# 🏢 ৩০ দিনের Python Problem Solving চ্যালেঞ্জ (FAANG ফোকাস)

# নিয়ম:

- . প্রতিদিন ১-২ ঘণ্টা সময় দাও
- . প্রথমে ১০-১৫ মিনিট syntax ঝালাই করো (যদি লাগে)
- Problem solve করার আগে paper/pen দিয়ে logic লিখে নাও
- LeetCode-এ solve করো, Python 3 বেছে নাও

# Week 1 — Python Basics + Easy Problems

লক্ষ্য: Python syntax + basic problem-solving flow আয়ত্ত করা

**Topics:** Variables, loops, conditions, lists, strings, functions

## Day 1

- Python setup + basic I/O
- Problem: "Sum of Two Numbers"
- Problem: "Find Max in List"

#### Day 2

- Loops + Conditional practice
- Problem: "Odd or Even"
- Problem: "Count Vowels in a String"

#### Day 3

- · List & String manipulation
- Problem: "Reverse String"

Problem: "Palindrome Check"

### Day 4

- Functions
- Problem: "Factorial of a Number"
- Problem: "Fibonacci Series"

### Day 5

- List comprehensions
- Problem: "Squares of Numbers in List"
- Problem: "Filter Even Numbers"

#### Day 6

- Nested loops
- Problem: "Multiplication Table"
- Problem: "Pattern Printing"

### Day 7

Weekly revision + 3 Easy LeetCode problems

# Week 2 — Arrays & Hashing

লক্ষ্য: FAANG interviews-এর সবচেয়ে সাধারণ section

# Day 8 — Arrays Basics

- Problem: "Running Sum of 1D Array" (LeetCode #1480)
- Problem: "Maximum Number in List"

### Day 9 — HashMap Basics

- Problem: "Two Sum" (LeetCode #1)
- Problem: "Contains Duplicate" (LeetCode #217)

#### **Day 10** — Frequency Count

Problem: "Valid Anagram" (LeetCode #242)

#### Day 11 — Prefix Sum

Problem: "Subarray Sum Equals K" (LeetCode #560)

### **Day 12** — Sliding Window Basics

Problem: "Best Time to Buy and Sell Stock" (LeetCode #121)

### **Day 13** — Practice Day

4 Easy + 1 Medium array problems

### Day 14 — Weekly revision

# Week 3 — Two Pointers & Strings

## লক্ষ্য: Interview favorite problems

## **Day 15**

- Problem: "Valid Palindrome" (LeetCode #125)
- Problem: "Move Zeroes" (LeetCode #283)

#### **Day 16**

Problem: "Reverse Words in a String" (LeetCode #151)

#### **Day 17**

 Problem: "Remove Duplicates from Sorted Array" (LeetCode #26)

#### **Day 18**

Problem: "Merge Sorted Array" (LeetCode #88)

#### **Day 19**

 Problem: "Longest Substring Without Repeating Characters" (LeetCode #3)

# Day 20 — Practice Day

5 Easy string/array problems

Day 21 — Weekly revision

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লক্ষ্য: DSA-এর পরবর্তী স্তরে যাওয়া

### Day 22 — Stack Basics

Problem: "Valid Parentheses" (LeetCode #20)

#### Day 23 — Queue Basics

Problem: "Implement Queue using Stacks" (LeetCode #232)

## Day 24 — Recursion Basics

- Problem: "Factorial" (recursive)
- Problem: "Fibonacci" (recursive)

### **Day 25** — More Stack Problems

Problem: "Min Stack" (LeetCode #155)

**Day 26** — Recursion Practice

Problem: "Power of Two" (LeetCode #231)

**Day 27** — Mix Practice

3 Easy + 1 Medium stack/recursion problem

**Day 28** — Revision + Timed Practice (simulate interview)

Day 29 — Final Easy + Medium Mix

 Pick 5 random problems from NeetCode 150 (Easy + Medium)

Day 30 — Mock Interview

• Pick 2 Medium problems, solve in 45 minutes total