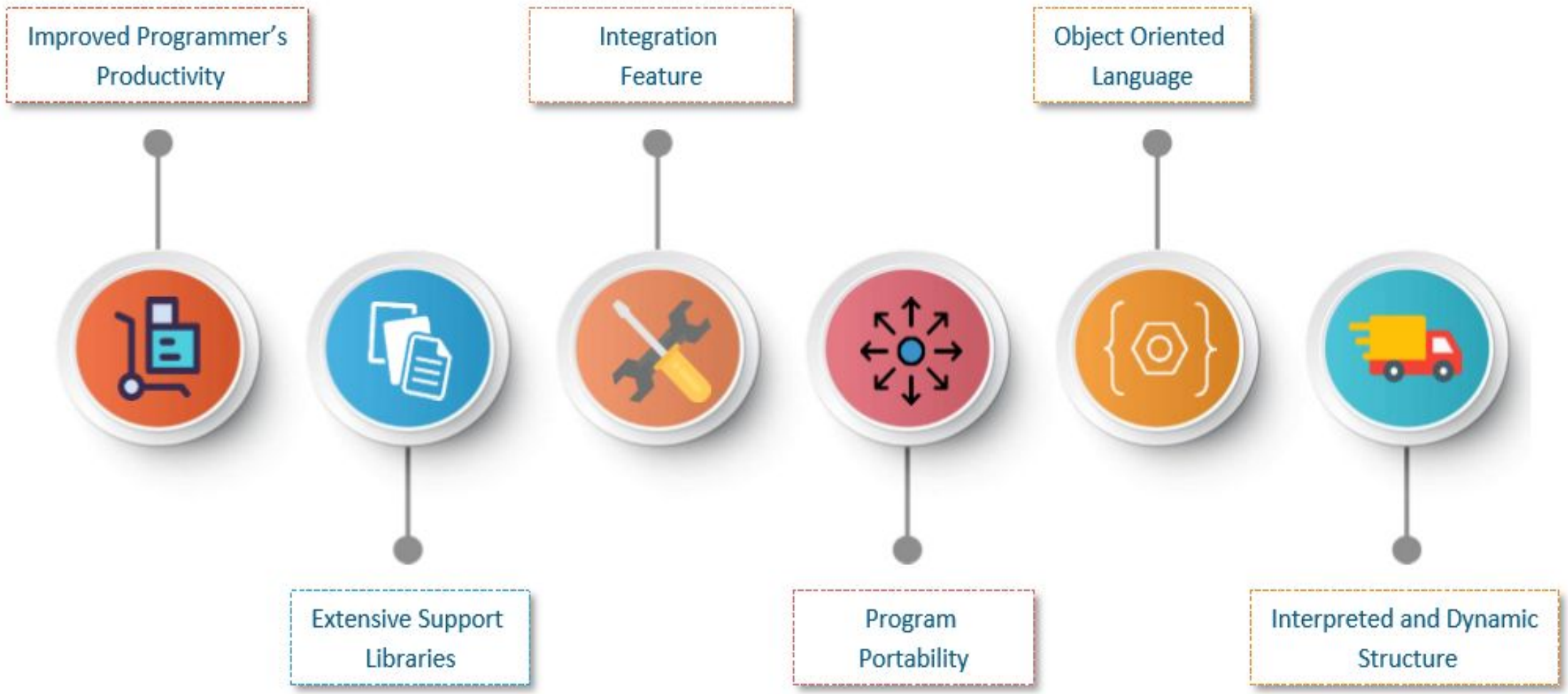
Python Tutorial

- Why Python ?
- Python Installation
- Data Types /Objects
- Operators
- Flow Control
- Function in Python
- Data Visualization
- Data Science Library

Why Python ?

