**Problems on Arrays**

1. [Find the smallest number in an array](https://takeuforward.org/data-structure/find-the-smallest-element-in-an-array/)
2. [Find the largest number in an array](https://takeuforward.org/data-structure/find-the-largest-element-in-an-array/)
3. [Second Smallest and Second Largest element in an array](https://takeuforward.org/data-structure/find-second-smallest-and-second-largest-element-in-an-array/)
4. [Reverse a given array](https://takeuforward.org/data-structure/reverse-a-given-array/)
5. [Count frequency of each element in an array](https://takeuforward.org/data-structure/count-frequency-of-each-element-in-the-array/)
6. [Rearrange array in increasing-decreasing order](https://takeuforward.org/data-structure/rearrange-array-in-increasing-decreasing-order/)
7. [Calculate sum of the elements of the array](https://takeuforward.org/arrays/calculate-sum-of-the-elements-of-the-array/)
8. [Rotate array by K elements - Block Swap Algorithm](https://takeuforward.org/data-structure/rotate-array-by-k-elements-block-swap-algorithm/)
9. [Average of all elements in an array](https://takeuforward.org/data-structure/average-of-all-the-elements-in-the-array/)
10. [Find the median of the given array](https://takeuforward.org/data-structure/find-median-of-the-given-array/)
11. [Remove duplicates from a sorted array](https://takeuforward.org/data-structure/remove-duplicates-in-place-from-sorted-array/)
12. [Remove duplicates from unsorted array](https://takeuforward.org/data-structure/remove-duplicates-from-an-unsorted-array/)
13. [Adding Element in an array](https://takeuforward.org/data-structure/adding-element-in-an-array/)
14. [Find all repeating elements in an array](https://takeuforward.org/data-structure/find-all-repeating-elements-in-an-array/)
15. [Find all non-repeating elements in an array](https://takeuforward.org/data-structure/find-all-the-non-repeating-elements-in-an-array/)
16. [Find all symmetric pairs in array](https://takeuforward.org/data-structure/find-all-symmetric-pairs-in-the-array-of-pairs/)
17. [Maximum product subarray in an array](https://takeuforward.org/data-structure/maximum-product-subarray-in-an-array/)
18. [Replace each element of the array by its rank in the array](https://takeuforward.org/data-structure/replace-elements-by-its-rank-in-the-array/)
19. [Sorting elements of an array by frequency](https://takeuforward.org/data-structure/sort-elements-of-an-array-by-frequency/)
20. [Rotation of elements of array- left and right](https://takeuforward.org/data-structure/rotate-array-by-k-elements/)
21. [Finding equilibrium index of an array](https://takeuforward.org/data-structure/finding-equilibrium-index-in-an-array/)
22. Finding Circular rotation of an array by K positions
23. Sort an array according to the order defined by another array.
24. [Search an element in an array](https://takeuforward.org/data-structure/search-an-element-in-an-array-program-cpp-java/)
25. [Check if Array is a subset of another array or not](https://takeuforward.org/data-structure/check-if-array-is-subset-of-another-array/)

