syntax of the range () function in Python

The range () function in Python has two types of syntax:

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

## The parameters of the range () function

The range () function has 3 parameters:

1. **start** : integer begins, the string will start with this parameter. The default value is 0.
2. **stop** : the integer ends, the string ends with this parameter.
3. **step** : integer specifies the distance between the numbers inside the string. The default value is 1.

## Return value from range ()

### 1. With range (stop) syntax:

1. Returns a string starting from 0 to stop -1.
2. Returns an empty string if the stop value is 0 or less than 0.

### 2. With range type syntax (start, stop [, step]):

1. Without the step parameter, the default step will be 1: the return value is a string starting at start and ending at stop -1
2. If step equals 0, the exception exception ValueError will be raised.
3. If step , check if the parameters meet the constraint.

1. If yes, returns the string according to the formula, starting from `start` , the numbers separated by `step` , the last number of the string will be `stop` .
2. Otherwise returns an empty string.

### Example 1: how does `range ()` work?

```
print(list(range(0))) # s? d?ng range(stop) print(list(range(10))) # s? d?
ng range(start, stop) print(list(range(1, 10)))
```

When you run the program, the output will be:

```
[] [0, 1, 2, 3, 4, 5, 6, 7, 8, 9] [1, 2, 3, 4, 5, 6, 7, 8, 9]
```

### Example 2: Making an even number list between parameters passed by using `range ()`

```
start = 2 stop = 14 step = 2 print(list(range(start, stop, step)))
```

When you run the program, the output will be:

```
[2, 4, 6, 8, 10, 12]
```

### Example 3: `range ()` works with step being a negative number

```
start = 2 stop = -14 step = -2 print(list(range(start, stop, step))) print(list(
```

Return value:

```
[2, 0, -2, -4, -6, -8, -10, -12] []
```

See also: Python built-in functions

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