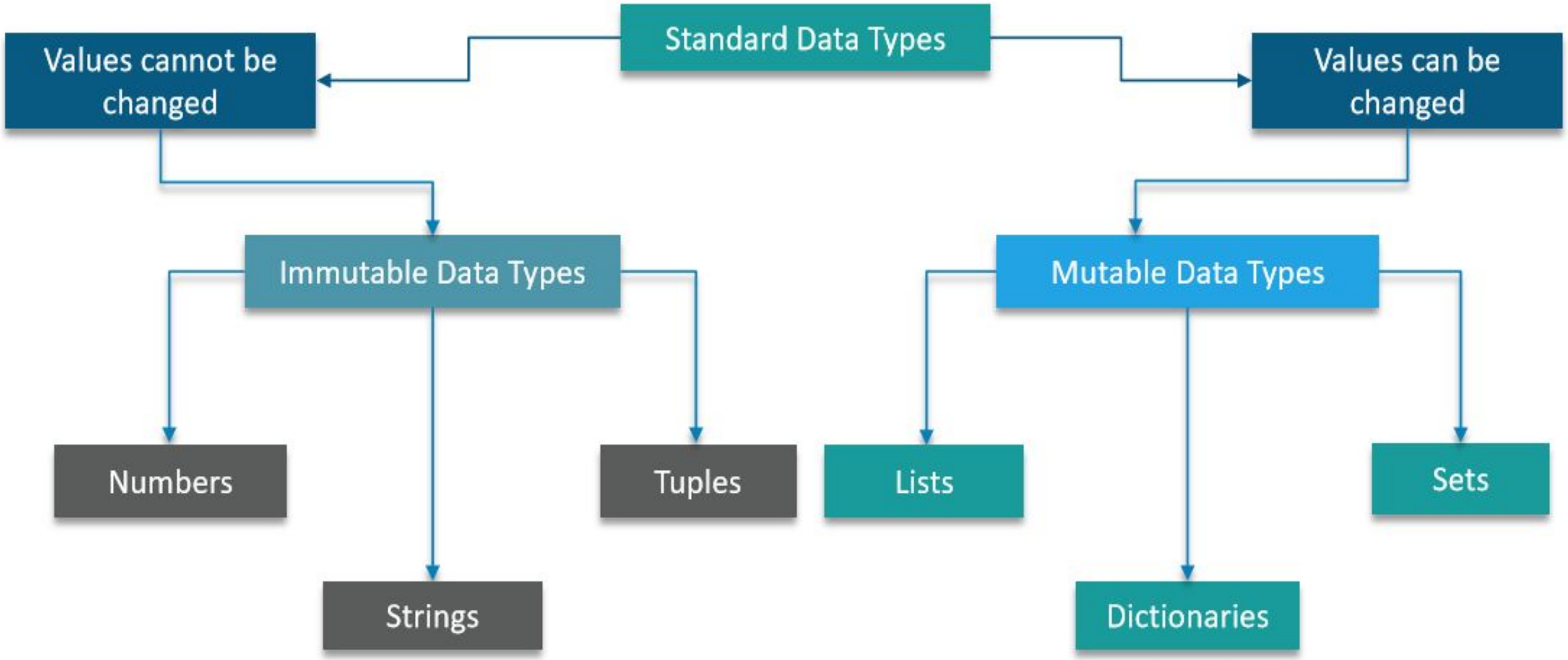

Improved Programmer's Productivity
Extensive Support Libraries
Integration Feature
Program Portability
Object Oriented Language
Interpreted and Dynamic Structure

Installation Guide

Download and Install Anaconda from below Link

https://www.anaconda.com/distribution/

Data Types / Objects



Data Objects

Numbers

Different types of numerical values.
A = 10
B = 56.23

String

Strings are nothing but anything enclosed in quotes
Str = “Hello”

Tuples

A sequence of immutable python objects
tup = (“Hello” , “Python”)

Data Objects

List

List is the most versatile datatype available in Python, which can be written as a list of comma-separated values (items) between square brackets.
list=["Maketing","Sales",8,11]

