# Introduction to functions

## What Is A Function?

A Function is a sequence of statements/instructions that performs a particular task. A function is like a black box that can take certain input(s) as its **parameters** and can output a value after performing a few operations on the parameters. A function is created so that one can use a block of code as many times as needed just by using the name of the function.

## Why Do We Need Functions?

- **Reusability:** Once a function is defined, it can be used over and over again. You can call the function as many times as it is needed. Suppose you are required to find out the area of a circle for 10 different radii. Now, you can either write the formula πr2 10 times or you can simply create a function that takes the value of the radius as an input and returns the area corresponding to that radius. This way you would not have to write the same code (formula) 10 times. You can simply invoke the function every time.

- **Neat code:** A code containing functions is concise and easy to read.

- **Modularisation:** Functions help in modularizing code. Modularization means dividing the code into smaller modules, each performing a specific task.

- **Easy Debugging:** It is easy to find and correct the error in a function as compared to raw code.