**1 – An Introduction to Python.**

* Intro Programming Language
* What is Python?
* Python History and Versions
* Why Learn Python
* Where is Python Used?
* Python Popular frameworks and libraries
* What is IDE?
* Installing Python
* Installing IDE
* Environment setup

**2 – Basic Python Syntax**

* Python Variable
  + Declare a variable and assign a value
  + Variable naming rules
  + Variable Multiple Assignment
  + Delete variable
  + 5 tips for better variable names
* Object Identity
* Input and Output
  + Taking input in Python
  + Taking input from the console in Python
  + Taking multiple inputs from the user in Python
  + Output using print() function
  + print without newline in Python
  + end and sep parameters in print()
  + Python Output Formatting
* Statement, Indentation, and Comment in Python

**3 – Data type**

* Introduction to Data Types
* Strings
* List
* Tuples
* Sets
* Dictionary
* Variable Type Check and Typecasting

**4 – Python Operators**

* Introduction to Operators
* Operand vs Operators
* Arithmetic Operators
* Comparison Operators
* Assignment Operators
* Logical Operators
* Membership Operators
* Identity Operators
* Operator Precedence
* Ternary Operators
* Difference between == and is operator in Python

**5 – Conditional Statements in Python**

* If the statement
* If else statement
* Nested if statement
* If…Elif ladder
* Shorthand if statement
* Shorthand if-else statement

**6 – Control Flow**

* Introduction to Loop
* Types of Loops
* Break, Continue, Pass
* range() vs xrange() in Python
* For Loop
* While Loop
* Looping Techniques in Python
* else with for

**7 – Function**

* Introduction to Functions
* Empty function – pass statement
* Return Multiple Values
* \*args and \*\*kwargs
* Python Scope
* Recursion

**8 – Lambda Function and Comprehension**

* Introduction to the Lambda function
* Use cases of the Lambda function
* Introduction to Comprehension
* List, Dictionary, and Set Comprehension

**9 – Popular Built-in Function**

* Python Datetime/Date
* Python Math
* Python JSON
* Regular Expression
* Magic Method

**10 – Module and Packages**

* Introduction to Module and Packages
* Use cases of Module and Packages

**11 – Iterator and Generator**

* Introduction to Iterator and Generator
* Use cases of Iterator and Generator
* Yield

**12 – File and Error Handling**

* Exception handling
* Built-in Exceptions
* try…except…else…finally
* File – Open, Read, Write, and Append
* Excel – Read, Write, Appending, Arithmetic Operation in Excel

**13 – Object Oriented Programming**

* Introduction to OOP
* Class
* Object
* Constructor
* Destructor
* Self
* Inheritance
* Polymorphism

**14 – Database**

* Database concepts
* Database design
* SQL

**15 – GIT and GitHub**

* Introduction to Git and GitHub
* Importance of GIT
* Git Add
* Git Commit
* Git Clone
* Git Fork
* Git Repository
* Git Checkout
* Git Branch
* Merge & Merge Conflict
* Git Pull
* Git Push

**16 – HTML and CSS**

* Introduction to HTML and CSS

**17 – Django 01**

* PIP
* Creating a virtual environment
* Installing Django
* Creating a Project
* Creating Our First App
* Overview of a Basic App
* Django Project MVT Structure

**18 – Django 02**

* Django Model
* Django URL Mapping
* Django Model Forms

**19 – Django 03**

* Django View
* Django Forms
* Form Validation

**20 – Django 04**

* Django Template

**21 – Django 05 (Project)**

* Virtual Environment.
* Git setup.
* Django Setup.
* Project Requirement Analysis
* Live Project