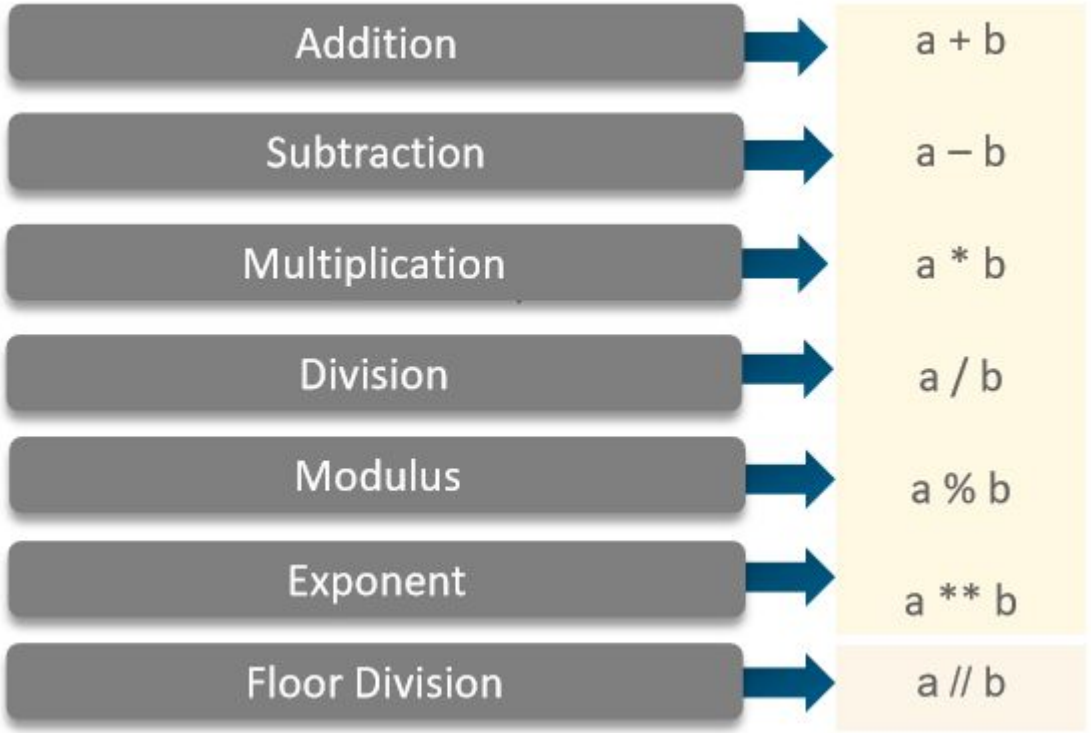
Dictionaries

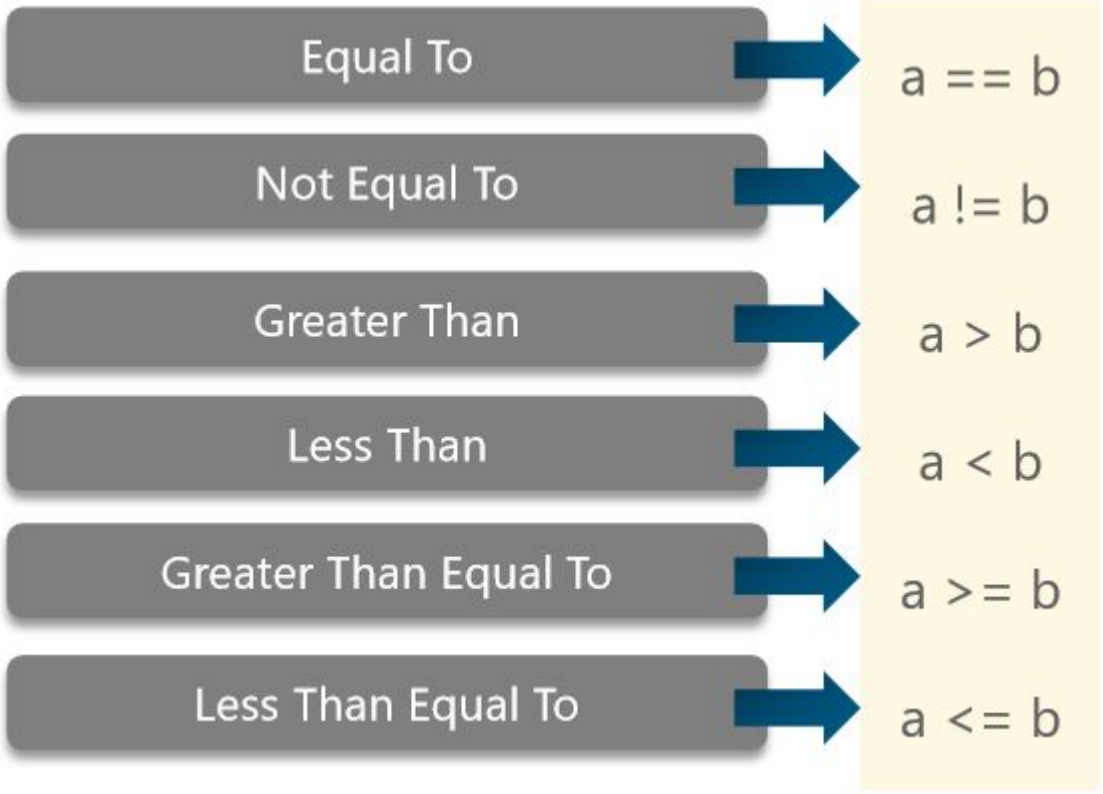
Dictionary is an unordered collection of key-value pairs. It is generally used when we have a huge amount of data
dict={1:”Python”}

