

Basic C++ Programs

1. [C++ Program For Hello World](#)
2. [C++ Program to Print Your Own Name](#)
3. [C++ Program to Get Input from the User](#)
4. [C++ Program to Read Number Input From User](#)
5. [C++ Program to Add Two Numbers](#)
6. [C++ Program to Swap two numbers](#)
7. [C++ Program to Find the Size of int, float, double, and char](#)
8. [C++ Program to Multiply Two Floating-Point Numbers](#)
9. [C++ Program to Print the ASCII Value of a Character](#)
10. [C++ Program to Calculate Fahrenheit to Celsius](#)
11. [C++ Program to Find Simple Interest](#)
12. [C++ Program to Find Compound Interest](#)
13. [C++ Program For Area And Perimeter of Rectangle](#)

C++ Control Flow Programs

1. [C++ Program to Check Even or Odd Integers](#)
2. [C++ Program to Find Largest Among 3 Numbers](#)
3. [C++ Program to Check Whether a Character is a Vowel or Consonant](#)
4. [C++ Program to Check if a Given Year is a Leap Year](#)
5. [C++ Program to Print Multiplication Table of a Number](#)
6. [C++ Program to Calculate Sum of First n Natural Numbers](#)
7. [C++ Program to Find Factorial of a Number](#)
8. [C++ Program to Reverse a Number](#)
9. [C++ Program to Find GCD](#)
10. [C++ Program to Find LCM](#)
11. [C++ Program to Check Whether a Number is a Palindrome or Not](#)
12. [C++ Program to Check Whether a Number is Prime or Not](#)
13. [C++ Program to Display Prime Numbers Between Two Intervals](#)
14. [C++ Program to Check Neon Numbers in a Given Range](#)
15. [C++ Program to Check Armstrong Number](#)
16. [C++ Program to Display Armstrong Numbers Between 1 to 1000](#)
17. [C++ Program to For Fibonacci Number](#)
18. [C++ Sum of Fibonacci Numbers at Even Indexes up to N Terms](#)
19. [C++ Program to Calculate the Power of a Number](#)
20. [C++ Program to Display Factors of a Natural Number](#)
21. [C++ Program to Make a Simple Calculator](#)

C++ Pattern Printing Programs

1. [C++ Program To Print Right Half Pyramid Pattern](#)
2. [C++ Program To Print Left Half Pyramid Pattern](#)
3. [C++ Program To Print Simple Full Pyramid Pattern](#)
4. [C++ Program To Print Inverted Pyramid](#)
5. [C++ Program To Print Triangle Pattern](#)
6. [C++ Program To Print Number Pattern without reassigning](#)
7. [C++ Program To Print Character Pattern](#)
8. [C++ Program To Print Continuous Character Pattern](#)

9. [C++ Program To Print Full Diamond Shape Pyramid](#)
10. [C++ Program To Print Inverted Hollow Star Pyramid Pattern](#)
11. [C++ Program To Print Hollow Star Pyramid in a Diamond Shape](#)
12. [C++ Program To Print Pascal's Triangle](#)
13. [C++ Program To Print Floyd's pattern Triangle Pyramid](#)
14. [C++ Program To Print Reverse Floyd Pattern Triangle Pyramid](#)

C++ Function Programs

1. [C++ Program to Display Prime Numbers Between Two Intervals Using Function](#)
2. [C++ Program to Check Whether a Number Can be Express as Sum of Two Prime Numbers](#)
3. [C++ Program to Find the Sum of Natural Numbers using Recursion](#)
4. [C++ Program to Calculate the Factorial of a Number Using Recursion](#)
5. [C++ Program to Reverse a Sentence Using Recursion](#)
6. [C++ Program to Calculate Power Using Recursion](#)
7. [C++ Program For Variadic Function Templates](#)

C++ Array Programs

1. [C++ Program to Check if Two Arrays Are Equal or Not](#)
2. [C++ Program to Find the Maximum and Minimum in an Array](#)
3. [C++ Program to Calculate the Average of all the Elements Present in an Array](#)
4. [C++ Program to Merge Two Arrays](#)
5. [C++ Program to Print a 2D Array](#)
6. [C++ Program to Find Common Array Elements](#)
7. [C++ Program to Remove Duplicate Elements From an Array](#)
8. [C++ Program to Remove All Occurrences of an Element in an Array](#)
9. [C++ Program For Array Rotation](#)
10. [C++ Program to Copy All the Elements of One Array to Another in the Reverse Order](#)

C++ Matrix Programs

1. [C++ Program to Add Two Matrices](#)
2. [C++ Program to Check Whether Two Matrices Are Equal or Not](#)
3. [C++ Program to Compute the Sum of Diagonals of a Matrix](#)
4. [C++ Program to Print Boundary Elements of a Matrix](#)
5. [C++ Program to Find the Transpose of a Matrix](#)
6. [C++ Program to Find the Determinant of a Matrix](#)
7. [C++ Program to Find the Normal and Trace of Matrix](#)
8. [C++ Program to Multiply Two Matrices](#)
9. [C++ Program to Rotate Matrix Elements of a Matrix](#)
10. [C++ Program to Interchange Elements of First And Last Rows in Matrix](#)
11. [C++ Program To Interchange Elements of First And Last Columns In Matrix](#)

C++ Pointers Programs

1. [C++ Program for Pointers](#)
2. [C++ Program for an Array of Pointers](#)

3. [C++ Program for void Pointer](#)
4. [C++ Program for Reference To a Pointer](#)
5. [C++ Program for Function Pointer](#)
6. [C++ Program for this Pointer](#)
7. [C++ Program For Opaque Pointer](#)

C++ String Programs

1. [C++ Program to Find the Length of a String](#)
2. [C++ Program to Access Characters in a Given String](#)
3. [C++ Program to Determine the Unicode Code Point at a given index](#)
4. [C++ Program to Replace a Character in a String](#)
5. [C++ Program to Compare Two Strings](#)
6. [C++ Program to Add/Concatenate Two Strings](#)
7. [C++ Program to Add 2 Binary Strings](#)
8. [C++ Program to Remove Leading Zeros](#)
9. [C++ Program to Compare Two Strings Lexicographically](#)
10. [C++ Program to Reverse a String](#)
11. [C++ Program to check if the String is Palindrome](#)
12. [C++ Program to Print the First Letter of Each Word of a String](#)
13. [C++ Program to Insert a String into Another String](#)
14. [C++ Program to Splitting into a Number of Sub-Strings](#)
15. [C++ Program to Reverse a String Using Stacks](#)
16. [C++ Program to Check Whether the Given String is Pangram](#)

C++ Conversion Programs

1. [C++ Program For Binary to Decimal Conversion](#)
2. [C++ Program For Binary to Octal Conversion](#)
3. [C++ Program For Octal to Decimal Conversion](#)
4. [C++ Program For Decimal to Octal Conversion](#)
5. [C++ Program For Hexadecimal to Decimal Conversion](#)
6. [C++ Program For Decimal to Hexadecimal Conversion](#)
7. [C++ Program For Decimal to Binary Conversion](#)
8. [C++ Program For Boolean to String Conversion](#)
9. [C++ Program For String to Double Conversion](#)
10. [C++ Program For Double to String Conversion](#)
11. [C++ Program For String to Long Conversion](#)
12. [C++ Program For Long to String Conversion](#)
13. [C++ Program For Int to Char Conversion](#)
14. [C++ Program For Char to Int Conversion](#)

C++ Searching and Sorting Programs

1. [C++ Program to Search an Element in an Array \(Linear Search\)](#)
2. [C++ Program to Search an Element in an Array \(Binary Search\)](#)
3. [C++ Program to Sort an Array\(Selection Sort\)](#)
4. [C++ Program to Sort an Array\(Bubble Sort\)](#)
5. [C++ Program to Sort an Array\(Insertion Sort\)](#)
6. [C++ Program of Merge Sort](#)
7. [C++ Program to Sort a String](#)

8. [C++ Program to Sort the 2D Array Across Rows](#)
9. [C++ Program to Sort the Elements of an Array in Descending Order](#)
10. [C++ Program to Sort the Elements of an Array in Ascending Order](#)

C++ Structures Programs

1. [C++ Program to Pass or Return a Structure to/from a Function](#)
2. [C++ Program to Store Information of a Student in a Structure](#)
3. [C++ Program For Structure Sorting \(By Multiple Rules\)](#)

C++ Class and Object Programs

1. [C++ Program to Create a Class and Object](#)
2. [C++ Program to Show Encapsulation](#)
3. [C++ Program to Show Inheritance](#)
4. [C++ Program to Show Abstraction in Class](#)
5. [C++ Program to Show Data Hiding in Class](#)
6. [C++ Program to Show Polymorphism in Class](#)
7. [C++ Program to Show Function Overloading](#)
8. [C++ Program to Show Function Overriding](#)
9. [C++ Program to Show Usage of Access Modifier](#)
10. [C++ Program to Show Use of This Keyword in Class](#)
11. [C++ Program to Show Usage of Static keyword](#)
12. [C++ Program For Friend Functions](#)
13. [C++ Program For Virtual Destructor](#)
14. [C++ Program to Create Abstract Class](#)
15. [C++ Program to Create Singleton Class](#)
16. [C++ Program to Create an Interface](#)
17. [C++ Program to Overload Increment ++ and Decrement](#)
18. [C++ Program to Add Two Complex Numbers](#)

C++ File Handling Programs

1. [C++ Program to Create a New File](#)
2. [C++ Program to Create a Temporary File](#)
3. [C++ Program to Write Into a File](#)
4. [C++ Program to Rename a File](#)
5. [C++ Program to Make a File Read-Only](#)
6. [C++ Program to Compare Paths of Two Files](#)
7. [C++ Program to Copy one File into Another File](#)
8. [C++ Program to Append the Content of One Text File to Another](#)
9. [C++ Program to Get the List of Files in a Directory](#)
10. [C++ Program to Append a String in an Existing File](#)
11. [C++ Program to Read Content From One File and Write it into Another File](#)

C++ Exception Handling Programs

1. [C++ Program to Show Runtime Exceptions](#)
2. [C++ Program to Show Types of Errors](#)
3. [C++ Program to Handle the Exception Methods](#)
4. [C++ Program to Handle the Exception Methods](#)
5. [C++ Program to Handle the Checked Exceptions](#)

6. [C++ Program to Handle the Unchecked Exceptions](#)
7. [C++ Program to Handle Divide By Zero and Multiple Exceptions](#)
8. [C++ Program to Show Unreachable Code Error](#)
9. [C++ Program to Show Thread Interface and Memory Consistency Errors](#)

C++ STL Programs

1. [C++ Program to Sort an Array Using STL](#)
2. [C++ Program To Initialize A Vector](#)
3. [C++ Program To Copy A Vector Using STL](#)
4. [C++ Program For Merge Operations Using STL](#)
5. [C++ Program To Show transform\(\) Using STL](#)
6. [C++ Program For Deque Using STL](#)
7. [C++ Program For Priority Queue Using STL](#)
8. [C++ Program For Map Using STL](#)
9. [C++ Program For Pair Using STL](#)
10. [C++ Program For Multiset using STL](#)
11. [C++ Program To Reverse A Vector Using STL](#)
12. [C++ Program To Reverse An Array Using STL](#)
13. [C++ Program For Stack Of Pair Using STL](#)
14. [C++ Program To Find Permutations Of A Given String Using STL](#)
15. [C++ Program To Find All Permutations of an Array Using STL.](#)
16. [C++ Program To Find Maximum And Minimum Elements In a Set Using STL](#)
17. [C++ Program To Insert And Delete Elements in a Set Using STL](#)
18. [C++ Program To Find Sum Of Elements Of a Vector Using STL](#)
19. [C++ Program To Implement Different Methods To Copy in STL](#)
20. [C++ Program To Implement Binary Search Functions Using STL](#)
21. [C++ Program To Check If Two Vectors Contain the Same Elements Or Not](#)

C++ Date and Time Programs

1. [C++ Program to Display Dates of Calendar Year in Different Formats](#)
2. [C++ Program to Display Current Date and Time](#)
3. [C++ Program to Convert the Local Time to GMT](#)

C++ Miscellaneous Programs

1. [C++ Program to Find Quotient and Remainder](#)
2. [C++ Program for sizeof\(\) Operator](#)
3. [C++ Program to Find Initials of a Name](#)
4. [C++ Program to Find Power Without Using * and / Operators](#)
5. [C++ Program to Find the Roots of the Quadratic Equation](#)
6. [Generate Random Double Numbers in C++](#)
7. [How to Hide and Show a Console Window in C++?](#)
8. [How to Run a C++ Program Without Namespace?](#)
9. [Build a custom Map using a Header File in C++](#)
10. [C++ Program for Number of Unique Triplets Whose XOR is Zero](#)

11. Array C/C++ Programs

12. C Program to find sum of elements in a given array
13. C program to find largest element in an array
14. Recursive C program to linearly search an element in a given array
15. C program to multiply two matrices
16. C/C++ Program for Given an array A[] and a number x, check for pair in A[] with sum as x
17. C/C++ Program for Majority Element
18. C/C++ Program for Find the Number Occurring Odd Number of Times
19. C/C++ Program for Largest Sum Contiguous Subarray
20. C/C++ Program for Find the Missing Number
21. C/C++ Program for Search an element in a sorted and pivoted array
22. C/C++ Program for Merge an array of size n into another array of size m+n
23. C/C++ Program for Median of two sorted arrays
24. C/C++ Program for Write a program to reverse an array
25. C/C++ Program for Program for array rotation
26. C/C++ Program for Reversal algorithm for array rotation
27. C/C++ Program for Block swap algorithm for array rotation
28. C/C++ Program for Maximum sum such that no two elements are adjacent
29. C/C++ Program for Leaders in an array
30. C/C++ Program for Sort elements by frequency | Set 1
31. C/C++ Program for Count Inversions in an array
32. C/C++ Program for Two elements whose sum is closest to zero
33. C/C++ Program for Find the smallest and second smallest element in an array
34. C/C++ Program for Check for Majority Element in a sorted array
35. C/C++ Program for Maximum and minimum of an array using minimum number of comparisons
36. C/C++ Program for Segregate 0s and 1s in an array
37. C/C++ Program for k largest(or smallest) elements in an array | added Min Heap method
38. C/C++ Program for Maximum size square sub-matrix with all 1s
39. C/C++ Program for Maximum difference between two elements such that larger element appears after the smaller number
40. C/C++ Program for Union and Intersection of two sorted arrays
41. C/C++ Program for Floor and Ceiling in a sorted array
42. C/C++ Program for A Product Array Puzzle
43. C/C++ Program for Segregate Even and Odd numbers
44. C/C++ Program for Find the two repeating elements in a given array
45. C/C++ Program for Sort an array of 0s, 1s and 2s
46. C/C++ Program for Find the Minimum length Unsorted Subarray, sorting which makes the complete array sorted
47. C/C++ Program for Find duplicates in O(n) time and O(1) extra space
48. C/C++ Program for Equilibrium index of an array
49. C/C++ Program for Which sorting algorithm makes minimum number of memory writes?
50. C/C++ Program for Turn an image by 90 degree
51. C/C++ Program for Search in a row wise and column wise sorted matrix
52. C/C++ Program for Next Greater Element
53. C/C++ Program for Check if array elements are consecutive | Added Method 3
54. C/C++ Program for Find the smallest missing number

