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| **Module** | **Topics** |
| **Module 1 – Introduction to Python** | * Introduction to Python * Why Python * Applications built on python * History of python * Getting started with python * Writing simple scripts |
| **Module 2 – Python building blocks** | * Variables * Data Types * Operators * Conditional statements * Loops * Data formatting * User inputs * Wring simple scripts |
| **Module 3 –Functions, package and module** | * Introduction to functions * Writing sample functions * Lambda functions * Packages, module * Importing modules |
| **Modules 4 – Data Structures** | * Introduction to higher order data types * Introduction to list, list operations and manipulation. * Introduction to Dictionary, dictionary operations and manipulation * Introduction to Tuple,its operations and manipulation * Introduction to set and its operations and manipulation * Programs on higher order datatypes |
| **Module 5 –Object oriented programming** | * Introduction to Class and Objects * Introduction to Object oriented concepts such as inheritance and polymorphism * Sample programming using oops * Usage of higher order data types with oops |
| **Module 6 –Exception Handling** | * Introduction to exception management * Sample programs to handle and manage exceptions |
| **Module 7 –File Management and network programming** | * Introduction to file handling * CRUD operations on file * Sample programs on file management * CSV File - Reading and writing data * Socket programming * Usage of networking api to extract information with webservers |
| **Module 8 –Database programming** | * Introduction to database management system * Writing simple SQL’s for CRUD operations * Working with SQLITE database |
| **Module 9 –GUI programming** | * Introduction to GUI programming * GUI programming using TKINTER * Building sample UI and interfacing with database |
| **Module 10 –Mock test and Assessments** | * Mocktest * Assessment |