Sets

Set is an unordered collection of unique items. Set is defined by values separated by comma inside braces { }
Out = {1,2,3,3,1,2,1,3,1}

Operators

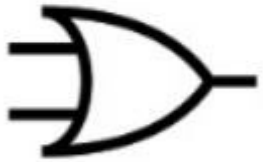

Addition
a + b
Subtraction
a – b
Multiplication
a * b
Division
a / b
Modulus
a % b
Exponent
a ** b
Floor Division
a // b


Equal To
a == b
Not Equal To
a != b
Greater Than
a > b
Less Than
a < b
Greater Than Equal To
a >= b
Less Than Equal To
a <= b

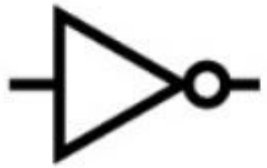
Operators

There are three types of logical operators: **AND**, **NOT**, **OR**

a & b → It combines each element of vectors and gives a output TRUE if both the elements are TRUE.



a | b → It combines each element of the vectors and gives a output TRUE if one the elements is TRUE.



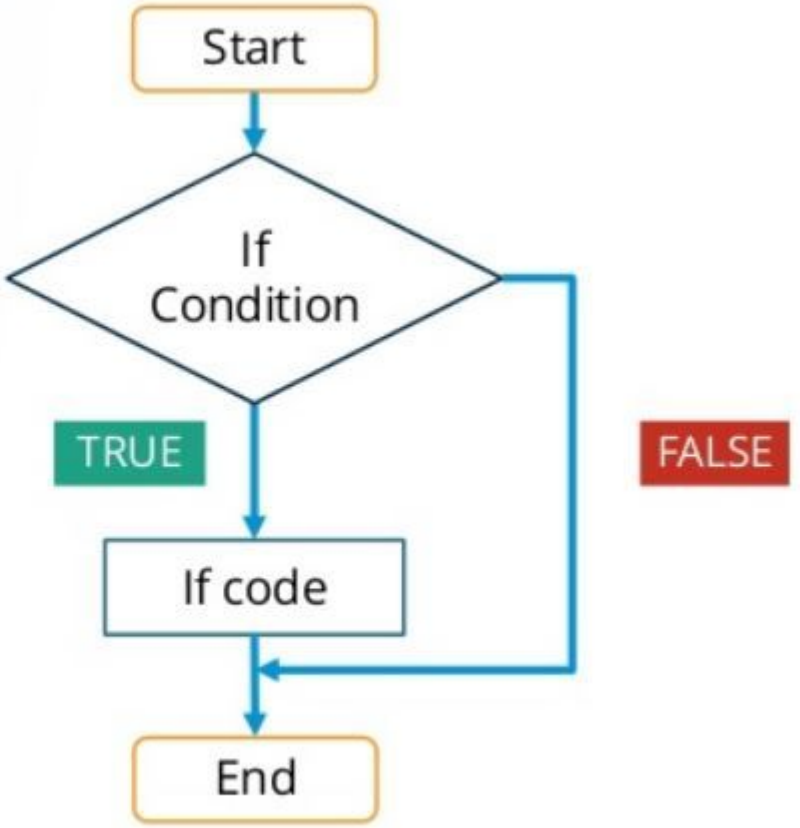
!a → Takes each element of the vector and gives the opposite logical value.

