

- **What is python**

Python programming language is a general-purpose language. Its primary features are that it is high-level, dynamically typed and interpreted. This makes debugging of errors easy and encourages the rapid development of application prototypes, marking itself as the language to code with. Python was developed in 1989 by Guido Van Rossum and emphasizes on the DRY (Don't Repeat Yourself) principle and readability.

- **What are applications of python**

Python is used in the following fields:

- Web Development
- Game Development
- Machine Learning and Artificial Intelligence
- Data Science and Data Visualization
- Desktop GUI
- Web Scraping Applications
- Business Applications
- Audio and Video Applications
- CAD Applications
- Embedded Applications

- **Functions in python**

-Function is a block of code which only runs when it is called. You can pass data, known as parameters, into a function. A function can return data as a result. There are two types of functions in python: User-Defined Functions - these types of functions are defined by the user to perform any specific task. Built-in Functions - these types of functions are pre-defined in python.

- **Operators in python**

Arithmetic operators
Assignment operators
Comparison operators
Logical operators
Identity operators
Membership operators
Bitwise operators

-Arithmetic operators are used with numeric values to perform common mathematical operations like addition, Subtraction, Multiplication, division, modulus and exponential operations.

-Assignment operators are used to assign values to variables.

-Comparison operators are used to compare two values.

-Logical operators are used to combine conditional statements.

-Identity operators are used to compare the objects, not if they are equal, but if they are actually the same object, with the same memory location.

-Membership operators are used to test if a sequence is presented in an object.

-Bitwise operators are used to compare (binary) numbers.

- **Lists in python**

A list is a data structure in Python that is a mutable, or changeable, ordered sequence of elements. Each element or value that is inside of a list is called an item. Just as strings are defined as characters between quotes, lists are defined by having values between square brackets [] .

- **What are tuples**

-Tuples are used to store multiple items in a single variable. Tuple is one of 4 built-in data types in Python used to store collections of data, the other 3 are List, Set, and Dictionary, all with different qualities and usage. A tuple is a collection which is ordered and unchangeable.

- **What are conditional statements**

A conditional statement as the name suggests itself, is used to handle conditions in your program. These statements guide the program while making decisions based on the conditions encountered by the program.

Python has 3 key Conditional Statements that you should know:

-if statement

-if-else statement

-if-elif-else ladder