55. C/C++ Program for Count the number of occurrences in a sorted array
56. C/C++ Program for Binary Search
57. C/C++ Program for Selection Sort
58. C/C++ Program for Bubble Sort
59. C/C++ Program for Insertion Sort
60. C/C++ Program for Merge Sort
61. C/C++ Program for Heap Sort
62. C/C++ Program for QuickSort
63. C/C++ Program for Given an array arr[], find the maximum j - i such that arr[j] > arr[i]
64. C/C++ Program for Maximum of all subarrays of size k (Added a O(n) method)
65. C/C++ Program for Find whether an array is subset of another array | Added Method 3
66. C/C++ Program for Find the minimum distance between two numbers
67. C/C++ Program for Find the repeating and the missing | Added 3 new methods
68. C/C++ Program for Print a given matrix in spiral form
69. C/C++ Program for A Boolean Matrix Question
70. C/C++ Program for Median in a stream of integers (running integers)
71. C/C++ Program for Find a Fixed Point in a given array
72. C/C++ Program for Maximum Length Bitonic Subarray
73. C/C++ Program for Find the maximum element in an array which is first increasing and then decreasing
74. C/C++ Program for Count smaller elements on right side
75. C/C++ Program for Minimum number of jumps to reach end
76. C/C++ Program for Implement two stacks in an array
77. C/C++ Program for Find subarray with given sum
78. C/C++ Program for Dynamic Programming | Set 14 (Maximum Sum Increasing Subsequence)
79. C/C++ Program for Longest Monotonically Increasing Subsequence Size (N log N)
80. C/C++ Program for Find a triplet that sum to a given value
81. C/C++ Program for Find the smallest positive number missing from an unsorted array
82. C/C++ Program for Find the two numbers with odd occurrences in an unsorted array
83. C/C++ Program for The Celebrity Problem
84. C/C++ Program for Dynamic Programming | Set 15 (Longest Bitonic Subsequence)
85. C/C++ Program for Find a sorted subsequence of size 3 in linear time
86. C/C++ Program for Largest subarray with equal number of 0s and 1s
87. C/C++ Program for Dynamic Programming | Set 18 (Partition problem)
88. C/C++ Program for Maximum Product Subarray
89. C/C++ Program for Find a pair with the given difference
90. C/C++ Program for Replace every element with the next greatest
91. C/C++ Program for Dynamic Programming | Set 20 (Maximum Length Chain of Pairs)
92. C/C++ Program for Find four elements that sum to a given value | Set 1 (n^3 solution)
93. C/C++ Program for Find four elements that sum to a given value | Set 2 ($O(n^2 \log n)$ Solution)
94. C/C++ Program for Sort a nearly sorted (or K sorted) array

95. C/C++ Program for Maximum circular subarray sum
96. C/C++ Program for Find the row with maximum number of 1s
97. C/C++ Program for Median of two sorted arrays of different sizes
98. C/C++ Program for Print unique rows in a given boolean matrix
99. C/C++ Program for Shuffle a given array
100. C/C++ Program for Count the number of possible triangles
101. C/C++ Program for Iterative Quick Sort
102. C/C++ Program for Inplace M x N size matrix transpose | Updated
103. C/C++ Program for Find the number of islands
104. C/C++ Program for Construction of Longest Monotonically Increasing Subsequence (N log N)
105. C/C++ Program for Find the first circular tour that visits all petrol pumps
106. C/C++ Program for Arrange given numbers to form the biggest number
107. C/C++ Program for Dynamic Programming | Set 27 (Maximum sum rectangle in a 2D matrix)
108. C/C++ Program for Pancake sorting
109. C/C++ Program for A Pancake Sorting Problem
110. C/C++ Program for Tug of War
111. C/C++ Program for Print Matrix Diagonally
112. C/C++ Program for Divide and Conquer | Set 3 (Maximum Subarray Sum)
113. C/C++ Program for Counting Sort
114. C/C++ Program for Merge Overlapping Intervals
115. C/C++ Program for Find the maximum repeating number in O(n) time and O(1) extra space
116. C/C++ Program for Stock Buy Sell to Maximize Profit
117. C/C++ Program for Rearrange positive and negative numbers in O(n) time and O(1) extra space
118. C/C++ Program for Sort elements by frequency | Set 2
119. C/C++ Program for Find a peak element
120. C/C++ Program for Print all possible combinations of r elements in a given array of size n
121. C/C++ Program for Given an array of of size n and a number k, find all elements that appear more than n/k times
122. C/C++ Program for Find the point where a monotonically increasing function becomes positive first time
123. C/C++ Program for Find the Increasing subsequence of length three with maximum product
124. C/C++ Program for Find the minimum element in a sorted and rotated array
125. C/C++ Program for Stable Marriage Problem
126. C/C++ Program for Merge k sorted arrays | Set 1
127. C/C++ Program for Radix Sort
128. C/C++ Program for Move all zeroes to end of array
129. C/C++ Program for Find number of pairs such that $x^y > y^x$
130. C/C++ Program for Count all distinct pairs with difference equal to k
131. C/C++ Program for Count all possible paths from top left to bottom right of a mXn matrix
132. C/C++ Program for Suffix Array | Set 1 (Introduction)

133. C/C++ Program for Rearrange an array so that $arr[i]$ becomes $arr[arr[i]]$ with $O(1)$ extra space
134. C/C++ Program for Sort n numbers in range from 0 to $n^2 - 1$ in linear time
135. C/C++ Program for Count all possible groups of size 2 or 3 that have sum as multiple of 3
136. **Matrix C/C++ Programs**
137. C Program to check if two given matrices are identical
C program to find transpose of a matrix
C program for subtraction of matrices
C program for addition of two matrices
C program to multiply two matrices
C/C++ Program for Print a given matrix in spiral form
C/C++ Program for A Boolean Matrix Question
C/C++ Program for Print Matrix Diagonally
C Program to find the number of islands
C Program to find maximum size square sub-matrix with all 1s
C/C++ program for the celebrity problem
C/C++ Program for Print a given matrix in spiral form
138. **String C/C++ Programs**
139. C program to swap two Strings
140. C Program to Check if a Given String is Palindrome
141. C Program to Sort an array of names or strings
142. C/C++ Program for Return maximum occurring character in the input string
143. C/C++ Program for Remove all duplicates from the input string.
144. C/C++ Program for Print all the duplicates in the input string.
145. C/C++ Program for Remove characters from the first string which are present in the second string
146. C/C++ Program for A Program to check if strings are rotations of each other or not
147. C/C++ Program for Print reverse of a string using recursion
148. C/C++ Program for Write a C program to print all permutations of a given string
149. C/C++ Program for Divide a string in N equal parts
150. C/C++ Program for Given a string, find its first non-repeating character
151. C/C++ Program for Print list items containing all characters of a given word
152. C/C++ Program for Reverse words in a given string
153. C/C++ Program for Run Length Encoding
154. C/C++ Program for Find the smallest window in a string containing all characters of another string
155. C/C++ Program for Searching for Patterns | Set 1 (Naive Pattern Searching)
156. C/C++ Program for Searching for Patterns | Set 2 (KMP Algorithm)
157. C/C++ Program for Searching for Patterns | Set 3 (Rabin-Karp Algorithm)
158. C/C++ Program for Searching for Patterns | Set 4 (A Naive Pattern Searching Question)
159. C/C++ Program for Length of the longest substring without repeating characters
160. C/C++ Program for Print all permutations with repetition of characters
161. C/C++ Program for Print all interleavings of given two strings

162. C/C++ Program for Check whether a given string is an interleaving of two other given strings
163. C/C++ Program for Check whether two strings are anagram of each other
164. C/C++ Program for Searching for Patterns | Set 5 (Finite Automata)
165. C/C++ Program for Pattern Searching | Set 6 (Efficient Construction of Finite Automata)
166. C/C++ Program for Pattern Searching | Set 7 (Boyer Moore Algorithm – Bad Character Heuristic)
167. C/C++ Program for Dynamic Programming | Set 17 (Palindrome Partitioning)
168. C/C++ Program for Lexicographic rank of a string
169. C/C++ Program for Print all permutations in sorted (lexicographic) order
170. C/C++ Program for Longest Palindromic Substring | Set 1
171. C/C++ Program for An in-place algorithm for String Transformation
172. C/C++ Program for Longest Palindromic Substring | Set 2
173. C/C++ Program for Given a sequence of words, print all anagrams together | Set 1
174. C/C++ Program for Given a sequence of words, print all anagrams together | Set 2
175. C/C++ Program for Count words in a given string
176. C/C++ Program for String matching where one string contains wildcard characters
177. C/C++ Program for Write your own atoi()
178. C/C++ Program for Dynamic Programming | Set 29 (Longest Common Substring)
179. C/C++ Program for Remove “b” and “ac” from a given string
180. C/C++ Program for Dynamic Programming | Set 33 (Find if a string is interleaved of two other strings)
181. C/C++ Program for Find the first non-repeating character from a stream of characters
182. C/C++ Program for Recursively remove all adjacent duplicates
183. C/C++ Program for Rearrange a string so that all same characters become distance away
184. C program to find second most frequent character
185. **Linked List C/C++ Programs:**
186. C/C++ Program for Introduction to Linked List
187. C/C++ Program for Linked List Insertion
188. C/C++ Program for Write a function to get Nth node in a Linked List
189. C/C++ Program for Given only a pointer to a node to be deleted in a singly linked list, how do you delete it?
190. C/C++ Program to print the middle of a given linked list
191. C/C++ Program for Nth node from the end of a Linked List
192. C/C++ Program to delete a Linked List
193. C/C++ Program to counts the number of times a given int occurs in a Linked List
194. C/C++ Program for Given only a pointer to a node to be deleted in a singly linked list, how do you delete it?
195. C/C++ Program to reverse a linked list
196. C/C++ Program to detect loop in a linked list

197. C/C++ Program to check if a singly linked list is palindrome
198. C/C++ Program The Great Tree-List Recursion Problem.
199. C/C++ Program to Copy a linked list with next and arbit pointer
200. C/C++ Program for Given a linked list which is sorted, how will you insert in sorted way
201. C/C++ Program for Write a function to get the intersection point of two Linked Lists.
202. C/C++ Program for Write a recursive function to print reverse of a Linked List
203. C/C++ Program for Remove duplicates from a sorted linked list
204. C/C++ Program for Remove duplicates from an unsorted linked list
205. C/C++ Program for Reverse a Doubly Linked List
206. C/C++ Program for Split a Circular Linked List into two halves
207. C/C++ Program for Practice questions for Linked List and Recursion
208. C/C++ Program for Move last element to front of a given Linked List
209. C/C++ Program for Pairwise swap elements of a given linked list
210. C/C++ Program for Delete a node in a Doubly Linked List
211. C/C++ Program for Intersection of two Sorted Linked Lists
212. C/C++ Program for Delete alternate nodes of a Linked List
213. C/C++ Program for Alternating split of a given Singly Linked List
214. C/C++ Program for Merge two sorted linked lists
215. C/C++ Program for Identical Linked Lists
216. C/C++ Program for Merge Sort for Linked Lists
217. C/C++ Program for Reverse a Linked List in groups of given size
218. C/C++ Program for Sorted insert for circular linked list
219. C/C++ Program for Reverse alternate K nodes in a Singly Linked List
220. C/C++ Program for Delete nodes which have a greater value on right side
221. C/C++ Program for Segregate even and odd nodes in a Linked List
222. C/C++ Program for Detect and Remove Loop in a Linked List
223. C/C++ Program for XOR Linked List – A Memory Efficient Doubly Linked List | Set 1
224. C/C++ Program for Add two numbers represented by linked lists | Set 1
225. C/C++ Program for How to write C functions that modify head pointer of a Linked List?
226. C/C++ Program for Delete a given node in Linked List under given constraints
227. C/C++ Program for Sorted Linked List to Balanced BST
228. C/C++ Program for In-place conversion of Sorted DLL to Balanced BST
229. C/C++ Program for Union and Intersection of two Linked Lists
230. C/C++ Program for XOR Linked List – A Memory Efficient Doubly Linked List | Set 2
231. C/C++ Program for Find a triplet from three linked lists with sum equal to a given number
232. C/C++ Program for Rotate a Linked List
233. C/C++ Program for Implement LRU Cache
234. C/C++ Program for Flattening a Linked List
235. C/C++ Program for Add two numbers represented by linked lists | Set 2
236. C/C++ Program for Sort a linked list of 0s, 1s and 2s
237. C/C++ Program for Flatten a multilevel linked list

- 238. C/C++ Program for QuickSort on Doubly Linked List
- 239. C/C++ Program for Swap Kth node from beginning with Kth node from end in a Linked List
- 240. C/C++ Program for Design a stack with operations on middle element
- 241. C/C++ Program for Delete N nodes after M nodes of a linked list
- 242. C/C++ Program for QuickSort on Singly Linked List
- 243. C/C++ Program for Merge a linked list into another linked list at alternate positions
- 244. C/C++ Program for Pairwise swap elements of a given linked list by changing links
- 245. C/C++ Program for Given a linked list, reverse alternate nodes and append at the end
- 246. C Program for Bubble Sort on Linked List
- 247. **Stack C/C++ Programs:**
- 248. C/C++ Program for Introduction to Stack
- 249. C/C++ Program for Infix to Postfix Conversion using Stack
- 250. C/C++ Program for Evaluation of Postfix Expression
- 251. C/C++ Program for Reverse a Sting using Stack
- 252. C/C++ Program for Implement two stacks in an array
- 253. C/C++ Program for Check for balanced parentheses in an expression
- 254. C/C++ Program for Next Greater Element
- 255. C/C++ Program for Reverse a stack using recursion
- 256. C/C++ Program for The Stock Span Problem
- 257. C/C++ Program for Design and Implement Special Stack Data Structure
- 258. C/C++ Program for Implement Stack using Queues
- 259. C/C++ Program for Design a stack with operations on middle element
- 260. **Queue C/C++ Programs:**
- 261. C/C++ Program for Queue Introduction and Array Implementation
- 262. C/C++ Program for Linked List Implementation of Queue
- 263. C/C++ Program for Implement Queue using Stacks
- 264. C/C++ Program for Check whether a given Binary Tree is Complete or not
- 265. C/C++ Program for Find the largest multiple of 3
- 266. **Tree C/C++ Programs:**
- 267. C/C++ Program for Tree Traversals
- 268. C/C++ Program for Write a C program to Calculate Size of a tree
- 269. C/C++ Program for Write C Code to Determine if Two Trees are Identical
- 270. C/C++ Program for Write a C Program to Find the Maximum Depth or Height of a Tree
- 271. C/C++ Program for Write a C program to Delete a Tree.
- 272. C/C++ Program for Write an Efficient C Function to Convert a Binary Tree into its Mirror Tree
- 273. C/C++ Program for If you are given two traversal sequences, can you construct the binary tree?
- 274. C/C++ Program for Given a binary tree, print out all of its root-to-leaf paths one per line.
- 275. C/C++ Program for Lowest Common Ancestor in a Binary Search Tree.
- 276. C/C++ Program for The Great Tree-List Recursion Problem.

277. C/C++ Program for Find the node with minimum value in a Binary Search Tree
278. C/C++ Program for Level Order Tree Traversal
279. C/C++ Program for Program to count leaf nodes in a binary tree
280. C/C++ Program for A program to check if a binary tree is BST or not
281. C/C++ Program for Level order traversal in spiral form
282. C/C++ Program for Check for Children Sum Property in a Binary Tree.
283. C/C++ Program for Convert an arbitrary Binary Tree to a tree that holds Children Sum Property
284. C/C++ Program for Diameter of a Binary Tree
285. C/C++ Program for How to determine if a binary tree is height-balanced?
286. C/C++ Program for Inorder Tree Traversal without Recursion
287. C/C++ Program for Inorder Tree Traversal without recursion and without stack!
288. C/C++ Program for Root to leaf path sum equal to a given number
289. C/C++ Program for Construct Tree from given Inorder and Preorder traversals
290. C/C++ Program for Given a binary tree, print all root-to-leaf paths
291. C/C++ Program for Double Tree
292. C/C++ Program for Maximum width of a binary tree
293. C/C++ Program for Total number of possible Binary Search Trees with n keys
294. C/C++ Program for Foldable Binary Trees
295. C/C++ Program for Print nodes at k distance from root
296. C++ Program for Inorder predecessor and successor of a given key in BST
297. C/C++ Program for Sorted order printing of a given array that represents a BST
298. C/C++ Program for Applications of tree data structure
299. C/C++ Program for Inorder Successor in Binary Search Tree
300. C/C++ Program for Find k-th smallest element in BST (Order Statistics in BST)
301. C/C++ Program for Get Level of a node in a Binary Tree
302. C/C++ Program for Print Ancestors of a given node in Binary Tree
303. C/C++ Program for Print BST keys in the given range
304. C/C++ Program for Tournament Tree (Winner Tree) and Binary Heap
305. C/C++ Program for Check if a given Binary Tree is SumTree
306. C/C++ Program for Decision Trees – Fake (Counterfeit) Coin Puzzle (12 Coin Puzzle)
307. C/C++ Program for Check if a binary tree is subtree of another binary tree
308. C/C++ Program for Trie | (Insert and Search)
309. C/C++ Program for Trie | (Delete)
310. C/C++ Program for Connect nodes at same level
311. C/C++ Program for Connect nodes at same level using constant extra space
312. C/C++ Program for Sorted Array to Balanced BST
313. C/C++ Program for Populate Inorder Successor for all nodes
314. C/C++ Program for Convert a given tree to its Sum Tree
315. C/C++ Program for Find the largest BST subtree in a given Binary Tree
316. C/C++ Program for AVL Tree | Set 1 (Insertion)
317. C/C++ Program for Vertical Sum in a given Binary Tree

