

GET STARTED WITH



# PYTHON



By **PRAFULLA**,  
Dept of CS ,Application & Animation  
St Aloysius College (Autonomous)



**No prior Knowledge in  
computer is required**



## Unit – 1

Introduction to Features and Applications of Python; Flavors of python. Thrust Areas of python.

Python Basics: Identifiers, Keywords, Statements and Expressions, Variables Operators, Precedence and Association, Data Types, Indentation, Comments, reading input, print output, Type Conversions, type() functions and special operators. Python Libraries; Importing Libraries with Examples. Format Specifiers; Escape Sequences; mathematical functions and random functions.

Python Control Flow: Types of Control Flow, Control Flow Statements- if, else, elif, while loop, break, continue statements, for loop Statement, range () and exit () functions.

Exception Handling: Types of Errors; Exceptions, Exception Handling using try, except and finally.

Python Functions: types of functions, built in functions, python user defined functions, types of function arguments, anonymous functions, recursion

## **Unit – 2**

Strings: Creating and Storing Strings; Accessing String Characters; the str () function, Operations on Strings- Concatenation, Comparison, Slicing and Joining, String Methods, formatting strings.

Lists: Creating Lists, Operations on Lists, Built-in Functions on Lists, list methods, del statement

Dictionaries: Creating Dictionaries, Operations on Dictionaries, Built-in Functions on Dictionaries, Dictionary Methods.

Tuples and Sets: Creating Tuples, Operations on Tuples, Built-in Functions on Tuples, Tuple Methods;

Creating Sets Operations on Sets, Built-in Functions on Sets, Set Methods, frozen set.

## **Unit – 3**

Object Oriented Programming: Classes and Objects; Creating Classes and Objects; Constructor Method; Classes with Multiple Objects, Inheritance- Single and Multiple Inheritance, Multilevel and Multipath Inheritance; Encapsulation- Definition, Private Instance Variables; Polymorphism.

Pandas- Introduction to Pandas, Series and Data Frames, Creating Data Frames from Excel Sheet and .csv file, Dictionary and Tuples. Operayllantions on Data Frames.

Data Analysis: NumPy- Introduction to NumPy, Array Creation using NumPy, Operations on Arrays;

## **Unit - 4**

Data Visualization: Introduction to Data Visualization; Matplotlib Library; Different Types of Charts using Pyplot- Line chart, Bar chart and Histogram and Pie chart.

Database Connectivity: Types of databases used with Python, Using MySQL from Python, Retrieving and Inserting, updating and deleting data in a table, Creating Database tables through Python.