

***NOTE : MCQ TEST

SR. NO.	DATE	MODULE
1.	22.10.2025	C++
2.	23.10.2025	COP&SDM
3.	24.10.2025	WPT
4.	25.10.2025	JAVA

DAY_01

Date : 19.10.2025

PRACTICE QUESTIONS

1. **Check if a number is prime**
 - Input: Integer n
 - Output: True if prime, False otherwise
2. **Generate all prime numbers up to n**
 - Input: Integer n
 - Output: List of primes $\leq n$
3. **Calculate factorial of a number**
 - Input: Integer n
 - Output: $n!$ (e.g., $5! = 120$)
4. **Generate Fibonacci series up to n terms**
 - Input: Integer n
 - Output: First n Fibonacci numbers
5. **Check if a number is even or odd**
 - Input: Integer n
 - Output: "Even" or "Odd"

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Coding Challenges

1. You are given an array of strings. Your task is to determine the length of the longest string in the array.
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DAY_02

Date : 20.10.2025

PRACTICE QUESTIONS

1. **Sum of first n even numbers**
 - Input: Integer n

- Output: Sum of first n even numbers
- 2. **Sum of first n odd numbers**
 - Input: Integer n
 - Output: Sum of first n odd numbers
- 3. **Check if a number is a palindrome**
 - Input: Integer n
 - Output: True if reversed number equals original
- 4. **Check if a number is an Armstrong number**
 - Input: Integer n
 - Output: True if sum of digits raised to power equals number
- 5. **Reverse a number**
 - Input: Integer n
 - Output: Reversed integer

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Coding Challenges

2. Given an integer n, reverse its digits and return the reversed number. Ignore leading zeros in the reversed result.

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DAY_03

Date : 21.10.2025

HOLIDAY

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DAY_04

Date : 22.10.2025

1. **Addition of two numbers**
 - Input: a, b
 - Output: a + b
2. **Print multiplication table of a number**
 - Input: Integer n
 - Output: Table from $n \times 1$ to $n \times 10$
3. **Print number pattern (e.g., triangle, pyramid)**
 - Input: Rows r
 - Output: Pattern using loops
4. **Sum of digits of a number**
 - Input: Integer n
 - Output: Sum of all digits

5. Find GCD and LCM of two numbers

- Input: a, b
- Output: GCD and LCM

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Coding Challenges

3. You are given an array of size n that contains distinct numbers from 0 to n. Your task is to find the one number that is missing from the array.

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DAY_05

Date : 23.10.2025

Write a Employee class with following properties:)

- Member variables
 - o String empName
 - o int empID
 - o String empRole
- Overloaded constructors
 - o No arguments constructor
 - o Constructor that accepts empID and empName (empRole is hardcoded)
 - o Constructor that accepts empID, empName and empRole
- Override toString
- Other methods of own choice

Write a menu driven program to demonstrate following operations using ArrayList of "Employee":

1. Add Employee to list
2. Remove Employee list
3. Show all Employee
4. Show all Employee in sorted order (sort on the basis of empID)
5. Find a Employee with empName
6. Save all Employees into file
7. Quit

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Coding Challenges

4. You are given an integer array nums and an integer k. Rotate the array to the right by k steps, where k is non-negative.

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DAY_06

Date : 24.10.2025

Write a class Calculator in a package study

Add following static method to the class which per calculation and return the result as per operator

public static int calculate(int number1, int number2, String operator);

List of valid operator (+, -, *, /, %)

If any other operator is passed then throw a custom checked exception "WrongOperatorException"

Demonstrate use of Calculator class in main.

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Coding Challenges

5. You are given two sorted arrays nums1 and nums2. Your task is to merge them

into a single array sorted in non-decreasing order

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DAY_07

Date : 25.10.2025

Java

Create a class Student with following details: rollNo, sname, course,

attendance_percentage, score

1. Add constructors - default and parameterized

2. Add method – calculateGrade()

3. If the attendance_percentage is lesser than 60%, throw a user defined exception

and print appropriate message

4. Store 10 student objects in file using serialization

5. Create appropriate collection for storing students in the decreasing order of

attendance_percentage

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Coding Challenges

6. Check if a string contains only alphanumeric characters

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