- 318. C/C++ Program for AVL Tree | Set 2 (Deletion)
- 319. C/C++ Program for Merge Two Balanced Binary Search Trees
- 320. C/C++ Program for Find the maximum sum leaf to root path in a Binary Tree
- 321. C/C++ Program for Merge two BSTs with limited extra space
- 322. C/C++ Program for Binary Tree to Binary Search Tree Conversion
- 323. C/C++ Program for Construct Special Binary Tree from given Inorder traversal
- 324. C/C++ Program for Construct a special tree from given preorder traversal
- 325. C/C++ Program for Check if each internal node of a BST has exactly one child
- 326. C/C++ Program for Check whether a given Binary Tree is Complete or not
- 327. C/C++ Program for Boundary Traversal of binary tree
- 328. C/C++ Program for Two nodes of a BST are swapped, correct the BST
- 329. C/C++ Program for Construct Full Binary Tree from given preorder and postorder traversals
- 330. C/C++ Program for Construct BST from given preorder traversal | Set 1
- 331. C/C++ Program for Construct BST from given preorder traversal | Set 2
- 332. C/C++ Program for Floor and Ceil from a BST
- 333. C/C++ Program for Iterative Preorder Traversal
- 334. C/C++ Program for Convert a BST to a Binary Tree such that sum of all greater keys is added to every key
- 335. C/C++ Program for Morris traversal for Preorder
- 336. C/C++ Program for Linked complete binary tree & its creation
- 337. C/C++ Program for Ternary Search Tree
- 338. C/C++ Program for Segment Tree | Set 1 (Sum of given range)
- 339. C/C++ Program for Segment Tree | Set 2 (Range Minimum Query)
- 340. C/C++ Program for Dynamic Programming | Set 26 (Largest Independent Set Problem)
- 341. C/C++ Program for Iterative Postorder Traversal | Set 1 (Using Two Stacks)
- 342. C/C++ Program for Iterative Postorder Traversal | Set 2 (Using One Stack)
- 343. C/C++ Program for Find if there is a triplet in a Balanced BST that adds to zero
- 344. C/C++ Program for Find a pair with given sum in a Balanced BST
- 345. C/C++ Program for Reverse Level Order Traversal
- 346. C/C++ Program for Construct Complete Binary Tree from its Linked List Representation
- 347. C/C++ Program for Remove BST keys outside the given range
- 348. C/C++ Program for Convert a given Binary Tree to Doubly Linked List | Set 1
- 349. C/C++ Program for B-Tree | Set 1 (Introduction)
- 350. C/C++ Program for B-Tree | Set 2 (Insert)
- 351. C/C++ Program for Longest prefix matching – A Trie based solution in Java
- 352. C/C++ Program for Tree Isomorphism Problem
- 353. C/C++ Program for Find all possible interpretations of an array of digits
- 354. C/C++ Program for Iterative Method to find Height of Binary Tree
- 355. C/C++ Program for Custom Tree Problem
- 356. C/C++ Program for Check for Identical BSTs without building the trees

- 357. C/C++ Program for Convert a given Binary Tree to Doubly Linked List | Set 2
- 358. C/C++ Program for Print ancestors of a given binary tree node without recursion
- 359. C/C++ Program for Difference between sums of odd level and even level nodes of a Binary Tree
- 360. C/C++ Program for Print Postorder traversal from given Inorder and Preorder traversals
- 361. C/C++ Program for Find depth of the deepest odd level leaf node
- 362. C/C++ Program for Check if all leaves are at same level
- 363. C/C++ Program for Print Left View of a Binary Tree
- 364. C/C++ Program for B-Tree | Set 3 (Delete)
- 365. C/C++ Program for Add all greater values to every node in a given BST
- 366. C/C++ Program for Remove all nodes which don't lie in any path with sum $\geq k$
- 367. C/C++ Program for Extract Leaves of a Binary Tree in a Doubly Linked List
- 368. C/C++ Program for Deepest left leaf node in a binary tree
- 369. C/C++ Program for Find next right node of a given key
- 370. C/C++ Program for Splay Tree | Set 1 (Search)
- 371. C/C++ Program for Splay Tree | Set 2 (Insert)
- 372. C/C++ Program for Sum of all the numbers that are formed from root to leaf paths
- 373. C/C++ Program for Red-Black Tree | Set 1 (Introduction)
- 374. C/C++ Program for Red-Black Tree | Set 2 (Insert)
- 375. C/C++ Program for Convert a given Binary Tree to Doubly Linked List | Set 3
- 376. C/C++ Program for Print all nodes that don't have sibling
- 377. C/C++ Program for Lowest Common Ancestor in a Binary Tree | Set 1
- 378. C/C++ Program for Find distance between two given keys of a Binary Tree
- 379. C/C++ Program for Print all nodes that are at distance k from a leaf node
- 380. C/C++ Program for Check if a given Binary Tree is height balanced like a Red-Black Tree
- 381. C/C++ Program for Interval Tree
- 382. C/C++ Program for Print a Binary Tree in Vertical Order | Set 1
- 383. C/C++ Program for Print all nodes at distance k from a given node
- 384. C/C++ Program to find the maximum path sum between two leaves of a binary tree
- 385. **Graph C/C++ Programs:**
- 386. C/C++ Program for Depth First Traversal for a Graph
- 387. C/C++ Program for Breadth First Traversal for a Graph
- 388. C/C++ Program for Detect Cycle in a Directed Graph
- 389. C/C++ Program for Find if there is a path between two vertices in a directed graph
- 390. C/C++ Program for Hamiltonian Cycle Detection
- 391. C/C++ Program for Dynamic Programming | Set 16 (Floyd Warshall Algorithm)
- 392. C/C++ Program for Find the number of islands
- 393. C/C++ Program for Union-Find Algorithm | Set 1 (Detect Cycle in a an Undirected Graph)

- 394. C/C++ Program for Union-Find Algorithm | Set 2 (Union By Rank and Path Compression)
- 395. C/C++ Program for Greedy Algorithms | Set 2 (Kruskal's Minimum Spanning Tree Algorithm)
- 396. C/C++ Program for Graph and its representations
- 397. C/C++ Program for Greedy Algorithms | Set 5 (Prim's Minimum Spanning Tree (MST))
- 398. C/C++ Program for Greedy Algorithms | Set 6 (Prim's MST for Adjacency List Representation)
- 399. C/C++ Program for Greedy Algorithms | Set 7 (Dijkstra's shortest path algorithm)
- 400. C/C++ Program for Greedy Algorithms | Set 8 (Dijkstra's Algorithm for Adjacency List Representation)
- 401. C/C++ Program for Dynamic Programming | Set 23 (Bellman-Ford Algorithm)
- 402. C/C++ Program for Transitive closure of a graph
- 403. C/C++ Program for Check whether a given graph is Bipartite or not
- 404. C/C++ Program for Topological Sorting
- 405. C/C++ Program for Shortest Path in Directed Acyclic Graph
- 406. C/C++ Program for Strongly Connected Components
- 407. C/C++ Program for Articulation Points (or Cut Vertices) in a Graph
- 408. C/C++ Program for Bridges in a graph
- 409. C/C++ Program for Biconnected graph
- 410. C/C++ Program for Connectivity in a directed graph
- 411. C/C++ Program for Eulerian path and circuit
- 412. C/C++ Program for Ford-Fulkerson Algorithm for Maximum Flow Problem
- 413. C/C++ Program for Maximum Bipartite Matching
- 414. C/C++ Program for Find minimum s-t cut in a flow network
- 415. C/C++ Program for Fleury's Algorithm for printing Eulerian Path or Circuit
- 416. C/C++ Program for Longest Path in a Directed Acyclic Graph
- 417. C/C++ Program for Find maximum number of edge disjoint paths between two vertices
- 418. C/C++ Program for Detect cycle in an undirected graph
- 419. C/C++ Program for Travelling Salesman Problem | Set 1 (Naive and Dynamic Programming)
- 420. C/C++ Program for Travelling Salesman Problem | Set 2 (Approximate using MST)
- 421. C/C++ Program for Johnson's algorithm for All-pairs shortest paths
- 422. C/C++ Program for Graph Coloring | Set 1 (Introduction and Applications)
- 423. C/C++ Program for Graph Coloring | Set 2 (Greedy Algorithm)
- 424. C/C++ Program for Some interesting shortest path questions | Set 1
- 425. C/C++ program to Reverse alternate levels of a perfect binary tree
- 426. C/C++ program to transform a BST to greater sum tree
- 427. **Bit-Magic C/C++ Program:**
- 428. C/C++ Program for Next Power of 2
- 429. C/C++ Program for Write an Efficient Method to Check if a Number is Multiple of 3
- 430. C/C++ Program for Write a C program to find the parity of an unsigned integer

- 431. C/C++ Program for Efficient way to multiply with 7
- 432. C/C++ Program for Write one line C function to find whether a no is power of two
- 433. C/C++ Program for Position of rightmost set bit
- 434. C/C++ Program for Find the Number Occurring Odd Number of Times
- 435. C/C++ Program for Check for Integer Overflow
- 436. C/C++ Program for Little and Big Endian Mystery
- 437. C/C++ Program for Write an Efficient C Program to Reverse Bits of a Number
- 438. C/C++ Program for Count set bits in an integer
- 439. C/C++ Program for Count number of bits to be flipped to convert A to B
- 440. C/C++ Program for Find the two non-repeating elements in an array of repeating elements
- 441. C/C++ Program for Rotate bits of a number
- 442. C/C++ Program for Compute the minimum or maximum of two integers without branching
- 443. C/C++ Program for Compute modulus division by a power-of-2-number
- 444. C/C++ Program for Compute the integer absolute value (abs) without branching
- 445. C/C++ Program for Find whether a given number is a power of 4 or not
- 446. C/C++ Program for Turn off the rightmost set bit
- 447. C/C++ Program for Multiply a given Integer with 3.5
- 448. C/C++ Program for Add 1 to a given number
- 449. C/C++ Program for Optimization Techniques | Set 1 (Modulus)
- 450. C/C++ Program for Next higher number with same number of set bits
- 451. C/C++ Program for Program to count number of set bits in an (big) array
- 452. C/C++ Program for A Boolean Array Puzzle
- 453. C/C++ Program for Smallest of three integers without comparison operators
- 454. C/C++ Program for Add two numbers without using arithmetic operators
- 455. C/C++ Program for Swap bits in a given number
- 456. C/C++ Program for Count total set bits in all numbers from 1 to n
- 457. C/C++ Program for Detect if two integers have opposite signs
- 458. C/C++ Program for Find the element that appears once
- 459. C/C++ Program for Binary representation of a given number
- 460. C/C++ Program for Write your own strcmp that ignores cases
- 461. C/C++ Program for Add two bit strings
- 462. C/C++ Program for Swap all odd and even bits
- 463. C/C++ Program for Find position of the only set bit
- 464. C/C++ Program for Divide and Conquer | Set 4 (Karatsuba algorithm for fast multiplication)
- 465. C/C++ Program for How to swap two numbers without using a temporary variable?
- 466. C/C++ Program for Check if a number is multiple of 9 using bitwise operators
- 467. **C/C++ Mathematical Programs**
- 468. C/C++ Program for Write an Efficient Method to Check if a Number is Multiple of 3
- 469. C Program to print first n Fibonacci Numbers

470. C program to find area of a circle
471. C program to find area of a triangle
472. C program to calculate the value of nPr
473. C Program to find sum of series $1 + 1/2 + 1/3 + 1/4 + .. + 1/n$
474. C/C++ Program for Efficient way to multiply with 7
475. C/C++ Program for Write a C program to print all permutations of a given string
476. C/C++ Program for Lucky Numbers
477. C/C++ Program for Write a program to add two numbers in base 14
478. C/C++ Program for Babylonian method for square root
479. C/C++ Program for Multiply two integers without using multiplication, division and bitwise operators, and no loops
480. C/C++ Program for Print all combinations of points that can compose a given number
481. C/C++ Program for Write you own Power without using multiplication(*) and division(/) operators
482. C/C++ Program for Fibonacci numbers
483. C/C++ Program for Average of a stream of numbers
484. C/C++ Program for Check whether a given point lies inside a triangle or not
485. C/C++ Program for Count numbers that don't contain 3
486. C/C++ Program for Magic Square
487. C/C++ Program for Sieve of Eratosthenes
488. C/C++ Program for Find day of the week for a given date
489. C/C++ Program for DFA based division
490. C/C++ Program for Generate integer from 1 to 7 with equal probability
491. C/C++ Program for Given a number, find the next smallest palindrome
492. C/C++ Program for Make a fair coin from a biased coin
493. C/C++ Program for Check divisibility by 7
494. C/C++ Program for Find the largest multiple of 3
495. C/C++ Program for Lexicographic rank of a string
496. C/C++ Program for Print all permutations in sorted (lexicographic) order
497. C/C++ Program for Shuffle a given array
498. C/C++ Program for Space and time efficient Binomial Coefficient
499. C/C++ Program for Reservoir Sampling
500. C/C++ Program for Pascal's Triangle
501. C/C++ Program for Select a random number from stream, with $O(1)$ space
502. C/C++ Program for Find the largest multiple of 2, 3 and 5
503. C/C++ Program for Efficient program to calculate e^x
504. C/C++ Program for Measure one litre using two vessels and infinite water supply
505. C/C++ Program for Efficient program to print all prime factors of a given number
506. C/C++ Program for Print all possible combinations of r elements in a given array of size n
507. C/C++ Program for Random number generator in arbitrary probability distribution fashion
508. C/C++ Program for How to check if two given line segments intersect?
509. C/C++ Program for How to check if a given point lies inside or outside a polygon?

- 510. C/C++ Program for Convex Hull | Set 1 (Jarvis's Algorithm or Wrapping)
- 511. C/C++ Program for Convex Hull | Set 2 (Graham Scan)
- 512. C/C++ Program for How to check if a given number is Fibonacci number?
- 513. C/C++ Program for Russian Peasant Multiplication
- 514. C Program to Draw a circle without floating point arithmetic
- 515. C++ Program to print all palindromes in a given range
- 516. **C/C++ Dynamic Programming Programs**
- 517. C/C++ Program for Largest Sum Contiguous Subarray
- 518. C/C++ Program for Ugly Numbers
- 519. C/C++ Program for Maximum size square sub-matrix with all 1s
- 520. C/C++ Program for Program for Fibonacci numbers
- 521. C/C++ Program for Overlapping Subproblems Property
- 522. C/C++ Program for Optimal Substructure Property
- 523. C/C++ Program for Longest Increasing Subsequence
- 524. C/C++ Program for Longest Common Subsequence)
- 525. C/C++ Program for Edit Distance
- 526. C/C++ Program for Min Cost Path
- 527. C/C++ Program for Length of the longest substring without repeating
characters
- 528. C/C++ Program for Minimum number of jumps to reach end
- 529. C/C++ Program for Coin Change)
- 530. C/C++ Program for Matrix Chain Multiplication
- 531. C/C++ Program for Binomial Coefficient
- 532. C/C++ Program for 0-1 Knapsack Problem
- 533. C/C++ Program for Egg Dropping Puzzle
- 534. C/C++ Program for Longest Palindromic Subsequence
- 535. C/C++ Program for Cutting a Rod
- 536. C/C++ Program for Maximum Sum Increasing Subsequence
- 537. C/C++ Program for Longest Bitonic Subsequence
- 538. C/C++ Program for Floyd Warshall Algorithm
- 539. C/C++ Program for Palindrome Partitioning
- 540. C/C++ Program for Partition problem
- 541. C/C++ Program for Word Wrap Problem
- 542. C/C++ Program for Maximum Length Chain of Pairs
- 543. C/C++ Program for Box Stacking Problem
- 544. C/C++ Program for Longest Palindromic Substring
- 545. C/C++ Program for Bellman-Ford Algorithm
- 546. C/C++ Program for Optimal Binary Search Tree
- 547. C/C++ Program for Subset Sum Problem
- 548. C/C++ Program for Largest Independent Set Problem
- 549. C/C++ Program for Maximum sum rectangle in a 2D matrix
- 550. C/C++ Program for Minimum insertions to form a palindrome
- 551. C/C++ Program for Longest Common Substring
- 552. C/C++ Program for Dice Throw
- 553. C/C++ Program for Optimal Strategy for a Game
- 554. C/C++ Program for Word Break Problem
- 555. C/C++ Program for Find if a string is interleaved of two other strings
- 556. C/C++ Program for Assembly Line Scheduling
- 557. C/C++ Program for Longest Arithmetic Progression