Flow Control - Conditional

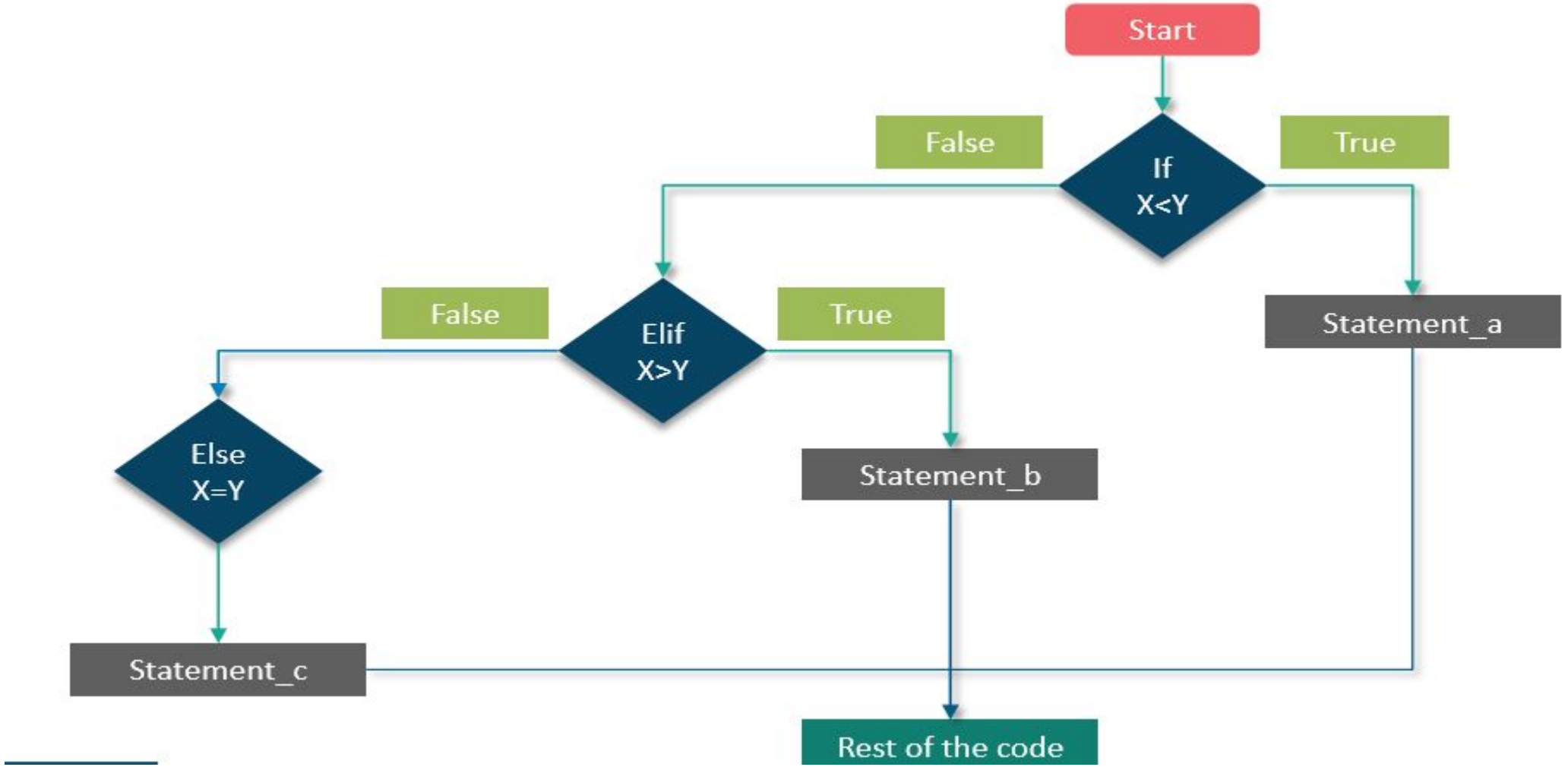
If Statement

Syntax:

```
1   if (expression)
2     {
3         //statements
4     }
```



Flow Control - Conditional

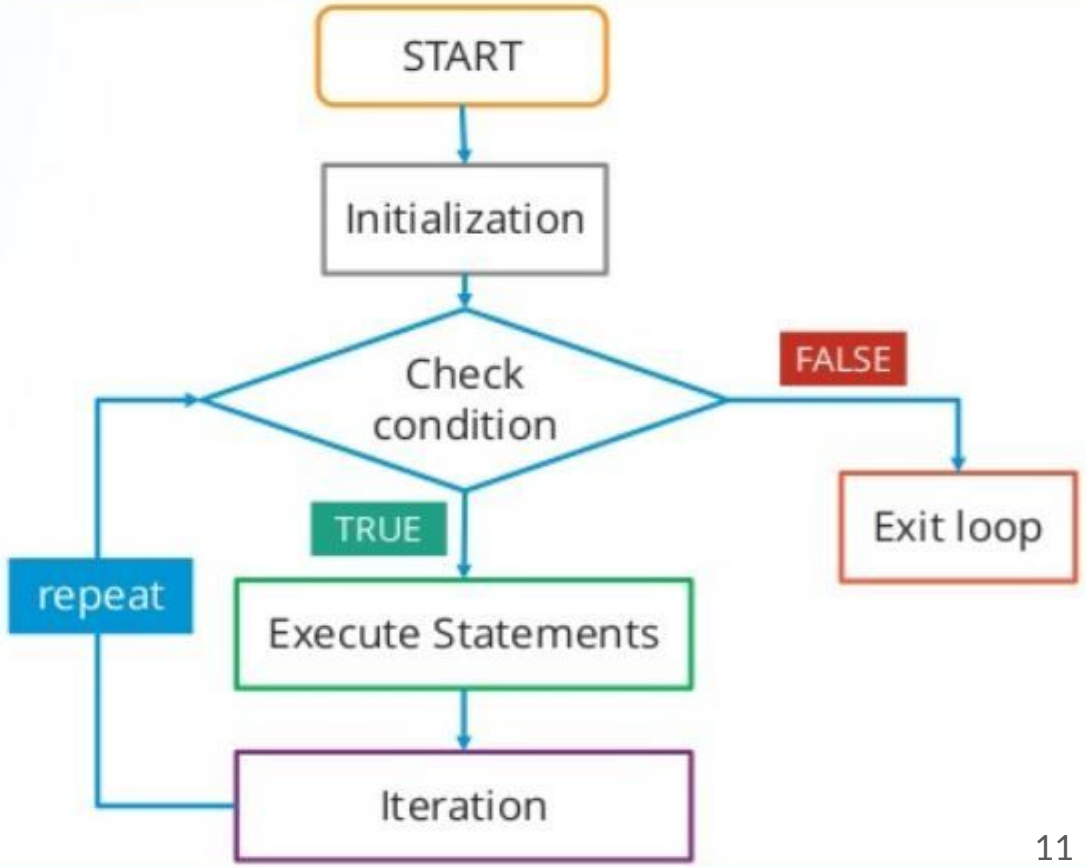


Flow Control - Loop

for Loop

Repeats a statement or group of for a fixed number of times. It tests the condition before executing the loop body.

```
1  for <variable> in <range>:
2      stmt1
3      stmt2
4      ...
5      stmtn
```



