Python Programming Classes - Home Tuition

About the Class

This home tuition program is designed to introduce school students (Class 6 to 12) to Python programming. Python is one of the most beginner-friendly languages and is widely used in fields like web development, automation, artificial intelligence, data science, and game development.

Who Can Join?

- Beginners with no coding background

- Students with basic computer knowledge

- Students interested in deeper learning and projects

What Will You Learn?

- Basics of Python: Variables, loops, conditions, and functions

- Problem solving and logical thinking

- Projects: Games, calculators, quiz apps, GUI programs

- Basics of Object-Oriented Programming and file handling

Class Schedule

- Frequency: 3 classes per week (Mon-Wed-Fri or Tue-Thu-Sat)

- Duration: 1 hour per class

- Batch Size: 3 to 5 students per batch for personal attention

- Mode: Offline (at tutor's home)

Course Duration
- Each level runs for 2 to 3 months depending on student pace

- Flexible learning based on school workload and progress

Benefits of the Class

- Build a strong foundation in programming

- School project and computer subject support

- Prepare for Olympiads and coding competitions

- Learn at your own pace in a comfortable home environment

Weekly Classes Topics:

Level 1: Beginner – Logic Building with Python (4 Weeks)

Goal: Introduce programming fundamentals and develop basic logical thinking.

Week 1: Introduction & Thinking Like a Programmer

- What is Programming?
- Why Python? Real-world applications
- Input, Output, and Variables
- Understanding data types

Logic Focus: Break a task into steps (Algorithm basics)

Week 2: Conditional Logic

- if, elif, else statements
- Logical operators and boolean expressions
- Simple decision-based problems (age check, grade system)

Logic Focus: Creating flowcharts & truth tables

Week 3: Loops and Repetition

- for and while loops
- Range function and iteration
- Pattern printing with loops

Problem Solving: Number patterns, multiplication tables, guessing game

Week 4: Mini Project & Problem-Solving Practice

- Combining conditions and loops
- Simple calculator or number guessing game
- Problem sets to solve real-life logic challenges

Mini Project: Build a simple number game

Level 2: Intermediate – Developing Logic with Data Structures (4 Weeks)

Goal: Use Python structures to organize and solve problems efficiently.

Week 1: Functions and Modular Thinking
- Writing and calling functions
- Parameters and return values

Logic Focus: Divide-and-conquer strategy

Week 2: Lists and Loops
- Lists: creation, indexing, iteration
- Common operations: append, remove, sort

Problem Solving: Find largest/smallest, average, frequency counter

Week 3: Dictionaries & Real-World Data
- Key-value pairs, nesting dictionaries
- Applications: contact book, product-price tracker

Problem Solving: Use dictionaries for fast lookup, counting

Week 4: Mini Project & Problem Sets
- Quiz App, To-Do List, or Student Report System
- Practice problems using loops, conditions, and lists

Mini Project: Create a simple contact manager or quiz game

Python for Advanced (7 Classes)

- Advanced data structures: sets, nested lists/dictionaries

- Deeper into OOP: inheritance, encapsulation, polymorphism

- File handling: read/write text and CSV files

- Working with external libraries (e.g., matplotlib, tkinter)

- Basics of GUI programming using Tkinter

- Intro to data analysis using pandas (optional)

- Project: Student Management System, Expense Tracker, GUI Calculator

Contact Information

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