- 558. C/C++ Program for Maximum Product Cutting
- 559. C/C++ Program for Count all possible paths from top left to bottom right of a $m \times n$ matrix
- 560. **C/C++ Greedy Algorithm Programs**
- 561. C/C++ Program Activity Selection Problem
- 562. C/C++ Program Kruskal's Minimum Spanning Tree Algorithm
- 563. C/C++ Program for Huffman Coding
- 564. C/C++ Program for Efficient Huffman Coding for Sorted Input
- 565. C/C++ Program for Prim's Minimum Spanning Tree (MST)
- 566. C/C++ Program for Prim's MST for Adjacency List Representation
- 567. C/C++ Program for Dijkstra's shortest path algorithm
- 568. C/C++ Program for Dijkstra's Algorithm for Adjacency List Representation
- 569. C/C++ Program for Graph Coloring
- 570. C/C++ Program for Rearrange a string so that all same characters become distance away
- 571. **C/C++ Backtracking Programs**
- 572. C/C++ Program to print all permutations of a given string
- 573. C/C++ Program The Knight's tour problem
- 574. C/C++ Program for Rat in a Maze
- 575. C/C++ Program for N Queen Problem
- 576. C/C++ Program for Subset Sum
- 577. C/C++ Program for m Coloring Problem
- 578. C/C++ Program for Hamiltonian Cycle
- 579. C/C++ Program for Sudoku
- 580. C/C++ Program for Tug of War
- 581. C/C++ Program for (Solving Cryptarithmic Puzzles
- 582. **C/C++ Divide and Conquer Programs:**
- 583. C/C++ Program for Write a C program to calculate $\text{pow}(x,n)$
- 584. C/C++ Program for Median of two sorted arrays
- 585. C/C++ Program for Count Inversions in an array
- 586. C/C++ Program for Check for Majority Element in a sorted array
- 587. C/C++ Program for Maximum and minimum of an array using minimum number of comparisons
- 588. C/C++ Program for Program to count number of set bits in an (big) array
- 589. C/C++ Program for Count the number of occurrences in a sorted array
- 590. C/C++ Program for Find a Fixed Point in a given array
- 591. C/C++ Program for Find the maximum element in an array which is first increasing and then decreasing
- 592. C/C++ Program for Median of two sorted arrays of different sizes
- 593. C/C++ Program for Closest Pair of Points
- 594. C/C++ Program for Maximum Subarray Sum
- 595. C/C++ Program for Largest Rectangular Area in a Histogram
- 596. C/C++ Program for Karatsuba algorithm for fast multiplication)
- 597. C/C++ Program for Find a peak element
- 598. C/C++ Program for Find the point where a monotonically increasing function becomes positive first time
- 599. C/C++ Program for Find the minimum element in a sorted and rotated array
- 600. C/C++ Program for Closest Pair of Points | $O(n \log n)$ Implementation

- 601. **C/C++ String Searching Programs:**
- 602. C/C++ Program for Naive Pattern Searching
- 603. C/C++ Program for KMP Algorithm
- 604. C/C++ Program for Rabin-Karp Algorithm
- 605. C/C++ Program for A Naive Pattern Searching Question
- 606. C/C++ Program for Finite Automata
- 607. C/C++ Program for Efficient Construction of Finite Automata
- 608. C/C++ Program for Boyer Moore Algorithm – Bad Character Heuristic
- 609. C/C++ Program for String matching where one string contains wildcard characters
- 610. C/C++ Program for Suffix Array
- 611. **C/C++ Geometric Algorithm Programs:**
- 612. C/C++ Program for How to check if two given line segments intersect?
- 613. C/C++ Program for How to check if a given point lies inside or outside a polygon?
- 614. C/C++ Program for Convex Hull | (Jarvis's Algorithm or Wrapping)
- 615. C/C++ Program for Convex Hull | (Graham Scan)
- 616. C/C++ Program for Given n line segments, find if any two segments intersect
- 617. C/C++ Program for Closest Pair of Points | $O(n \log n)$ Implementation
- 618. C/C++ Program for Find if two rectangles overlap
- 619. **C/C++ Misc Programs:**
- 620. C Program to print environment variable
- 621. C Program for Tower of Hanoi
- 622. C Program to print Floyd's triangle
- 623. C Program to Swap two Numbers
- 624. C program swap two numbers without using a temporary variable
- 625. C Program to check if a given year is leap year
- 626. C Program to sum the digits of a given number in single statement?
- 627. C program to print numbers from 1 to 100 without using loop?
- 628. C Program to print contents of file
- 629. C program to copy contents of one file to another file
- 630. C Program to list all files and sub-directories in a directory
- 631. C program to delete a file
- 632. C Program to merge contents of two files into a third file
- 633. C Program to count number of lines in a file
- 634. C/C++ Program for Check if a number is Palindrome
- 635. C/C++ Program for Print all possible combinations of r elements in a given array of size n
- 636. C/C++ Program for Print all possible strings of length k that can be formed from a set of n characters
- 637. C/C++ Program to Find Excel column name from a given column number
- 638. C/C++ Program to Find next greater number with same set of digits
- 639. C/C++ Program to Count Possible Decodings of a given Digit Sequence
- 640. C/C++ Program to calculate the angle between hour hand and minute hand

- 1) [Java Program to copy all elements of one array into another array](#)
 - 2) [Java Program to find the frequency of each element in the array](#)
 - 3) [Java Program to left rotate the elements of an array](#)
 - 4) [Java Program to print the duplicate elements of an array](#)
 - 5) [Java Program to print the elements of an array](#)
 - 6) [Java Program to print the elements of an array in reverse order](#)
 - 7) [Java Program to print the elements of an array present on even position](#)
 - 8) [Java Program to print the elements of an array present on odd position](#)
 - 9) [Java Program to print the largest element in an array](#)
 - 10) [Java Program to print the smallest element in an array](#)
 - 11) [Java Program to print the number of elements present in an array](#)
 - 12) [Java Program to print the sum of all the items of the array](#)
 - 13) [Java Program to right rotate the elements of an array](#)
 - 14) [Java Program to sort the elements of an array in ascending order](#)
 - 15) [Java Program to sort the elements of an array in descending order](#)
 - 16) [Java Program to Find 3rd Largest Number in an array](#)
 - 17) [Java Program to Find 2nd Largest Number in an array](#)
 - 18) [Java Program to Find Largest Number in an array](#)
 - 19) [Java to Program Find 2nd Smallest Number in an array](#)
 - 20) [Java Program to Find Smallest Number in an array](#)
 - 21) [Java Program to Remove Duplicate Element in an array](#)
 - 22) [Java Program to Print Odd and Even Numbers from an array](#)
 - 23) [How to Sort an Array in Java](#)
-
- 1) [Java Matrix Programs](#)

- 2) Java Program to Add Two Matrices
- 3) Java Program to Multiply Two Matrices
- 4) Java Program to subtract the two matrices
- 5) Java Program to determine whether two matrices are equal
- 6) Java Program to display the lower triangular matrix
- 7) Java Program to display the upper triangular matrix
- 8) Java Program to find the frequency of odd & even numbers in the given matrix
- 9) Java Program to find the product of two matrices
- 10) Java Program to find the sum of each row and each column of a matrix
- 11) Java Program to find the transpose of a given matrix
- 12) Java Program to determine whether a given matrix is an identity matrix
- 13) Java Program to determine whether a given matrix is a sparse matrix
- 14) Java Program to Transpose matrix

1. Write a program to Sort Numeric Array In Ascending Order

Sample Output

Array = {23, 5, 67, 20, 3, 30, 79, 3, 70, 2}

Ascending Order = {2, 3, 3, 5, 20, 23, 30, 67, 70, 79}

[View Solution](#)

2. Write a program to Sort Numeric Array In Descending Order

Sample Output

Array = {23, 5, 67, 20, 3, 30, 79, 3, 70, 2}

Descending Order = {79, 70, 67, 30, 23, 20, 5, 3, 3, 2}

[View Solution](#)

3. Write a program to print sum values of an array

Sample Output

Array = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

Sum Values of Array = 55

[View Solution](#)

4. Write a program to calculate the average value of array elements

Sample Output

Array = {1, 2, 3, 4, 5}

Sum of Array Value : 15

Average of Array Value : 3.0

[View Solution](#)

5. Write a program to store elements in an array and print it

Sample Output

Array Size = 5

Element of a[0] = 5

Element of a[1] = 11

Element of a[2] = 22

Element of a[3] = 33

Element of a[4] = 44

Display Array Elements

5

11

22

33
44

[View Solution](#)

6. Write a program in to array size to be user input print it

Sample Output

Enter the Array Limit = 4
Element of a[0] = 10
Element of a[1] = 20
Element of a[2] = 30
Element of a[3] = 40

Display Array Elements
10
20
30
40

[View Solution](#)

7. Write a program in to find the sum of all elements of the array

Sample Output

Array = { 10, 20, 30, 40, 50, 60}
Sum of Array Elements = 210

[View Solution](#)

8. Write a program in to read n number of values in an array and display it in reverse order

Sample Output

Enter the Array Size = 5
Element of a[0] = 1
Element of a[1] = 2
Element of a[2] = 3
Element of a[3] = 4
Element of a[4] = 5

Display Reverse Order
5
4
3
2
1

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9. Write a program to array elements to print cubic values

Sample Output

Array = { 1, 2, 3, 4, 5 }

Cubic Array Elements = 1 8 27 64 125

[View Solution](#)

10. Write a program to find the maximum and minimum element in an array

Sample Output

Array = { 23, 4, 32, 5, 75 }

Maximum Element of Array = 75

Minimum Element of Array = 4

[View Solution](#)

11. Write a program to array elements print all Odd number

Sample Output

Array = { 23, 45, 67, 34, 78 }

Odd Array Elements = 23 45 67

[View Solution](#)

12. Write a program to array elements print all Even number

Sample Output

Array = { 23, 45, 89, 34, 12 }

Even Array Elements = 34 12

[View Solution](#)

13. Write a program to array elements to print sum of Odd Numbers

Sample Output

Array = { 12, 34, 59, 45, 22 }

Sum of Odd Array Elements = 104

[View Solution](#)

14. Write a program to array elements to print sum of Even Numbers

Sample Output

Array = { 56, 78, 45, 79, 34 }

Sum of Even Array Elements = 168

[View Solution](#)

15. Write a program to array elements to print sum of Cubic Values

Sample Output

Array = {1, 2, 3, 4, 5}

Sum of Cubic Array Elements = 225

[View Solution](#)

16. Write a program in to copy the elements of one array into another array

Sample Output

Array = {1, 2, 3, 4, 5}

Copy Array Elements one to Another Array = {1, 2, 3, 4, 5}

[View Solution](#)

17. Write a program to merge two arrays elements to store third array

Sample Output

First Array = {1, 2, 3, 4, 5}

First Array = {6, 7, 8, 9, 10}

Merge two Array Elements = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

[View Solution](#)

18. Write a program to array elements print all Positive number

Sample Output

Array = {67, -4, 3, -5, 44}

Positive Array Elements = {67, 3, 44}

[View Solution](#)

19. Write a program to array elements print all Negative number

Sample Output

Array = {-45, 32, -7, 3, -6}

Negative Array Elements = {-45, -7, -6}

[View Solution](#)

20. Write a program to array elements to print sum of Positive Numbers

Sample Output

Array = { 1, -2, 3, 3, 4 }

Sum of Positive Array Elements = 7

[View Solution](#)

21. Write a program to array elements to print sum of Negative Numbers

Sample Output

Array = { 10, -23, 45, -10, 30 }

Sum of Negative Array Elements = -33

[View Solution](#)

22. Write a program to search an element in an array

Sample Output

Array = { 10, 20, 30, 40, 50 }

Search Array Elements = 30

Element is Found in the Position = 3

Element is Found in the Index = 2

[View Solution](#)

23. Write a program to Delete Duplicate Elements from an Array

Sample Output

Array = { 10, 10, 20, 20, 30 }

After Remove Duplicate Array Elements = { 10, 20, 30 }

[View Solution](#)

24. Write a program to Print Unique Elements in Array

Sample Output

Array = { 10, 20, 40, 20, 10 }

Display Array Unique Elements = { 10, 20, 40 }

[View Solution](#)

25. Write a program to find the second smallest element in an array

Sample Output

Array = { 10, 20, 5, 2, 30 }

Second Smallest Element = 5

[View Solution](#)

26. Write a program that identifies the Even elements in two arrays and creates a third array with those elements

Sample Output

First Array = {1, 2, 3, 4, 5}

Second Array = {6, 7, 8, 9, 10}

Even Element Store in Third Array = {2, 4, 6, 8, 10}

[View Solution](#)

27. Write a program that identifies the Odd elements in two arrays and creates a third array with those elements

Sample Output

First Array = {1, 2, 3, 4, 5}

Second Array = {6, 7, 8, 9, 10}

Odd Element Store in Third Array = {1, 3, 5, 7, 9}

[View Solution](#)

28. Write a program to find the common elements between two arrays of integers

Sample Output

First Array = {10, 20, 30, 40, 50}

Second Array = {10, 30, 60, 50, 70}

Common Array Elements = {10, 30, 50}

[View Solution](#)

29. Write a program to find the second Largest element in an array

Sample Output

Array = {10, 20, 30, 40, 50}

Second Largest Element = 40

[View Solution](#)

30. Write a program to find a missing number in an array

Sample Output

Array = {1, 2, 4, 5, 6, 7}

Missing Array Number = 3

[View Solution](#)

31. Write a program to Sort an array in ascending order using quicksort

Sample Output

Array = {2, 65, 23, 13, 18, 30, 46, 17, 52, 78}

Sorted Array in Ascending Order = 2 13 17 18 23 30 46 52 65 78

[View Solution](#)

32. Write a program to Sort an array in descending order using bubble sort

Sample Output

Array = {2, 65, 23, 13, 18, 30, 46, 17, 52, 78}

Sorted Array in Descending Order = 78 65 52 46 30 23 18 17 13 2

[View Solution](#)

33. Write a program to Sort an array in ascending order using bubble sort

Sample Output

Array = {2, 65, 23, 13, 18, 30, 46, 17, 52, 78}

Sorted Array in Ascending Order = 2 13 17 18 23 30 46 52 65 78

[View Solution](#)

34. Write a program to Sort an array in descending order using selection sort

Sample Output

Array = {2, 65, 23, 13, 18, 30, 46, 17, 52, 78}

Sorted Array in Descending Order = 78 65 52 46 30 23 18 17 13 2

[View Solution](#)

35. Write a program to Sort an array in ascending order using selection sort

Sample Output

Array = {2, 65, 23, 13, 18, 30, 46, 17, 52, 78}

Sorted Array in Ascending Order = 2 13 17 18 23 30 46 52 65 78

[View Solution](#)

36. Write a program to Search an item in an array using binary search

Sample Output

Array = { 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 }

Enter Item to Search = 60

Item Found at 5 Position

[View Solution](#)

37. Write a program to Search an item into the array using linear search

Sample Output

Array = { 10, 20, 30, 56, 84 }

Item to Search = 30

Item Found at Index = 2

[View Solution](#)

38. Write a program to Find prime and non-prime numbers in the array

Sample Output

Array = { 3, 12, 21, 11 }

3 - Prime

12 - Not Prime

21 - Not Prime

11 - Prime

[View Solution](#)

39. Write a program to Move all zero at the end of the array

Sample Output

Array = { 1,0,45,34,0,67,2,0,6,67,45,2,0,10 }

Array after Moving Zeros to End = 1 45 34 67 2 6 67 45 2 10 0 0 0 0

[View Solution](#)

40. Write a program to Read and print a Two Dimensional array

Sample Output

Rows = 2

Columns = 3

Enter Array Elements a[0][0] = 1

Enter Array Elements a[0][1] = 2

Enter Array Elements a[0][2] = 3

Enter Array Elements a[1][0] = 4

Enter Array Elements a[1][1] = 5

Enter Array Elements a[1][2] = 6

Display 2D Array Element

1 2 3

4 5 6

Take 10 integer inputs from user and store them in an array and print them on screen.

2.

Take 10 integer inputs from user and store them in an array. Again ask user to give a number. Now, tell user whether that number is present in array or not.

3.

Take 20 integer inputs from user and print the following:

number of positive numbers

number of negative numbers

number of odd numbers

number of even numbers

number of 0s.