**Problems on Numbers**

1. [Check if a number is palindrome or not](https://takeuforward.org/data-structure/check-if-a-number-is-palindrome-or-not/)
2. [Find all Palindrome numbers in a given range](https://takeuforward.org/data-structure/find-all-palindrome-numbers-in-a-given-range/)
3. [Check if a number is prime or not](https://takeuforward.org/data-structure/check-if-a-number-is-prime-or-not/)
4. [Prime numbers in a given range](https://takeuforward.org/data-structure/prime-numbers-in-a-given-range/)
5. [Check if a number is armstrong number of not](https://takeuforward.org/maths/check-if-a-number-is-armstrong-number-or-not/)
6. [Check if a number is perfect number](https://takeuforward.org/data-structure/check-whether-a-number-is-perfect-number-or-not/)
7. [Even or Odd](https://takeuforward.org/arrays/check-whether-a-given-number-is-even-or-odd/)
8. [Check weather a given number is positive or negative](https://takeuforward.org/data-structure/check-whether-a-number-is-positive-or-negative/)
9. [Sum of first N natural numbers](https://takeuforward.org/data-structure/sum-of-first-n-natural-numbers/)
10. [Find Sum of AP Series](https://takeuforward.org/data-structure/find-sum-of-ap-series/)
11. [Program to find sum of GP Series](https://takeuforward.org/data-structure/program-to-find-sum-of-gp-series/)
12. [Greatest of two numbers](https://takeuforward.org/maths/greatest-of-two-numbers/)
13. [Greatest of three numbers](https://takeuforward.org/arrays/greatest-of-three-numbers/)
14. [Leap Year or not](https://takeuforward.org/data-structure/check-if-given-year-is-a-leap-year-or-not/)
15. [Reverse digits of a number](https://takeuforward.org/data-structure/reverse-digits-of-a-number/)
16. [Maximum and Minimum digit in a number](https://takeuforward.org/data-structure/maximum-and-minimum-digit-in-a-number/)
17. [Print Fibonacci upto Nth Term](https://takeuforward.org/arrays/print-fibonacci-series-up-to-nth-term/)
18. [Factorial of a number](https://takeuforward.org/data-structure/factorial-of-a-number-iterative-and-recursive/)
19. [Power of a number](https://takeuforward.org/data-structure/calculate-the-power-of-a-number-binary-exponentiation/)
20. [Factors of a given number](https://takeuforward.org/combinatorics/factors-of-a-given-number/)
21. [Print all prime factors of the given number](https://takeuforward.org/data-structure/print-all-prime-factors-of-the-given-number/)
22. [Check if a number is a strong number or not](https://takeuforward.org/data-structure/check-if-a-number-is-a-strong-number-or-not/)
23. [Check if a Number is Automorphic](https://takeuforward.org/data-structure/check-if-a-number-is-automorphic-number/)
24. [GCD of two numbers](https://takeuforward.org/data-structure/find-gcd-of-two-numbers/)
25. [LCM of two numbers](https://takeuforward.org/data-structure/find-lcm-of-two-numbers/)
26. [Check if a number is Harshad number](https://takeuforward.org/data-structure/check-if-the-given-number-is-harshador-niven-number/)
27. [Check if the number is abundant number or not](https://takeuforward.org/data-structure/check-if-the-number-is-an-abundant-number-or-not/)
28. [Sum of digits of a number](https://takeuforward.org/data-structure/sum-of-digits-of-a-number/)
29. [Sum of numbers in the given range](https://takeuforward.org/data-structure/find-the-sum-of-numbers-in-the-given-range/)
30. [Permutations in which N people can occupy R seats in a classroom](https://takeuforward.org/data-structure/permutations-in-which-n-people-can-occupy-r-seats/)
31. [Program to add two fractions](https://takeuforward.org/data-structure/program-to-add-two-fractions/)
32. [Replace all 0s with 1s in a given integer](https://takeuforward.org/data-structure/replace-all-the-0s-with-1-in-a-given-integer/)
33. [Can a number be expressed as a sum of two prime numbers](https://takeuforward.org/data-structure/express-given-number-as-sum-of-two-prime-numbers/)
34. [Calculate the area of circle](https://takeuforward.org/data-structure/calculate-the-area-of-the-circle/)
35. [Program to find roots of a Quadratic Equation](https://takeuforward.org/data-structure/program-to-find-roots-of-a-quadratic-equation/)

**Problems on Number System**

1. [Convert Binary to Decimal](https://takeuforward.org/data-structure/convert-binary-to-decimal/)
2. [Convert binary to octal](https://takeuforward.org/data-structure/convert-binary-to-octal/)
3. [Decimal to Binary conversion](https://takeuforward.org/maths/convert-decimal-to-binary-number/)
4. [Convert decimal to octal](https://takeuforward.org/uncategorized/convert-decimal-to-octal/)
5. [Convert octal to binary](https://takeuforward.org/data-structure/convert-octal-to-binary/)
6. [Convert octal to decimal](https://takeuforward.org/data-structure/convert-octal-to-decimal/)
7. [Convert digits/numbers to words](https://takeuforward.org/data-structure/convert-digits-numbers-to-words/)

