#### TRAINING PROGRAM

### PYTHON

Python is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python has a design philosophy that emphasizes code readability, notably using significant whitespace. It provides constructs that enable clear programming on both small and large scales.Van Rossum led the language community until July 2018.

# **KEY FEATURES**

# Effective Upskilling Planned Curriculum Team Learning Awesome Quizzes Complete Hands on

The below Curriculum is Schedule for 2 weeks

### CURRICULUM

Introduction to Python

Learn how to install Python, distinguish between important data types and use basic features of the Python interpreter, IDLE.

- 1.1. Installation of Python
- 1.2. Using the Python Interpreter IDLE
- 1.3. Salient Features of Python
- 1.4. Basic Syntax of Python

2. Using Variables in Python

Learn about numeric, string, sequence and dictionary data types and relevant operations while practicing Python syntax.

- 2.1. Data Types and Variables
- 2.2. Numeric Data Types
- 2.3. String Data Type
- 2.4. Sequence Data Type
- 2.5. Dictionary Data Type
- 2.6. Assignment

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#### CURRICULUM

3. Basics of Programming in Python

Learn how to write programs using conditionals, loops, iterators and generators, functions and modules and packages.

- 3.1. Understanding Programs and Programming
- 3.2. Using Conditionals
- 3.3. Using Loops
- 3.4. Using Functions

3.5. Using Functions from Built-in Modules 3.6. Constructing Modules and Packages 3.7. Assignment

4. Principles of Object-oriented Programming (OOP)

Learn about the important features of Object-oriented Programming while using Classes and Objects, two main aspects of the OOP paradigm.

- 4.1. Overview of OOP
- 4.2. Declaring Class and Creating Object
- 4.3. Understanding Inheritance
- 4.4. Using Magic Methods
- 4.5. Assignment
- 5. Connecting to SQLite Database

Learn about relational databases while learning how to store and retrieve data from an SQLite database through Python.

- 5.1. Introduction to SQL
- 5.2. Creating an SQLite database
- 5.3. Accessing SQLite Database through Python
- 5.4. Assignment

6. Developing a GUI with PyQT

Learn how to install PyQt5 toolkit, Qt Designer and create a graphical user interface using common widgets and menu systems.

- 6.1. GUI and Event driven programming
- 6.2. Qt Designer
- 6.3. Using Common Widgets
- 6.4. Geometry Management
- 6.5. Designing Menu Systems 6.6. Assignment

7. Application of Python in Various Disciplines

Learn about various resources to extend your learning for the Python programming language.

#### SAK INFORMATICS

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