4.

Take 10 integer inputs from user and store them in an array. Now, copy all the elements in an another array but in reverse order.

5.

Write a program to find the sum and product of all elements of an array.

6.

Initialize and print all elements of a 2D array.

7.

Find largest and smallest elements of an array.

8.

Write a program to check if elements of an array are same or not it read from front or back. E.g.-

9.

Take an array of 10 elements. Split it into middle and store the elements in two different arrays. E.g.-
INITIAL array :

58 24 13 15 63 9 8 81 1 78

After splitting :

58 24 13 15 63
9 8 81 1 78

10.

Consider an integer array, the number of elements in which is determined by the user. The elements are also taken as input from the user. Write a program to find those pair of elements that has the maximum and minimum difference among all element pairs.



11.

If the input array is [10, 12, 20, 30, 25, 40, 32, 31, 35, 50, 60], your program should be able to find that the subarray lies between the indexes 3 and 8.

Write a Java program to sort a numeric array and a string array.

[Click me to see the solution](#)

2. Write a Java program to sum values of an array.

[Click me to see the solution](#)

3. Write a Java program to print the following grid.

Expected Output :

```
- - - - -  
- - - - -  
- - - - -  
- - - - -  
- - - - -  
- - - - -  
- - - - -  
- - - - -  
- - - - -  
- - - - -
```

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4. Write a Java program to calculate the average value of array elements.

[Click me to see the solution](#)

5. Write a Java program to test if an array contains a specific value.

[Click me to see the solution](#)

6. Write a Java program to find the index of an array element.

[Click me to see the solution](#)

7. Write a Java program to remove a specific element from an array.

[Click me to see the solution](#)

8. Write a Java program to copy an array by iterating the array.

[Click me to see the solution](#)

9. Write a Java program to insert an element (specific position) into an array.

[Click me to see the solution](#)

10. Write a Java program to find the maximum and minimum value of an array.

[Click me to see the solution](#)

11. Write a Java program to reverse an array of integer values.

[Click me to see the solution](#)

12. Write a Java program to find duplicate values in an array of integer values.

[Click me to see the solution](#)

13. Write a Java program to find duplicate values in an array of string values.

[Click me to see the solution](#)

14. Write a Java program to find common elements between two arrays (string values).

[Click me to see the solution](#)

15. Write a Java program to find common elements between two integer arrays.

[Click me to see the solution](#)

16. Write a Java program to remove duplicate elements from an array.

[Click me to see the solution](#)

17. Write a Java program to find the second largest element in an array.

[Click me to see the solution](#)

18. Write a Java program to find the second smallest element in an array.

[Click me to see the solution](#)

19. Write a Java program to add two matrices of the same size.

[Click me to see the solution](#)

20. Write a Java program to convert an array to an ArrayList.

[Click me to see the solution](#)

21. Write a Java program to convert an ArrayList to an array.

[Click me to see the solution](#)

22. Write a Java program to find all pairs of elements in an array whose sum is equal to a specified number.

[Click me to see the solution](#)

23. Write a Java program to test two arrays' equality.

[Click me to see the solution](#)

24. Write a Java program to find a missing number in an array.

[Click me to see the solution](#)

25. Write a Java program to find common elements in three sorted (in non-decreasing order) arrays.

[Click me to see the solution](#)

26. Write a Java program to move all 0's to the end of an array. Maintain the relative order of the other (non-zero) array elements.

[Click me to see the solution](#)

27. Write a Java program to find the number of even and odd integers in a given array of integers.

[Click me to see the solution](#)

28. Write a Java program to get the difference between the largest and smallest values in an array of integers. The array must have a length of at least 1.

[Click me to see the solution](#)

29. Write a Java program to compute the average value of an array of integers except the largest and smallest values.

[Click me to see the solution](#)

30. Write a Java program to check if an array of integers is without 0 and -1.

[Click me to see the solution](#)

31. Write a Java program to check if the sum of all the 10's in the array is exactly 30. Return false if the condition does not satisfy, otherwise true.

[Click me to see the solution](#)

32. Write a Java program to check if an array of integers contains two specified elements 65 and 77.

[Click me to see the solution](#)

33. Write a Java program to remove duplicate elements from a given array and return the updated array length.

Sample array: [20, 20, 30, 40, 50, 50, 50]

After removing the duplicate elements the program should return 4 as the new length of the array.

[Click me to see the solution](#)

34. Write a Java program to find the length of the longest consecutive elements sequence from an unsorted array of integers.

Sample array: [49, 1, 3, 200, 2, 4, 70, 5]

The longest consecutive elements sequence is [1, 2, 3, 4, 5], therefore the program will return its length 5.

[Click me to see the solution](#)

35. Write a Java program to find the sum of the two elements of a given array equal to a given integer.

Sample array: [1,2,4,5,6]

Target value: 6.

[Click me to see the solution](#)

36. Write a Java program to find all the distinct triplets such that the sum of all the three elements $[x, y, z \ (x \leq y \leq z)]$ equal to a specified number.

Sample array: [1, -2, 0, 5, -1, -4]

Target value: 2.

[Click me to see the solution](#)

37. Write a Java program to create an array of its anti-diagonals from a given square matrix.

Example:

Input :

1 2

3 4

Output:

[

[1],

[2, 3],

[4]

]

[Click me to see the solution](#)

38. Write a Java program to get the majority element from an array of integers containing duplicates.

Majority element: A majority element is an element that appears more than $n/2$ times where n is the array size.

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39. Write a Java program to print all the LEADERS in the array.

Note: An element is leader if it is greater than all the elements to its right side.

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40. Write a Java program to find the two elements in a given array of positive and negative numbers such that their sum is close to zero.

[Click me to see the solution](#)

41. Write a Java program to find the smallest and second smallest elements of a given array.

[Click me to see the solution](#)

42. Write a Java program to separate 0s and 1s in an array of 0s and 1s into left and right sides.

[Click me to see the solution](#)

43. Write a Java program to find all combinations of four elements of an array whose sum is equal to a given value.

[Click me to see the solution](#)

44. Write a Java program to count the number of possible triangles from a given unsorted array of positive integers.

Note: The triangle inequality states that the sum of the lengths of any two sides of a triangle must be greater than or equal to the length of the third side.

[Click me to see the solution](#)

45. Write a Java program to cyclically rotate a given array clockwise by one.

[Click me to see the solution](#)

46. Write a Java program to check whether there is a pair with a specified sum in a given sorted and rotated array.

[Click me to see the solution](#)

47. Write a Java program to find the rotation count in a given rotated sorted array of integers.

[Click me to see the solution](#)

48. Write a Java program to arrange the elements of an array of integers so that all negative integers appear before all positive integers.

[Click me to see the solution](#)

49. Write a Java program to arrange the elements of an array of integers so that all positive integers appear before all negative integers.

[Click me to see the solution](#)

50. Write a Java program to sort an array of positive integers from an array. In the sorted array the value of the first element should be maximum, the second value should be a minimum, third should be the second maximum, the fourth should be the second minimum and so on.

[Click me to see the solution](#)

51. Write a Java program that separates 0s on the left hand side and 1s on the right hand side from a random array of 0s and 1.

[Click me to see the solution](#)

52. Write a Java program to separate even and odd numbers from a given array of integers. Put all even numbers first, and then odd numbers.

[Click me to see the solution](#)

53. Write a Java program to replace every element with the next greatest element (from the right side) in a given array of integers.
There is no element next to the last element, therefore replace it with -1.

[Click me to see the solution](#)

54. Write a Java program to check if a given array contains a subarray with 0 sum.

Example:

Input :

nums1= { 1, 2, -2, 3, 4, 5, 6 }

nums2 = { 1, 2, 3, 4, 5, 6 }

nums3 = { 1, 2, -3, 4, 5, 6 }

Output:

Does the said array contain a subarray with 0 sum: true

Does the said array contain a subarray with 0 sum: false

Does the said array contain a subarray with 0 sum: true

[Click me to see the solution](#)

55. Write a Java program to print all sub-arrays with 0 sum present in a given array of integers.

Example:

Input :

nums1 = { 1, 3, -7, 3, 2, 3, 1, -3, -2, -2 }

nums2 = { 1, 2, -3, 4, 5, 6 }

nums3= { 1, 2, -2, 3, 4, 5, 6 }

Output:

Sub-arrays with 0 sum : [1, 3, -7, 3]

Sub-arrays with 0 sum : [3, -7, 3, 2, 3, 1, -3, -2]

Sub-arrays with 0 sum : [1, 2, -3]

Sub-arrays with 0 sum : [2, -2]

[Click me to see the solution](#)

56. Write a Java program to sort a binary array in linear time.

From Wikipedia,

Linear time: An algorithm is said to take linear time, or $O(n)$ time, if its time complexity is $O(n)$. Informally, this means that the running time increases at most linearly with the size of the input. More precisely, this means that there is a constant c such that the running time is at most cn for every input of size n . For example, a procedure that adds up all elements of a list requires time proportional to the length of the list, if the adding time is constant, or, at least, bounded by a constant.

Linear time is the best possible time complexity in situations where the algorithm has to sequentially read its entire input. Therefore, much research has been invested into discovering algorithms exhibiting linear time or, at least, nearly linear time. This research includes both software and hardware methods. There are several hardware technologies which exploit parallelism to provide this. An example is content-addressable memory. This concept of linear time is used in string matching algorithms such as the Boyer–Moore algorithm and Ukkonen's algorithm.

Example:

Input :

`b_nums[] = { 0, 1, 1, 0, 1, 1, 0, 1, 0, 0 }`

Output:

After sorting: [0, 0, 0, 0, 0, 1, 1, 1, 1, 1]

[Click me to see the solution](#)

57. Write a Java program to check if a sub-array is formed by consecutive integers from a given array of integers.

Example:

Input :

`nums = { 2, 5, 0, 2, 1, 4, 3, 6, 1, 0 }`

Output:

The largest sub-array is [1, 7]
Elements of the sub-array: 5 0 2 1 4 3 6

[Click me to see the solution](#)

58. Given two sorted arrays A and B of size p and q, write a Java program to merge elements of A with B by maintaining the sorted order i.e. fill A with first p smallest elements and fill B with remaining elements.

Example:

Input :

int[] A = { 1, 5, 6, 7, 8, 10 }

int[] B = { 2, 4, 9 }

Output:

Sorted Arrays:

A: [1, 2, 4, 5, 6, 7]

B: [8, 9, 10]

[Click me to see the solution](#)

59. Write a Java program to find the maximum product of two integers in a given array of integers.

Example:

Input :

nums = { 2, 3, 5, 7, -7, 5, 8, -5 }

Output:

Pair is (7, 8), Maximum Product: 56

[Click me to see the solution](#)

60. Write a Java program to shuffle a given array of integers.

Example:

Input :

nums = { 1, 2, 3, 4, 5, 6 }

Output:

Shuffle Array: [4, 2, 6, 5, 1, 3]

[Click me to see the solution](#)

61. Write a Java program to rearrange a given array of unique elements such that every second element of the array is greater than its left and right elements.

Example:

Input :

nums= { 1, 2, 4, 9, 5, 3, 8, 7, 10, 12, 14 }

Output:

Array with every second element is greater than its left and right elements:

[1, 4, 2, 9, 3, 8, 5, 10, 7, 14, 12]

[Click me to see the solution](#)

62. Write a Java program to find equilibrium indices in a given array of integers.

Example:

Input :

nums = {-7, 1, 5, 2, -4, 3, 0}

Output:

Equilibrium indices found at : 3

Equilibrium indices found at : 6

[Click me to see the solution](#)

63. Write a Java program to replace each element of the array with the product of every other element in a given array of integers.

Example:

Input :

nums1 = { 1, 2, 3, 4, 5, 6, 7}

nums2 = {0, 1, 2, 3, 4, 5, 6, 7}

Output:

Array with product of every other element:

[5040, 2520, 1680, 1260, 1008, 840, 720]

Array with product of every other element:

[5040, 0, 0, 0, 0, 0, 0, 0]

[Click me to see the solution](#)

64. Write a Java program to find the Longest Bitonic Subarray in a given array.

A bitonic subarray is a subarray of a given array where elements are first sorted in increasing order, then in decreasing order. A strictly increasing or strictly decreasing subarray is also accepted as bitonic subarray.

Example:

Input :

nums = { 4, 5, 9, 5, 6, 10, 11, 9, 6, 4, 5 }

Output:

The longest bitonic subarray is [3,9]

Elements of the said sub-array: 5 6 10 11 9 6 4

The length of longest bitonic subarray is 7

[Click me to see the solution](#)

65. Write a Java program to find the maximum difference between two elements in a given array of integers such that the smaller element appears before the larger element.

Example:

Input :

nums = { 2, 3, 1, 7, 9, 5, 11, 3, 5 }

Output:

The maximum difference between two elements of the said array elements
10

[Click me to see the solution](#)

66. Write a Java program to find a contiguous subarray within a given array of integers with the largest sum.

In computer science, the maximum sum subarray problem is the task of finding a contiguous subarray with the largest sum, within a given one-dimensional array $A[1\dots n]$ of numbers. Formally, the task is to find indices and with, such that the sum is as large as possible.

Example:

Input :

int[] A = {1, 2, -3, -4, 0, 6, 7, 8, 9}

Output:

The largest sum of contiguous sub-array: 30

[Click me to see the solution](#)

67. Write a Java program to find the subarray with the largest sum in a given circular array of integers.

Example:

Input :

nums1 = { 2, 1, -5, 4, -3, 1, -3, 4, -1 }

nums2 = { 1, -2, 3, 0, 7, 8, 1, 2, -3 }

Output:

The sum of subarray with the largest sum is 6

The sum of subarray with the largest sum is 21

[Click me to see the solution](#)

68. Write a Java program to create all possible permutations of a given array of distinct integers.

Example:

Input :

nums1 = {1, 2, 3, 4}

nums2 = {1, 2, 3}

Output:

Possible permutations of the said array:

[1, 2, 3, 4]

[1, 2, 4, 3]

....

[4, 1, 3, 2]

[4, 1, 2, 3]

Possible permutations of the said array:

[1, 2, 3]

[1, 3, 2]

...

[3, 2, 1]

[3, 1, 2]

[Click me to see the solution](#)

69. Write a Java program to find the minimum subarray sum of specified size in a given array of integers.

Example:

Input :

nums = { 1, 2, 3, 4, 5, 6, 7, 8, 9,10}

Output:

Sub-array size: 4

Sub-array from 0 to 3 and sum is: 10

[Click me to see the solution](#)

70. Write a Java program to find the smallest length of a contiguous subarray of which the sum is greater than or equal to a specified value. Return 0 instead.

Example:

Input :

nums = {1, 2, 3, 4, 6}

Output:

Minimum length of a contiguous subarray of which the sum is 8, 2

[Click me to see the solution](#)

71. Write a Java program to find the largest number from a given list of non-negative integers.

Example:

Input :

nums = {1, 2, 3, 0, 4, 6}

Output:

Largest number using the said array numbers: 643210

[Click me to see the solution](#)

72. Write a Java program to find and print one continuous subarray (from a given array of integers) that if you only sort the said subarray in ascending order then the entire array will be sorted in ascending order.

Example:

Input :

nums1 = {1, 2, 3, 0, 4, 6}

nums2 = { 1, 3, 2, 7, 5, 6, 4, 8}

Output:

Continuous subarray:

1 2 3 0

Continuous subarray:

3 2 7 5 6 4

[Click me to see the solution](#)

73. Write a Java program to sort a given array of distinct integers where all its numbers are sorted except two numbers.

Example:

Input :

nums1 = { 3, 5, 6, 9, 8, 7 }

nums2 = { 5, 0, 1, 2, 3, 4, -2 }

Output:

After sorting new array becomes: [3, 5, 6, 7, 8, 9]

After sorting new array becomes: [-2, 0, 1, 2, 3, 4, 5]

[Click me to see the solution](#)

74. Write a Java program to find all triplets equal to a given sum in an unsorted array of integers.

Example:

Input :

nums = { 1, 6, 3, 0, 8, 4, 1, 7 }

Output:

Triplets of sum 7

(0 1 6)

(0 3 4)

[Click me to see the solution](#)

75. Write a Java program to calculate the largest gap between sorted elements of an array of integers.

Example:

Original array: [23, -2, 45, 38, 12, 4, 6]

Largest gap between sorted elements of the said array: 15

[Click me to see the solution](#)

76. Write a Java program to determine whether numbers in an array can be rearranged so that each number appears exactly once in a consecutive list of numbers. Return true otherwise false.