**Problems on Sorting**

1. [Bubble Sort Algorithm](https://takeuforward.org/data-structure/bubble-sort-algorithm/)
2. [Selection Sort Algorithm](https://takeuforward.org/sorting/selection-sort-algorithm/)
3. [Insertion Sort Algorithm](https://takeuforward.org/data-structure/insertion-sort-algorithm/)
4. [Quick Sort Algorithm](https://takeuforward.org/data-structure/quick-sort-algorithm/)
5. [Merge sort algorithm](https://takeuforward.org/data-structure/merge-sort-algorithm/)

**Problems on String**

1. [Check if a given string is palindrome or not](https://takeuforward.org/data-structure/check-if-the-given-string-is-palindrome-or-not/)
2. [Count number of vowels, consonants, spaces in String](https://takeuforward.org/data-structure/count-number-of-vowels-consonants-spaces-in-string/)
3. [Find the ASCII value of a character](https://takeuforward.org/data-structure/find-the-ascii-value-of-a-character/)
4. [Remove all vowels from the string](https://takeuforward.org/data-structure/remove-all-vowels-from-the-string/)
5. [Remove spaces from a string](https://takeuforward.org/data-structure/remove-spaces-from-a-string/)
6. [Remove characters from a string except alphabets](https://takeuforward.org/data-structure/remove-characters-from-a-string-except-alphabets/)
7. [Reverse a String](https://takeuforward.org/data-structure/reverse-a-string/)
8. [Remove brackets from an algebraic expression](https://takeuforward.org/data-structure/remove-brackets-from-an-algebraic-expression/)
9. [Sum of the numbers in a String](https://takeuforward.org/data-structure/sum-of-the-numbers-in-a-string/)
10. [Capitalize first and last character of each word](https://takeuforward.org/string/capitalize-first-and-last-character-of-each-word-of-a-string/)
11. [Calculate frequency of characters in a string](https://takeuforward.org/data-structure/calculate-frequency-of-characters-in-a-string/)
12. [Find Non-repeating characters of a String](https://takeuforward.org/data-structure/find-non-repeating-characters-of-a-string/)
13. [Check if two strings are anagram of each other](https://takeuforward.org/data-structure/check-if-two-strings-are-anagrams-of-each-other/)
14. Count common sub-sequence in two strings.
15. Check if two strings match where one string contains wildcard characters.
16. [Return maximum occurring character in the input string](https://takeuforward.org/data-structure/maximum-occurring-character-in-a-string/)
17. [Remove all duplicates from the input string](https://takeuforward.org/data-structure/remove-all-duplicates-from-a-string/).
18. [Print all the duplicates in the input string](https://takeuforward.org/data-structure/print-all-the-duplicates-in-the-string/).
19. [Remove characters from first string present in the second string](https://takeuforward.org/data-structure/remove-characters-from-first-string-present-in-the-second-string/)
20. [Change every letter with the next lexicographic alphabet in the given string](https://takeuforward.org/data-structure/change-every-letter-with-next-lexicographic-alphabet/)
21. [Write a program to find the largest word in a given string](https://takeuforward.org/data-structure/find-the-largest-word-in-a-string/).
22. [Write a program to sort characters in a string](https://takeuforward.org/data-structure/write-a-program-to-sort-characters-in-a-string/)
23. [Count number of words in a given string](https://takeuforward.org/data-structure/count-the-number-of-words-in-a-given-string/)
24. [Write a program to find a word in a given string which has the highest number of repeated letters](https://takeuforward.org/data-structure/find-word-with-highest-number-of-repeated-letters-in-string/)
25. [Change case of each character in a string](https://takeuforward.org/data-structure/change-case-of-each-character-in-a-string/)
26. [Concatenate one string to another](https://takeuforward.org/data-structure/concatenate-one-string-to-another/)
27. [Write a program to find a substring within a string. If found display its starting position](https://takeuforward.org/data-structure/find-the-position-of-a-substring-within-a-string/)
28. [Reverse words in a string](https://takeuforward.org/data-structure/reverse-words-in-a-string/)