Index

1. Numerical-Based Questions

1. Swapping Numbers

- Swap two numbers using a third variable
- Swap two numbers without using a third variable

2. Digit Operations

- Extract the last digit of a number
- Remove the last digit of a number
- o Reverse a number

3. Number Properties

- Check if a number is even or odd
- o Check if a number is prime
- o Find the sum of digits of a number
- o Count the number of digits in a number
- Find the factorial of a number

4. Mathematical Series & Patterns

- Print Fibonacci series
- Find the greatest common divisor (GCD)
- Find the least common multiple (LCM)
- o Check if a number is an Armstrong number
- Check if a number is a palindrome

2. String-Based Questions

1. String Manipulation

- o Reverse a string
- Check if a string is a palindrome
- Count vowels and consonants in a string
- Remove white spaces from a string
- Find the frequency of a character in a string

2. String Formatting

- o Convert lowercase to uppercase and vice versa
- Remove duplicate characters from a string
- Find the longest word in a sentence
- Count the number of words in a sentence
- o Replace a word in a sentence

3. Substring and Searching

- o Find if a substring exists in a string
- o Find the first non-repeating character in a string
- o Find all permutations of a string
- o Convert a string to an integer (without Integer.parseInt())
- Check if two strings are anagrams

3. Array-Based Questions

1. Basic Operations

- o Find the largest and smallest element in an array
- Sort an array in ascending and descending order
- o Find the second largest number in an array
- o Find duplicate elements in an array
- o Reverse an array

2. Matrix and Multi-Dimensional Arrays

- o Find the sum of elements in a matrix
- Find the transpose of a matrix
- Perform matrix multiplication
- Check if a matrix is symmetric
- Rotate a matrix 90 degrees

3. Searching & Sorting

- o Implement Linear Search
- Implement Binary Search
- Implement Bubble Sort
- Implement Selection Sort