Example:

Original array: [1, 2, 5, 0, 4, 3, 6]

Check consecutive numbers in the said array!true

[Click me to see the solution](#)

77. Write a Java program that checks whether an array of integers alternates between positive and negative values.

Example:

Original array: [1, -2, 5, -4, 3, -6]

Check the said array of integers alternates between positive and negative values!true

[Click me to see the solution](#)

78. Write a Java program that checks whether an array is negative dominant or not. If the array is negative dominant return true otherwise false.

Example:

Original array of numbers:

[1, -2, -5, -4, 3, -6]

Check Negative Dominance in the said array!true

[Click me to see the solution](#)

79. Write a Java program that returns the missing letter from an array of increasing letters (upper or lower). Assume there will always be one omission from the array.

Example:

Original array of elements:

[p, r, s, t]

Missing letter in the said array: q

1. Write a Java program to count the number of days between two given years

[View Solution](#)

2. Write a Java program to print LocalDate yyyy-MM-dd

[View Solution](#)

3. Write a Java program to print LocalTime HH:mm:ss

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4. Write a Java program to print LocalTime and LocalDate yyyy-MM-dd HH:mm:ss

[View Solution](#)

5. Write a Java program to print ZonedDateTime E MMM yyyy HH:mm:ss.SSSZ

[View Solution](#)

6. Write a Java program to print OffsetTime HH:mm:ss,Z

[View Solution](#)

7. Write a Java program to display combine local date and time in a single object

[View Solution](#)

8. Write a Java program to display current date without time and current time without date

[View Solution](#)

9. Write a Java program to calculate the difference between two dates in days

[View Solution](#)

10. Write a Java program to get seconds since 1970

[View Solution](#)

11. Write a Java program to convert a unix timestamp to date

[View Solution](#)

12. Write a Java program to extract date, time from the date string

[View Solution](#)

13. Write a Java program to get today's date at midnight time

[View Solution](#)

14. Write a Java program to get the next and previous Friday

[View Solution](#)

15. Write a Java program to calculate your age

[View Solution](#)

16. Write a Java program to compute the difference between two datetime (Hours, Minutes, Milliseconds, Seconds and Nanoseconds)

[View Solution](#)

17. Write a Java program to compute the difference between two dates (Years, Months, Days)

[View Solution](#)

18. Write a Java program to convert a string to date

[View Solution](#)

19. Write a Java program to display the date time information before some hours and minutes from current date time

[View Solution](#)

20. Write a Java program to get the information of a given time

[View Solution](#)

21. Write a Java program to get the information of current/given month

- Current Month of Number : 6
- Number of Days in Month : 30
- Maximum Number of Days in Month : 30
- First Month of the Quarter : APRIL

[View Solution](#)

22. Write a Java program to get the information of current/given year

- Current Year : 2001
- Is Current Year or leap Year ? false
- Number of Days in the year : 365 days

[View Solution](#)

23. Write a Java program to display the dates in the specified formats

[View Solution](#)

24. Write a Java program to get the months remaining in the year

[View Solution](#)

25. Write a Java program to get the dates 10 days before and after today

[View Solution](#)

26. Write a Java program to get the current time in all the available time zones

[View Solution](#)

27. Write a Java program to get current timestamp

[View Solution](#)

28. Write a Java program to get year and months between two dates

[View Solution](#)

29. Write a Java program to get a date before and after 1 year compares to the current date

[View Solution](#)

30. Write a Java program to get a date after 2 weeks

[View Solution](#)

31. Write a Java program to add some hours to the current time

[View Solution](#)

32. Write a Java program to get the current local time

[View Solution](#)

33. Write a Java program to get a day of the week of a specific date

[View Solution](#)

34. Write a Java program to get localized day in week name

[View Solution](#)

35. Write a Java program to get Current Locale day in week name

[View Solution](#)

36. Write a Java program to get the number of days of a month

[View Solution](#)

37. Write a Java program to get the name of the first and last day of a month

[View Solution](#)

38. Write a Java program to calculate the first and last day of each week

[View Solution](#)

39. Write a Java program to get the last date of the month

[View Solution](#)

40. Write a Java program to get the last day of the current month

[View Solution](#)

41. Write a Java program to get current full date and time

[View Solution](#)

42. Write a Java program to get the current time in New York

[View Solution](#)

43. Write a Java program to get the minimum value of year, month, week, date from the current date of a default calendar

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44. Write a Java program to get the maximum value of the year, month, week, date from the current date of a default calendar

[View Solution](#)

45. Write a Java program to get and display information (year, month, day, hour, minute) of a default calendar

[View Solution](#)

46. Write a Java program to create a Date object using the Calendar class

[View Solution](#)

47. Write a Java Program to Generate Month Calendar of Any Year

[View Solution](#)

48. Write a Java Program to Generate One Year Calendar

[View Solution](#)

49. Write a Java Program to Decrement a Month using the Calendar Class

[View Solution](#)

50. Write a Java Program to Increment a Month using the Calendar Class

[View Solution](#)

51. Write a Java Program to Get individual components of the current time

[View Solution](#)

52. Write a Java Program to Compare time using equals() method

[View Solution](#)

53. Write a Java Program to Compare time using compareTo() method

[View Solution](#)

54. Write a Java Program to Add years to the current date

[View Solution](#)

55. Write a Java Program to Add months to the current date

[View Solution](#)

56. Write a Java Program to Subtract days from the current date

[View Solution](#)

57. Write a Java Program to Add days to the current date

[View Solution](#)

58. Write a Java Program to Get the current day number of a month using the get() method of Calendar class

[View Solution](#)

59. Write a Java Program to Get the current year using the get() method of Calendar class

[View Solution](#)

60. Write a Java Program to Print the current date-time using Calendar class

[View Solution](#)

61. Write a Java Program to Create a LocalDate object from the object of Date class

[View Solution](#)

62. Write a Java Program to Parse individual components of date from the current date

[View Solution](#)

63. Write a Java Program to Parse individual components of date from a string

[View Solution](#)

64. Write a Java Program to Compare dates using the Date.equals() method

[View Solution](#)

65. Write a Java Program to Compare dates using Date.compareTo() method

[View Solution](#)

66. Write a Java Program to Get a date from milliseconds using the Date.setTime() method

[View Solution](#)

67. Write a Java Program to Get a date from milliseconds using Date() constructor

[View Solution](#)

68. Write a Java Program to Get milliseconds from the specified date

[View Solution](#)

69. Write a Java Program to Convert 'java.util.Date' into 'java.sql.Date'

[View Solution](#)

70. Write a Java Program to Get current system date and time in Java

[View Solution](#)

71. Write a Java Program to get elapsed time in seconds and milliseconds

[View Solution](#)

- String
 - Question 1 : How to reverse a String in java? Can you write a program without using any java inbuilt methods?
 - Question 2 : Write a java program to check if two Strings are anagram in java?
 - Question 3 : Write a program to check if String has all unique characters in java?
 - Question 4 : How to check if one String is rotation of another String in java?
 - Question 5 : How to find duplicate characters in String in java?
 - Question 6 : Find first non repeated character in String in java?
 - Question 7 : Find all substrings of String in java?
 - Question 8 : Find length of String without using any inbuilt method in java?
 - Question 9 : Write a program to print all permutations of String in java?
- Array
 - Question 10 : Write java Program to Find Smallest and Largest Element in an Array.
 - Question 11 : Find missing number in the array.
 - Question 12 : Search an element in rotated and sorted array.
 - Question 13 : Find minimum element in a sorted and rotated array.
 - Question 14: Find second largest number in an array
 - Question 15 : Find the number occurring odd number of times in an array
 - Question 16 : Find minimum number of platforms required for railway station
 - Question 17 : Find a Pair Whose Sum is Closest to zero in Array
 - Question 18 : Given a sorted array and a number x, find the pair in array whose sum is closest to x

- [Question 19 : Find all pairs of elements from an array whose sum is equal to given number](#)
- [Question 20: Given an array of 0's and 1's in random order, you need to separate 0's and 1's in an array.](#)
- [Question 21 : Separate odd and even numbers in an array](#)
- [Question 22 : Given an array containing zeroes, ones and twos only. Write a function to sort the given array in O\(n\) time complexity.](#)
- [Question 23 : Find local minima in array](#)
- [Question 24 : Sliding window maximum in java](#)
- [Question 25 : Count number of occurrences \(or frequency\) of each element in a sorted array](#)
- [Question 26 : Find subarrays with given sum in an array.](#)
- [Question 27 : Find peak element in the array.](#)
- [Question 28 : Find leaders in an array.](#)
- [Question 29 : Count 1's in sorted Binary Array.](#)
- [Question 30 : Find first repeating element in an array of integers.](#)
- [Question 31 : Check if Array Elements are Consecutive.](#)
- [Question 32 : Permutations of array in java.](#)
- [Question 33 : Rotate an array by K positions.](#)
- [Question 34 : Stock Buy Sell to Maximize Profit.](#)
- [Question 35 : Find maximum difference between two elements such that larger element appears after the smaller number.](#)
- [Question 36 : Search in a row wise and column wise sorted matrix.](#)
- [Question 37 : Largest sum contiguous subarray.](#)
- [Question 38 : Find the Contiguous Subarray with Sum to a Given Value in an array.](#)
- [Question 39 : Longest Common Prefix in an array of Strings in java.](#)
- [Question 40 : Find all subsets of set \(power set\) in java.](#)

- Stack
 - Question 41: Implement a stack using array.
 - Question 42: Implement a stack using Linked List.
 - Question 43: Implement a stack using two queues.
 - Question 44 : Sort an stack using another stack
- Queue
 - Question 45: Implement Queue using Array in java.
 - Question 46: Implement a stack using two queues .
- Linked List
 - Question 47 : Implement singly linked list in java.
 - Question 48: How to reverse linked list in java.
 - Question 49: How to find middle element of linked list.
 - Question 50 : How to find nth element from end of linked list .
 - Question 51 : How to detect a loop in linked list. If linked list has loop, find the start node for the loop.
 - Question 52: How to check if linked list is palindrome or not?
 - Question 53 : Find intersection of two linked lists?
 - Question 54 : How to reverse a linked list in pairs?
 - Question 55 : Implement Doubly linked list in java?
- Binary Tree
 - Question 56 : How can you traverse binary tree?
 - Question 57 : Write an algorithm to do level order traversal of binary tree?
 - Question 58 : Write an algorithm to do spiral order traversal of binary tree?
 - Question 59 : How can you print leaf nodes of binary tree?
 - Question 60 : How to count leaf nodes of binary tree.
 - Question 61 : How to print all paths from root to leaf in binary tree.
 - Question 62 : How to find level of node in binary tree
 - Question 63 : How to find maximum element in binary tree.

- [Question 64 : How to find lowest common ancestor\(LCA\) in binary tree.](#)
- [Question 65 : How to do boundary traversal of binary tree.](#)
- [Question 66 : How to print vertical sum of binary tree?](#)
- [Question 67 : Count subtrees with Sum equal to target in binary tree?](#)
- [Binary Search tree](#)
 - [Question 68 : What is binary search tree?](#)
 - [Question 69 : Can you write algorithm to insert a node in binary search tree.](#)
 - [Question 70 : Can you write algorithm to delete a node in binary search tree.](#)
 - [Question 71 : How can you find minimum and maximum elements in binary search tree?](#)
 - [Question 72 : How to find lowest common ancestor\(LCA\) in binary search tree.](#)
 - [Question 73 : Find inorder successor in a Binary search Tree](#)
 - [Question 74 : Convert sorted array to balanced BST](#)
 - [Question 75 : Convert sorted Linked List to balanced BST](#)
 - [Question 76 : Check if a binary tree is binary search tree or not in java](#)
- [Sorting](#)
 - [Question 77 : Write an algorithm to implement bubble sort?](#)
 - [Question 78 : Write an algorithm to implement insertion sort sort?](#)
 - [Question 79 : Write an algorithm to implement selection sort sort?](#)
 - [Question 80 : Can you write algorithm for merge sort and also do you know complexity of merge sort?](#)
 - [Question 81 : Do you know how to implement Heap sort?](#)
 - [Question 82 : Implement quick sort in java?](#)
 - [Question 83 : Implement shell sort in java?](#)
 - [Question 84 : Implement Counting sort in java?](#)

- [Question 85 : What is binary search? Can you write an algorithm to find an element in sorted array using binary search?](#)
- [Graph](#)
 - [Question 86 : Write algorithm to do depth first search in a graph.](#)
 - [Question 87 : Write algorithm to do breadth first search in a graph.](#)
 - [Question 88 : Explain Dijkstra algorithm from source to all other vertices.](#)
 - [Question 89 : Explain Bellman Ford algorithm to find shortest distance](#)
 - [Question 90 : Explain Kruskal's algorithm for finding minimum spanning tree](#)
- [Dynamic Programming](#)
 - [Question 91 : Given two String, find longest common substring.](#)
 - [Question 92 : Given two Strings A and B. Find the length of the Longest Common Subsequence \(LCS\) of the given Strings.](#)
 - [Question 93 : Given a matrix, we need to count all paths from top left to bottom right of MxN matrix. You can either move down or right.](#)
 - [Question 94 : Edit Distance Problem in java](#)
 - [Question 95: Coin change problem in java](#)
 - [Question 96 : Minimum number of jumps to reach last index](#)
- [Miscellaneous](#)
 - [Question 97 : What is an algorithm and how to calculate complexity of algorithms.](#)
 - [Question 98 : Implement trie data structure in java.](#)
 - [Question 99 : Count Factorial Trailing Zeroes in java.](#)
 - [Question 100 : Largest Rectangular Area in a Histogram.](#)
 - [Question 101 : Check for balanced parentheses in an expression in java.](#)
 - [Question 102 : What is Memoization.](#)

- 1) [Fibonacci Series in Java](#)
- 2) [Prime Number Program in Java](#)
- 3) [Palindrome Program in Java](#)
- 4) [Factorial Program in Java](#)
- 5) [Armstrong Number in Java](#)
- 6) [How to Generate Random Number in Java](#)
- 7) [How to Print Pattern in Java](#)
- 8) [How to Compare Two Objects in Java](#)
- 9) [How to Create Object in Java](#)
- 10) [How to Print ASCII Value in Java](#)

Java Number Programs

- 1) [How to Reverse a Number in Java](#)
- 2) [Java Program to convert Number to Word](#)
- 3) [Automorphic Number Program in Java](#)
- 4) [Peterson Number in Java](#)
- 5) [Sunny Number in Java](#)
- 6) [Tech Number in Java](#)
- 7) [Fascinating Number in Java](#)
- 8) [Keith Number in Java](#)
- 9) [Neon Number in Java](#)
- 10) [Spy Number in Java](#)
- 11) [ATM program Java](#)
- 12) [Autobiographical Number in Java](#)

- 13) [Emirp Number in Java](#)
- 14) [Sphenic Number in Java](#)
- 15) [Buzz Number Java](#)
- 16) [Duck Number Java](#)
- 17) [Evil Number Java](#)
- 18) [ISBN Number Java](#)
- 19) [Krishnamurthy Number Java](#)
- 20) [Bouncy Number in Java](#)
- 21) [Mystery Number in Java](#)
- 22) [Smith Number in Java](#)
- 23) [Strontio Number in Java](#)
- 24) [Xylem and Phloem Number in Java](#)
- 25) [nth Prime Number Java](#)
- 26) [Java Program to Display Alternate Prime Numbers](#)
- 27) [Java Program to Find Square Root of a Number Without sqrt Method](#)
- 28) [Java Program to Swap Two Numbers Using Bitwise Operator](#)
- 29) [Java Program to Find GCD of Two Numbers](#)
- 30) [Java Program to Find Largest of Three Numbers](#)
- 31) [Java Program to Find Smallest of Three Numbers Using Ternary Operator](#)
- 32) [Java Program to Check if a Number is Positive or Negative](#)
- 33) [Java Program to Check if a Given Number is Perfect Square](#)
- 34) [Java Program to Display Even Numbers From 1 to 100](#)
- 35) [Java Program to Display Odd Numbers From 1 to 100](#)
- 36) [Java Program to Find Sum of Natural Numbers](#)