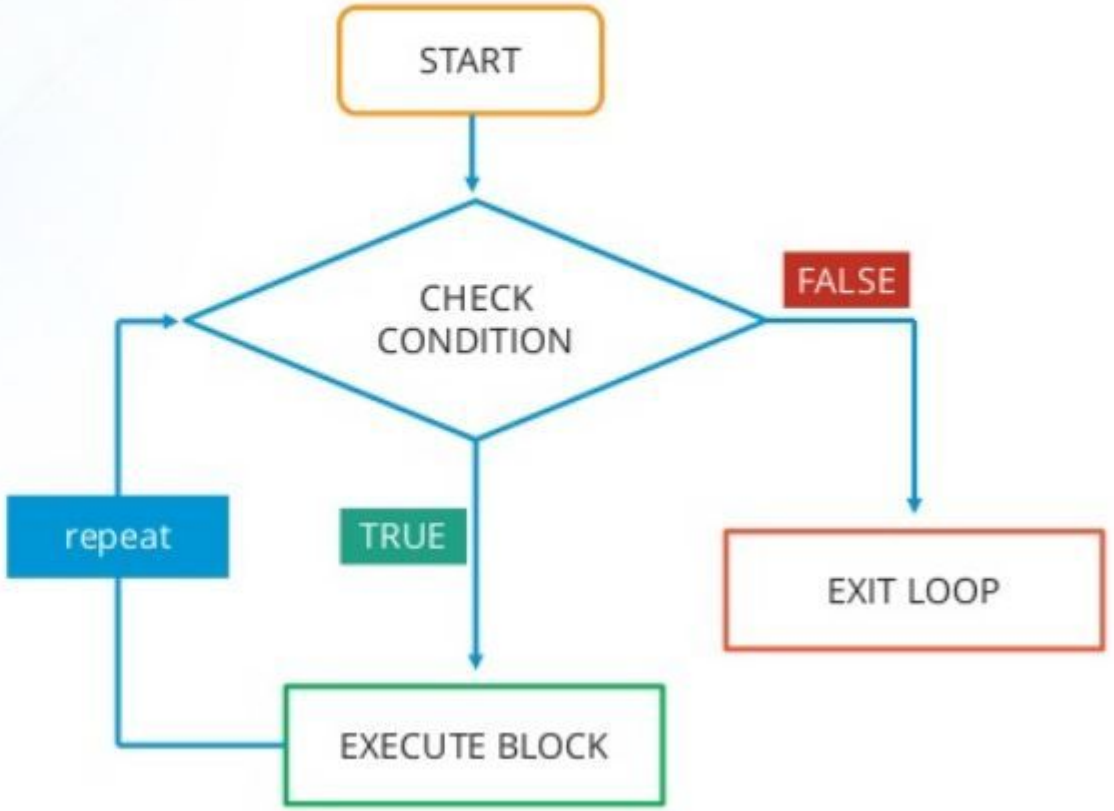
Flow Control - Loop

while Loop

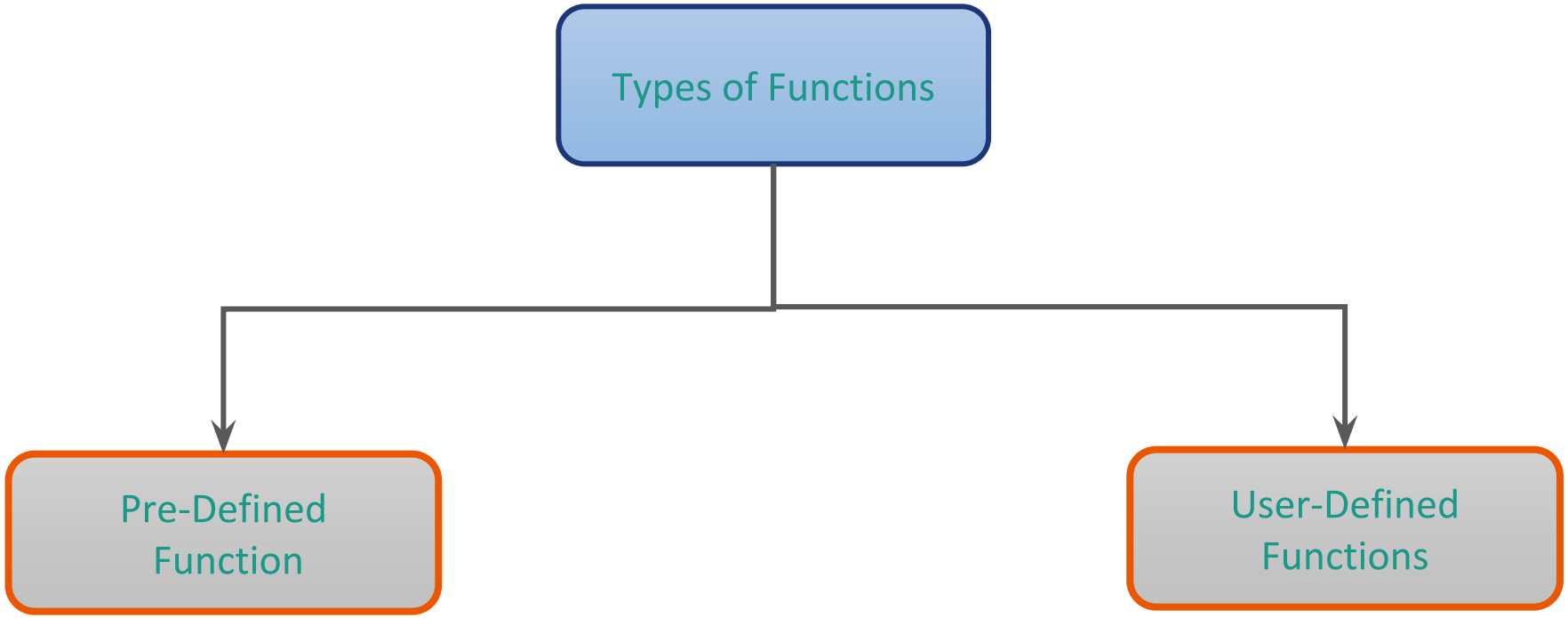
Repeats a statement or group of statements while a given condition is TRUE. It tests the condition before executing the loop body.

Syntax:

```
