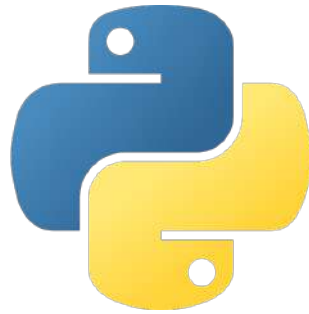**FirstBitSolutions.com**

...Learn IT, Bit by Bit...

PYTHON
FULL STACK

Syllabus

1 Core Python

- *Programming Basics*
- *Functions, Lambda Functions*
- *Data Structures in Python*
- *Object Oriented Programming*
- *Comprehension,Generators,Decorators*
- *Modules and Packages*
- *Exception Handling*
- *File Handling*
- *Multithreading*
- *Regular Expressions*
- *GUI programming using Tkinter*
- *Database Connectivity*
- *Case Study*

2 MySQL

- *Database Normalization*
- *SQL Components and various commands*
- *Data definition Language*
- *Data Manipulation Language*
- *Select Statement, Groupby, having clause, Joins,Subquery*
- *String, Date and Number functions*
- *Views, Index*
- *PLSQL –Stored Procedure, Functions, Cursor, Triggers*
- *Transaction*
- *Case Study*

3 Web Programming

- *HTML5*
- *CSS3*
- *JavaScript*
- *jQuery*
- *Bootstrap*

4 Flask Framework

- *Introduction to Flask*
- *Building flask application*
- *Request and Response object*
- *Jinja2 Template Engine*
- *URL Routing*
- *Views and templates*
- *State management*
- *Database Connectivity*
- *Microservices with Flask*
- *Ajax*
- *Project using Flask and MySQL*

5 Django

- *Introduction to Django Architecture*
- *Views, Templates and Routing*
- *Django Template Language*
- *Handling Request and Response*
- *Models*
- *Admin Module*
- *Model Forms*
- *Django Security*
- *State Management*
- *REST API Integration using Django*
- *Project using Django and REST API*

6 Data Analysis

- *NumPy*
- *Pandas*
- *Plotting using Matplotlib & Seaborn*

7 Git & GitHub

- *Introduction*
- *Installation & Lifecycle*
- *Create & clone operation*
- *Perform,Review & commit changes*
- *Push,update,stash,move operation*
- *What is GitHub?*
- *Create a Repository*
- *Create a Branch*
- *Make a Commit*
- *Open a Pull Request*

8 Credit System

- *Mock Interviews (Module wise)*
- *Techinical quizzes*
- *Machine Test*
- *Project Presentations*

9 Aptitude

- Averages and ages
- Percentages
- Ratio and Proportion
- Profit and Loss
- Partnership
- Speed, distance, and time
- Trains
- Boats and Streams
- Time and Work
- Pipes and Cistern
- Permutations and Combinations
- Probability
- Simple Interest
- Compound Interest
- Numbers and Divisibility Rules
- Allegations and mixtures
- Analytical Reasoning
- Linear sitting arrangement
- Circular sitting arrangement
- Parallel sitting arrangement
- Blood Relation
- Distance and Direction
- Coding and Decoding

10 Softskills

- Introduction to Communication Skills
- Confidence Building and Public Speaking
- English Grammar
- Business English
- Advanced Communication Skills
- Group Discussion
- Resume Building and Cover Letter
- Interview Preparation
- Email Writing
- Dressing / Attire / Grooming
- Public Speaking and Presentation Skills
- Interpersonal Skills and Assertiveness
- Time Management
- Stress Management
- One to One Counseling Session for needy candidates

11 Operating Systems

- *Operating Systems an Overview*
- *Types of Operating Systems*
- *Components of an Operating System*
- *An overview of File Systems*
- *Process and Memory Management*
- *User Management*
- *Operating System Security*
- *Device Drivers*
- *Installing an OS using Virtual Box*
- *Operating Systems in Cloud*

12 Software Engineering

- *Introduction to Software Engineering*
- *Software Development Life Cycle*
- *SDLC Models*
- *Agile – SCRUM*
- *Requirement Analysis*
- *Project Management*
- *Design*
- *Introduction to UML*
- *Coding / Implementation*
- *Testing*
- *DevOps*