Java Array Programs

- 1) Java Program to copy all elements of one array into another array
- 2) Java Program to find the frequency of each element in the array
- 3) Java Program to left rotate the elements of an array
- 4) Java Program to print the duplicate elements of an array
- 5) Java Program to print the elements of an array
- 6) Java Program to print the elements of an array in reverse order
- 7) Java Program to print the elements of an array present on even position
- 8) Java Program to print the elements of an array present on odd position
- 9) Java Program to print the largest element in an array
- 10) Java Program to print the smallest element in an array
- 11) Java Program to print the number of elements present in an array
- 12) Java Program to print the sum of all the items of the array
- 13) Java Program to right rotate the elements of an array
- 14) Java Program to sort the elements of an array in ascending order
- 15) Java Program to sort the elements of an array in descending order
- 16) Java Program to Find 3rd Largest Number in an array
- 17) Java Program to Find 2nd Largest Number in an array
- 18) Java Program to Find Largest Number in an array
- 19) Java to Program Find 2nd Smallest Number in an array
- 20) Java Program to Find Smallest Number in an array
- 21) Java Program to Remove Duplicate Element in an array
- 22) Java Program to Print Odd and Even Numbers from an array

23) How to Sort an Array in Java

Java Matrix Programs

- 1) Java Matrix Programs
 - 2) Java Program to Add Two Matrices
 - 3) Java Program to Multiply Two Matrices
 - 4) Java Program to subtract the two matrices
 - 5) Java Program to determine whether two matrices are equal
 - 6) Java Program to display the lower triangular matrix
 - 7) Java Program to display the upper triangular matrix
 - 8) Java Program to find the frequency of odd & even numbers in the given matrix
 - 9) Java Program to find the product of two matrices
 - 10) Java Program to find the sum of each row and each column of a matrix
 - 11) Java Program to find the transpose of a given matrix
 - 12) Java Program to determine whether a given matrix is an identity matrix
 - 13) Java Program to determine whether a given matrix is a sparse matrix
 - 14) Java Program to Transpose matrix
-

Java String Programs

- 1) Java Program to count the total number of characters in a string
- 2) Java Program to count the total number of characters in a string 2
- 3) Java Program to count the total number of punctuation characters exists in a String

- 4) Java Program to count the total number of vowels and consonants in a string
- 5) Java Program to determine whether two strings are the anagram
- 6) Java Program to divide a string in 'N' equal parts.
- 7) Java Program to find all subsets of a string
- 8) Java Program to find the longest repeating sequence in a string
- 9) Java Program to find all the permutations of a string
- 10) Java Program to remove all the white spaces from a string
- 11) Java Program to replace lower-case characters with upper-case and vice-versa
- 12) Java Program to replace the spaces of a string with a specific character
- 13) Java Program to determine whether a given string is palindrome
- 14) Java Program to determine whether one string is a rotation of another
- 15) Java Program to find maximum and minimum occurring character in a string
- 16) Java Program to find Reverse of the string
- 17) Java program to find the duplicate characters in a string
- 18) Java program to find the duplicate words in a string
- 19) Java Program to find the frequency of characters
- 20) Java Program to find the largest and smallest word in a string
- 21) Java Program to find the most repeated word in a text file
- 22) Java Program to find the number of the words in the given text file
- 23) Java Program to separate the Individual Characters from a String
- 24) Java Program to swap two string variables without using third or temp variable.
- 25) Java Program to print smallest and biggest possible palindrome word in a given string

- 26) [Reverse String in Java Word by Word](#)
 - 27) [Reserve String without reverse\(\) function](#)
-

Java Searching and Sorting Programs

- 1) [Linear Search in Java](#)
 - 2) [Binary Search in Java](#)
 - 3) [Bubble Sort in Java](#)
 - 4) [Selection Sort in Java](#)
 - 5) [Insertion Sort in Java](#)
-

Java Conversion Programs

- 1) [How to convert String to int in Java](#)
- 2) [How to convert int to String in Java](#)
- 3) [How to convert String to long in Java](#)
- 4) [How to convert long to String in Java](#)
- 5) [How to convert String to float in Java](#)
- 6) [How to convert float to String in Java](#)
- 7) [How to convert String to double in Java](#)
- 8) [How to convert double to String in Java](#)
- 9) [How to convert String to Date in Java](#)
- 10) [How to convert Date to String in Java](#)
- 11) [How to convert String to char in Java](#)
- 12) [How to convert char to String in Java](#)

- 13) [How to convert String to Object in Java](#)
 - 14) [How to convert Object to String in Java](#)
 - 15) [How to convert int to long in Java](#)
 - 16) [How to convert long to int in Java](#)
 - 17) [How to convert int to double in Java](#)
 - 18) [How to convert double to int in Java](#)
 - 19) [How to convert char to int in Java](#)
 - 20) [How to convert int to char in Java](#)
 - 21) [How to convert String to boolean in Java](#)
 - 22) [How to convert boolean to String in Java](#)
 - 23) [How to convert Date to Timestamp in Java](#)
 - 24) [How to convert Timestamp to Date in Java](#)
 - 25) [How to convert Binary to Decimal in Java](#)
 - 26) [How to convert Decimal to Binary in Java](#)
 - 27) [How to convert Hex to Decimal in Java](#)
 - 28) [How to convert Decimal to Hex in Java](#)
 - 29) [How to convert Octal to Decimal in Java](#)
 - 30) [How to convert Decimal to Octal in Java](#)
-

Java Pattern programs

- 1) [Java program to print the following spiral pattern on the console](#)
- 2) [Java program to print the following pattern](#)
- 3) [Java program to print the following pattern 2](#)

- 4) [Java program to print the following pattern 3](#)
- 5) [Java program to print the following pattern 4](#)
- 6) [Java program to print the following pattern 5](#)
- 7) [Java program to print the following pattern on the console](#)
- 8) [Java program to print the following pattern on the console 2](#)
- 9) [Java program to print the following pattern on the console 3](#)
- 10) [Java program to print the following pattern on the console 4](#)
- 11) [Java program to print the following pattern on the console 5](#)
- 12) [Java program to print the following pattern on the console 6](#)
- 13) [Java program to print the following pattern on the console 7](#)
- 14) [Java program to print the following pattern on the console 8](#)
- 15) [Java program to print the following pattern on the console 9](#)
- 16) [Java program to print the following pattern on the console 10](#)
- 17) [Java program to print the following pattern on the console 11](#)
- 18) [Java program to print the following pattern on the console 12](#)

DSA

Easy	Ideal Time : 5-10 mins	
Medium	Ideal Time : 15-20 mins	5 Questions each Day
Hard	Ideal Time : 40-60 mins (based on Qs) 88 Qs	
Topics	Question (375)	Companies
Arrays	Maximum and Minimum Element in an Array	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe
Arrays	Reverse the Array	Infosys Moonfrog Labs
Arrays	Maximum-Subarray	Microsoft + Facebook Interview Qs
Arrays	Contains Duplicate	Amazon Interview Qs
Arrays	Chocolate Distribution Problem	Amazon Interview Qs
Arrays	Search in Rotated Sorted Array	Microsoft Google Adobe Amazon D-E-Shaw Flipkart Hike Intuit MakeMyTrip Paytm
Arrays	Next Permutation	Uber + Goldman Sachs + Adobe Interview Qs
Arrays	Best time to Buy and Sell Stock	Amazon D-E-Shaw Directi Flipkart Goldman Sachs Intuit MakeMyTrip Microsoft Ola Cabs Oracle Paytm Pubmatic Quikr Salesforce Sapient Swiggy Walmart Media.net Google
Arrays	Repeat and Missing Number Array	Amazon Interview Qs
Arrays	Kth-Largest Element in an Array	Amazon Microsoft Walmart Adobe

Arrays	Trapping Rain Water	Samsung Interview Qs
Arrays	Product of Array Except Self	Microsoft + Facebook Interview Qs
Arrays	Maximum Product Subarray	Amazon D-E-Shaw Microsoft Morgan Stanley OYO Rooms Google
Arrays	Find Minimum in Rotated Sorted Array	Adobe Amazon Microsoft Morgan Stanley Samsung Snapdeal Times Internet
Arrays	Find Pair with Sum in Sorted & Rotated Array	Microsoft + Google + Apple Interview Qs
Arrays	3Sum	Adobe Amazon Microsoft Morgan Stanley Samsung Snapdeal Times Internet
Arrays	Container With Most Water	Flipkart + Dunzo Interview Qs
Arrays	Given Sum Pair	Infosys + Amazon + Flipkart Interview Qs
Arrays	Kth - Smallest Element	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe
Arrays	Merge Overlapping Intervals	Google Interview Qs
Arrays	Find Minimum Number of Merge Operations to Make an Array Palindrome	Amazon
Arrays	Given an Array of Numbers Arrange the Numbers to Form the Biggest Number	Barclays Interview Qs
Arrays	Space Optimization Using Bit Manipulations	Amazon
Arrays	Subarray Sum Divisible K	Snapdeal Microsoft
Arrays	Print all Possible Combinations of r Elements in a	Amazon

	Given Array of Size n	
Arrays	Mo's Algorithm	Microsoft
Strings	Valid Palindrome	Amazon Cisco D-E-Shaw Facebook FactSet Morgan Stanley Paytm Zoho
Strings	Valid Anagram	Nagarro Media.net Directi Google Adobe Flipkart
Strings	Valid parentheses	Google Interview Qs
Strings	Remove Consecutive Characters	Samsung + Adobe
Strings	Longest Common Prefix	Adobe + Grofers + Dunzo Interview Qs
Strings	Convert a Sentence into its Equivalent Mobile Numeric Keypad Sequence	Adobe
Strings	Print all the Duplicates in the Input String	Ola + Amdocs IQ
Strings	Longest Substring without Repeating Characters	Morgan Stanley + Amazon IQ
Strings	Longest Repeating Character Replacement	Amazon Google
Strings	Group Anagrams	Samsung + Adobe + Amazon Interview Qs
Strings	Longest Palindromic Substring	Microsoft + Google + Samsung + Visa IQ
Strings	Palindromic Substrings	Microsoft IQ
Strings	Next Permutation	Adobe + Goldman Sachs + Uber
Strings	Count Palindromic Subsequences	Myntra Interview Qs

Strings	Smallest Window in a String Containing all the Characters of Another String	Microsoft + Amazon IQ
Strings	Wildcard String Matching	Microsoft + Amazon + Ola IQ
Strings	Longest Prefix Suffix	Flipkart + Swiggy IQ
Strings	Rabin-Karp Algorithm for Pattern Searching	Microsoft
Strings	Transform One String to Another using Minimum Number of Given Operation	Directi
Strings	Minimum Window Substring	Amazon Google MakeMyTrip Streamoid Technologies Microsoft Media.net Atlassian Flipkart
Strings	Boyer Moore Algorithm for Pattern Searching	Amdocs
Strings	Word Wrap	Microsoft
2D Arrays	Zigzag (or diagonal) Traversal of Matrix	Amazon
2D Arrays	Set Matrix Zeroes	Amazon Microsoft
2D Arrays	Spiral Matrix	Flipkart + Apple + Societe Generale IQ
2D Arrays	Rotate Image	Microsoft Paytm Samsung Adobe
2D Arrays	Word Search	Google + Ola + Goldman Sachs IQ
2D Arrays	Find the Number of Islands Set 1 (Using DFS)	Microsoft + Uber + Apple + Amazon IQ

2D Arrays	Given a Matrix of 'O' and 'X', Replace 'O' with 'X' if Surrounded by 'X'	Google
2D Arrays	Find a Common Element in all Rows of a Given Row-Wise Sorted Matrix	MAQ Software Microsoft VMWare
2D Arrays	Create a Matrix with Alternating Rectangles of O and X	MAQ VMWare
2D Arrays	Maximum Size Rectangle of all 1s	Amazon Microsoft
Searching & Sorting	Permute Two Arrays such that Sum of Every Pair is Greater or Equal to K	Samsung
Searching & Sorting	counting sort	Samsung+ Morgan Stanley+ Snapdeal + EPAM Systems
Searching & Sorting	find common elements three sorted arrays	MAQ Software Microsoft VMWare
Searching & Sorting	Searching in an array where adjacent differ by at most k	TCS Amazon
Searching & Sorting	ceiling in a sorted array	TCS
Searching & Sorting	Pair with given difference	Amazon Visa
Searching & Sorting	majority element	Amazon+ Google
Searching & Sorting	count triplets with sum smaller than a given value	Amazon SAP Labs

Searching & Sorting	Maximum Sum Subsequence with no adjacent elements	Amazon FactSet Oxigen Wallet OYO Rooms Paytm Walmart Yahoo Adobe Flipkart
Searching & Sorting	Merge Sorted Arrays using O(1) Space	Amdocs Brocade Goldman Sachs Juniper Networks Linkedin Microsoft Quikr Snapdeal Synopsys Zoho Adobe
Searching & Sorting	Inversion of Array	Adobe Amazon BankBazaar Flipkart Microsoft Myntra MakeMyTrip
Searching & Sorting	Find Duplicates in O(n) Time and O(1) Extra Space	Amazon D-E-Shaw Flipkart Paytm Qualcomm Zoho
Searching & Sorting	Radix Sort	Amazon+ Microsoft
Searching & Sorting	Product of Array except itself	Accolite Amazon D-E-Shaw Intuit Morgan Stanley Opera Microsoft Flipkart
Searching & Sorting	Make all Array Elements Equal	Amazon
Searching & Sorting	Check if Reversing a Sub Array Make the Array Sorted	Amazon
Searching & Sorting	Find Four Elements that Sum to a Given Value	Adobe Amazon Google Microsoft OYO Rooms
Searching & Sorting	Median of Two Sorted Array with Different Size	Amazon Samsung Microsoft Google
Searching & Sorting	Median of Stream of Integers Running Integers	Amazon + Google
Searching & Sorting	Print Subarrays with 0 Sum	Paytm Adobe
Searching & Sorting	Aggressive Cows	Adobe
Searching & Sorting	Allocate Minimum number of Pages	Google Infosys Codenation Amazon Microsoft

Searching & Sorting	Minimum Swaps to Sort	Amazon + Google
Backtracking	Set 2 Rat in a Maze	Microsoft Amazon
Backtracking	Combinational Sum	Adobe Amazon Microsoft
Backtracking	Crossword-Puzzle	Microsoft
Backtracking	Longest Possible Route in a Matrix with Hurdles	Microsoft
Backtracking	Printing all solutions in N-Queen Problem	Accolite Amazon Amdocs D-E-Shaw MAQ Software Twitter Visa Microsoft
Backtracking	Solve the Sudoku	Amazon Directi Flipkart MakeMyTrip MAQ Software Microsoft Ola Cabs Oracle PayPal Zoho
Backtracking	Partition Equal Subset Sum	Amazon + Adobe + Accolite + Traveloka
Backtracking	M Coloring Problem	Amazon
Backtracking	Knight Tour	IBM
Backtracking	Sudoku	Amazon + Adobe + Accolite + Traveloka
Backtracking	Remove Invalid Parentheses	Uber
Backtracking	Word Break Problem using Backtracking	
Backtracking	Print all Palindromic Partitions of a String	Facebook Amazon Microsoft
Backtracking	Find Shortest Safe Route in a Path with Landmines	Facebook Amazon Microsoft
Backtracking	Partition of Set into K Subsets with Equal Sum	Amazon

Backtracking	Backtracking set-7 hamiltonian cycle	Amazon
Backtracking	tug-of-war	Google
Backtracking	Maximum Possible Number by doing at most K swaps	Amazon + Adobe + Accolite + Traveloka
Backtracking	Backtracking set-8 solving cryptarithmic puzzles	Goldman Sachs
Backtracking	Find paths from corner cell to middle cell in maze	Meta
Backtracking	Arithmetic Expressions	Flipkart
Linked List	Reverse Linked List	Sprinklr
Linked List	Linked List Cycle	Accolite Amazon D-E-Shaw Hike Lybrate Mahindra Comviva MakeMyTrip MAQ Software OYO Rooms Paytm Qualcomm Samsung SAP Labs Snapdeal Veritas VMWare Walmart Adobe
Linked List	Merge Two Sorted Lists	Accolite Amazon Belzabar Brocade FactSet Flipkart MakeMyTrip Microsoft OATS Systems Oracle Samsung Synopsys Zoho
Linked List	Delete without Head node	Amazon Goldman Sachs Kritikal Solutions Microsoft Samsung Visa
Linked List	Remove duplicates from an unsorted linked list	Amazon Intuit
Linked List	Sort a linked list of 0s-1s-or-2s	<u>Microsoft Amazon MakeMyTrip</u>
Linked List	Multiply two numbers represented linked lists	Amazon