1  while expression:
2      statements
```

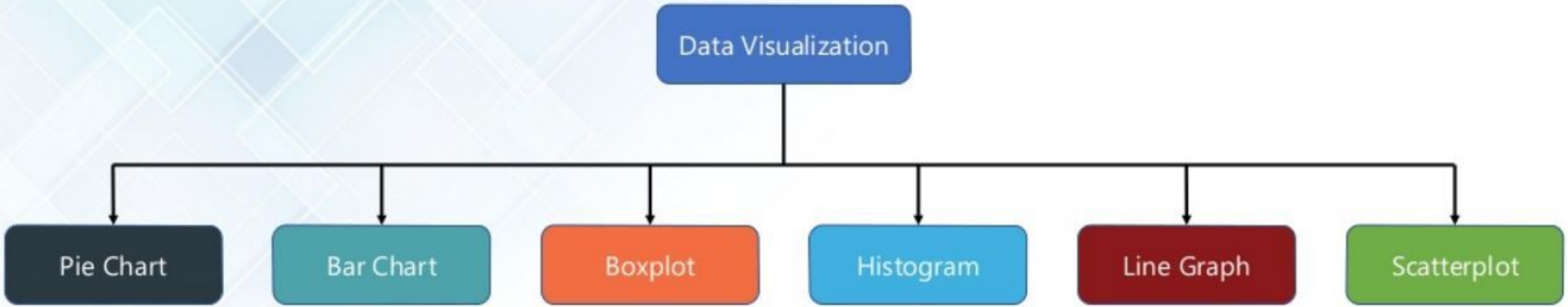


Functions in Python



Data Visualization

- Data Visualization helps the organizations unleash the power of their most valuable assets: their data and their people.



Thank You