



Competitive Programming – Python

Duration: 50 Hours

Price: INR 14999/-

Target Companies: Google, Amazon,, Microsoft, Facebook, Apple, Uber, IBM, Intel, Oracle, Goldman Sachs, Bloomberg, Palantir, Dropbox, Airbnb, Twitter

1: Introduction to Python and Algorithmic Thinking

- Introduction to Python syntax and data types
- Basic input/output operations in Python
- Control statements in Python: if-else, loops, and break/continue statements
- Algorithmic thinking: analyzing problems and identifying solutions

2: Basic Data Structures and Algorithms

- Lists and Tuples: accessing elements, slicing, and basic operations
- Dictionaries and Sets: accessing elements, adding and deleting elements
- Sorting and searching algorithms: selection sort, bubble sort, binary search
- Time and space complexity analysis

3: Advanced Data Structures and Algorithms

- Stacks and Queues: implementing with lists and deque
- Trees and Graphs: basic concepts, traversals, and basic algorithms
- Dynamic Programming: basic concepts and solving problems using dynamic programming
- Recursion: basic concepts and solving problems using recursion

4: Advanced Algorithms

- Greedy algorithms: basic concepts and solving problems using greedy approach
- Divide and Conquer: basic concepts and solving problems using divide and conquer approach
- Backtracking: basic concepts and solving problems using backtracking approach
- Bit manipulation: basic concepts and solving problems using bit manipulation

5: Problem-Solving Strategies

- Brute force: basic concepts and solving problems using brute force approach
- Two-pointer technique: basic concepts and solving problems using two-pointer technique
- Sliding window technique: basic concepts and solving problems using sliding window technique
- Hashing: basic concepts and solving problems using hashing approach

6: Advanced Topics

- Number theory: basic concepts and solving problems using number theory
- String algorithms: basic concepts and solving problems using string algorithms
- Game theory: basic concepts and solving problems using game theory

7: Practice and Contest Preparation

- Solving problems from online judges: Codeforces, HackerRank, LeetCode, etc.
- Participating in online coding contests: Codeforces, HackerRank, etc.
- Debugging and optimizing code
- Discussing and sharing code with others



VIDYAXCEL
LIAISONING EXCELLENCE

Website: www.vidyaxcel.com

Address: BC-74 3rd Floor Calcutta Greens Commercial Complex, Kolkata -700075

Contact No: +91-9123672473