Linked List	Remove nth node from end of list	Accolite Adobe Amazon Citicorp Epic Systems FactSet Hike MAQ Software Monotype Solutions Morgan Stanley OYO Rooms Qualcomm Samsung Snapdeal Flipkart
Linked List	Reorder List	Amazon Microsoft OYO Rooms Intuit
Linked List	Detect and remove loop in a linked list	Accolite Amazon D-E-Shaw Hike Lybrate Mahindra Comviva MakeMyTrip MAQ Software OYO Rooms Paytm Qualcomm Samsung SAP Labs Snapdeal Veritas VMWare Walmart Adobe
Linked List	Write a Function to get the Intersection Point of two Linked Lists	Amazon
Linked List	Flatten a linked list with next and child pointers	Google
Linked List	Linked list in zig-zag fashion	Micorsoft
Linked List	Reverse a doubly linked list	Walmart
Linked List	Delete nodes which have a greater value on right side	Amazon
Linked List	Segregate even and odd Elements in a Linked List	Walmart
Linked List	Point to next higher value node in a linked list with an Arbitrary Pointer	GeekyAnts
Linked List	Rearrange a given linked list in place	Ola Uber
Linked List	Sort Biotonic Doubly Linked Lists	Morgan Stanley
Linked List	Merge K Sorted Lists	Microsoft+ Ola+ eBay
Linked List	Merge sort for linked list	Accolite Adobe Amazon MAQ Software Microsoft Paytm Veritas

Linked List	Quicksort on singly-linked list	Paytm
Linked List	Sum of two linked lists	Accolite Amazon Flipkart MakeMyTrip Microsoft Morgan Stanley Qualcomm Snapdeal
Linked List	Flattening a linked list	24*7 Innovation Labs Amazon Drishti-Soft Flipkart Goldman Sachs Microsoft Paytm Payu Qualcomm Snapdeal Visa
Linked List	Clone a linked list with next and random Pointer	Triology
Linked List	Subtract two numbers represented as linked lists	Amazon Goldman Sachs
Stacks & Queues	Implement two stacks in an Array	24*7 Innovation Labs Microsoft Samsung Snapdeal
Stacks & Queues	Evaluation of Postfix Expression	Amazon + Google + Facebook
Stacks & Queues	Implement Stack using Queues	Facebook
Stacks & Queues	Queue Reversal	Amazon + Morgain Stanley
Stacks & Queues	Implement Stack Queue using Deque	Microsoft +Atlassian
Stacks & Queues	Reverse first k elements of queue	Microsoft + Amdocs
Stacks & Queues	Design Stack with Middle Operation	MaQ Software
Stacks & Queues	Infix to Postfix	Amazon + Samsung + Paytm + Vmware inc
Stacks & Queues	Design and Implement Special stack	Amazon Google Microsoft Visa Goldman Sachs
Stacks & Queues	Longest Valid String	Google Microsoft

Stacks & Queues	Find if an expression has duplicate parenthesis or not	Flipkart Oracle OYO Rooms Snapdeal Walmart Yatra.com Microsoft Google
Stacks & Queues	Stack permutations check if an array is stack permutation of other	Visa
Stacks & Queues	Count natural numbers whose permutation greater number	Amazon
Stacks & Queues	Sort a stack using Recursion	Amazon Goldman Sachs IBM Intuit Kuliza Yahoo Microsoft
Stacks & Queues	Queue based approach for first non repeating character in a stream	Microsoft Flipkart
Stacks & Queues	The Celebrity Problem	Google + Visa + Apple
Stacks & Queues	Next larger Element	Visa
Stacks & Queues	Distance of nearest cell	Flipkar + Facebook
Stacks & Queues	Rotten-oranges	Facebook
Stacks & Queues	Next smaller element	Codenation
Stacks & Queues	Circular-tour	Codenation Flipkart
Stacks & Queues	Efficiently implement k-stacks single array	Flipkart
Stacks & Queues	The celebrity problem	Google + Visa + Apple
Stacks & Queues	Iterative tower of hanoi	Microsoft Flipkart
Stacks & Queues	Find the maximum of minimums for	Amazon Microsoft Flipkart

	every window size in a given array	
Stacks & Queues	lru cache implementation	Microsoft + Uber + Alibaba
Stacks & Queues	Find a tour that visits all stations	Uber
Greedy	Activity selection problem greedy algo	Facebook Morgan Stanley Flipkart
Greedy	Greedy algorithm to find minimum number of coins	Accolite Amazon Morgan Stanley Oracle Paytm Samsung Snapdeal Synopsys Visa Microsoft Google
Greedy	Minimum sum two numbers formed digits array-2	Google
Greedy	Minimum sum absolute difference pairs two arrays	Amazon
Greedy	Find maximum height pyramid from the given array of objects	Flipkart Amazon
Greedy	Minimum cost for acquiring all coins with k extra coins allowed with every coin	
Greedy	Find maximum equal sum of every three stacks	Microsoft Amazon Flipkart
Greedy	Job sequencing problem	Microsoft + Acolite
Greedy	Greedy algorithm egyptian fraction	

Greedy	Fractional knapsack problem	Microsoft
Greedy	Maximum length chain of pairs	Amazon Microsoft
Greedy	Find smallest number with given number of digits and digit sum	MAQ Software OYO Rooms
Greedy	Maximize sum of consecutive differences circular-array	Maccafe
Greedy	paper-cut minimum number squares	Google
Greedy	Lexicographically smallest array-k consecutive swaps	Amazon
Greedy	Problems-CHOCOLA	Flipkart
Greedy	Find minimum time to finish all jobs with given constraints	
Greedy	Job sequencing using disjoint set union	Samsung
Greedy	Rearrange characters string such that no two adjacent are same	Amazon Microsoft
Greedy	Minimum edges to reverse to make path from a source to a destination	
Greedy	Minimize Cash Flow among a given set of friends who have borrowed	

	money from each other	
Greedy	Minimum Cost to cut a board into squares	Maccafe
Binary Trees	Maximum Depth of Binary Tree	Amazon Cadence India CouponDunia D-E-Shaw FactSet FreeCharge MakeMyTrip
Binary Trees	Reverse Level Order Traversal	Amazon + Microsoft + flipkart + Adobe
Binary Trees	Subtree of Another Tree	Amazon + Microsoft + Facebook
Binary Trees	Invert Binary Tree	Amazon Hike
Binary Trees	Binary Tree Level Order Traversal	Accolite Adobe Amazon Cisco D-E-Shaw Flipkart
Binary Trees	Left View of Binary Tree	Microsoft + Adobe + Cisco Networking Academy
Binary Trees	Right View of Binary Tree	Amdocs
Binary Trees	ZigZag Tree Traversal	Amazon Cisco FactSet Hike Snapdeal Walmart Microsoft Flipkart
Binary Trees	Create a mirror tree from the given binary tree	Accolite Adobe Amazon Belzabar EBay Goldman Sachs Microsoft Morgan Stanley Myntra Ola Cabs Paytm
Binary Trees	Leaf at same level	Amazon
Binary Trees	Check for Balanced Tree	Amazon Walmart Microsoft
Binary Trees	Transform to Sum Tree	Amazon FactSet Microsoft Samsung Walmart
Binary Trees	Check if Tree is Isomorphic	Amazon Microsoft
Binary Trees	Same Tree	Amazon Microsoft Flipkart
Binary Trees	Construct Binary Tree from Preorder and Inorder Traversal	Accolite Amazon Microsoft

Binary Trees	Height of Binary Tree	Amazon Cadence India CouponDunia D-E-Shaw FactSet FreeCharge MakeMyTrip
Binary Trees	Diameter of a Binary Tree	Amazon Microsoft OYO Rooms
Binary Trees	Top View of Binary Tree	Microsoft + Adobe + Expedia Group
Binary Trees	Bottom View of Binary Tree	DE Shaw India
Binary Trees	Diagonal Traversal of Binary Tree	Amazon Microsoft
Binary Trees	Boundary Traversal of binary tree	Accolite Amazon FactSet Hike Kritikal Solutions
Binary Trees	Construct Binary Tree from String with Brackets	Microsoft Morgan Stanley OYO Rooms Payu Samsung Snapdeal Flipkart
Binary Trees	Minimum swap required to convert binary tree to binary search tree	Adobe Amazon
Binary Trees	Duplicate subtree in Binary Tree	Google
Binary Trees	Check if a given graph is tree or not	Microsoft Amazon
Binary Trees	Lowest Common Ancestor in a Binary Tree	Accolite Amazon American Express Cisco Expedia Flipkart MakeMyTrip Microsoft OYO Room
Binary Trees	Min distance between two given nodes of a Binary Tree	Amazon Linkedin MakeMyTrip Ola Cabs Qualcomm Samsung
Binary Trees	Duplicate Subtrees	Ola
Binary Trees	Kth ancestor of a node in binary tree	Josh Technology Group
Binary Trees	Binary Tree Maximum Path Sum	Samsung + Facebook

Binary Trees	Serialize and Deserialize Binary Tree	Flipkart InMobi LinkedIn MAQ Software Microsoft Paytm Quikr Yahoo
Binary Trees	Binary Tree to DLL	Accolite Amazon Goldman Sachs Microsoft Morgan Stanley Salesforce Snapdeal
Binary Trees	Print all k-sum paths in a binary tree	Accolite Amazon Goldman Sachs
Binary Search Trees	Lowest Common Ancestor of a Binary Search Tree	Accolite Amazon Flipkart MAQ Software Microsoft Samsung Synopsys
Binary Search Trees	Binary Search Tree Set 1 (Search and Insertion)	Accolite Amazon Microsoft Paytm Samsung
Binary Search Trees	Minimum element in BST	Microsoft
Binary Search Trees	Predecessor and Successor	Google + Adobe + Goldman Sachs + Direct
Binary Search Trees	Check whether BST contains Dead End	Walmart
Binary Search Trees	Binary Tree to BST	HSBC
Binary Search Trees	Kth largest element in BST	Accolite Amazon Samsung SAP Labs Microsoft
Binary Search Trees	Validate Binary Search Tree	OYO Rooms Qualcomm Samsung Snapdeal VMWare Walmart Wooker Amazon Facebook
Binary Search Trees	Kth Smallest Element in a BST	Accolite Amazon Google
Binary Search Trees	Delete Node in a BST	Adobe Barclays

Binary Search Trees	Flatten BST to sorted list	Microsoft
Binary Search Trees	Preorder to Postorder	Amazon LinkedIn Flipkart
Binary Search Trees	Count BST nodes that lie in a given range	D-E-Shaw Google
Binary Search Trees	Populate Inorder Successor for all Nodes	Sap labs
Binary Search Trees	Convert Normal BST to Balanced BST	Paytm
Binary Search Trees	Merge two BSTs	DE Shaw India
Binary Search Trees	Given n appointments, find all conflicting appointments	Samsung
Binary Search Trees	Replace every element	Samsung
Binary Search Trees	Construct BST from given preorder traversal	Adobe Morgan Stanley Microsoft
Binary Search Trees	Find median of BST in O(n) time and O(1) space	Amazon
Binary Search Trees	Largest BST in a Binary Tree	Amazon D-E-Shaw Samsung Microsoft Flipkart
Heaps & Hashing	Choose k array elements such that difference of maximum and minimum is minimized	

Heaps & Hashing	Heap Sort	Adobe
Heaps & Hashing	Top K Frequent Elements	Amazon Microsoft
Heaps & Hashing	k largest elements in an array	Amazon Microsoft Walmart Adobe
Heaps & Hashing	Next Greater Element	Amazon + Microsoft + Flipkart + Adobe
Heaps & Hashing	K'th Smallest/Largest Element in Unsorted Array	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe
Heaps & Hashing	Find the maximum repeating number in O(n) time and O(1) extra space	Accolite Amazon
Heaps & Hashing	K-th smallest element after removing some integers from natural numbers	ABCO Accolite Amazon Cisco Hike Microsoft Snapdeal VMWare Google Adobe
Heaps & Hashing	Find k closest elements to a given value	Amazon OYO Rooms
Heaps & Hashing	K'th largest element in a stream	Amazon Cisco Hike OYO Rooms Walmart Microsoft Flipkart
Heaps & Hashing	Connect Ropes	Amazon + Oyo + Goldman Sachs
Heaps & Hashing	Cuckoo Hashing	Amazon
Heaps & Hashing	Itinerary from a List of Tickets	Microsoft + Ola + eBay
Heaps & Hashing	Largest Subarray with 0 Sum	Amazon MakeMyTrip Microsoft
Heaps & Hashing	Count distinct elements in every window of size k	Accolite Amazon Microsoft
Heaps & Hashing	Group Shifted Strings	Oracle

Heaps & Hashing	Merge K Sorted lists	Microsoft + Ola + eBay
Heaps & Hashing	Find Median from Data Stream	Adobe Amazon Apple Belzabar D-E-Shaw Facebook Flipkart Google Intuit Microsoft Morgan Stanley Ola Cabs Oracle Samsung SAP Labs Yahoo
Heaps & Hashing	Sliding Window Maximum	Amazon Directi Flipkart Microsoft Google
Heaps & Hashing	Find the smallest positive number	Accolite Amazon Samsung Snapdeal
Heaps & Hashing	Find Surpasser Count of each element in array	Amazon Morgan Stanley Ola Cabs SAP Labs
Heaps & Hashing	Tournament Tree and Binary Heap	Amazon Ola Cabs Samsung Synopsys Walmart Microsoft
Heaps & Hashing	Check for palindrome	Amazon Cisco D-E-Shaw Facebook FactSet Morgan Stanley Paytm Zoho
Heaps & Hashing	Length of the largest subarray with contiguous elements	Amazon Intuit Microsoft
Heaps & Hashing	Palindrome Substring Queries	Amazon Morgan Stanley Ola Cabs SAP Labs
Heaps & Hashing	Subarray distinct elements	Microsoft + Ola + eBay
Heaps & Hashing	Find the recurring function	MAQ Software
Heaps & Hashing	K maximum sum combinations from two arrays	Amazon
Graphs	BFS	Samsung + Delhivery + SAP Labs
Graphs	DFS	Samsung + Intuit + Goldman Sachs
Graphs	Flood Fill Algorithm	Google + Adobe + Apple
Graphs	Number of Triangles	IBM

Graphs	Detect cycle in a graph	Lenksart
Graphs	Detect cycle in an undirected graph	Samsung
Graphs	Rat in a Maze Problem	Sharechat + Directi
Graphs	Steps by Knight	Samsung
Graphs	Clone graph	Google + MAQ Software + Apple + Facebook
Graphs	Number of Operations to Make Network Connected	Samsung
Graphs	Dijkstra's shortest path algorithm	Amazon
Graphs	Topological Sort	Amazon + Google + Flipkart + Oyo + Fipkart + Samsung
Graphs	Oliver and the Game	Sharechat + Directi
Graphs	Minimum time taken by each job to be completed given by a Directed Acyclic Graph	Amazon
Graphs	Find whether it is possible to finish all tasks or not from given dependencies	Directi + Sharechat
Graphs	Find the number of islands	Razorpay
Graphs	Prim's Algo	Visa
Graphs	Negative Weighted Cycle	Amazon
Graphs	Floyd Warshall	Google + Uber
Graphs	Graph Coloring	Morgan Stanley
Graphs	Snakes and Ladders	Goldman Sachs +Makemytrip

Graphs	Kosaraju's Theorem	Paytm
Graphs	Journey to moon	Lenksart + Payload
Graphs	Vertex Cover	Intuit
Graphs	M Coloring Problem	Uber
Graphs	Cheapest Flights Within K Stops	Uber + Paypal
Graphs	Find if there is a path of more than k length from a source	Cisco + Intuit
Graphs	Bellman Ford	Sharechat + Directi
Graphs	Bipartite Graph	Microsoft Flipkart
Graphs	Word-Ladder	Microsoft
Graphs	Allen Dictionary	Samsung
Graphs	Kruskals MST	Amazon Cisco Samsung
Graphs	Total number spanning trees graph	Amazon Cisco Samsung Microsoft Flipkart
Graphs	Travelling Salesman	Google + Microsoft + Opera
Graphs	Find longest path directed acyclic graph	Google
Graphs	Two Clique Problem	Microsoft
Graphs	Minimise the cash flow	Intuit + Uber
Graphs	Chinese postman	Intuit
Graphs	Water Jug	Intuit + Uber
Graphs	Water Jug 2	MakeMyTrip MAQ Software
Tries	Construct a trie from scratch	Accolite Amazon D-E-Shaw FactSet Microsoft
Tries	Print unique rows in a given boolean matrix	Amazon Zoho

Tries	Word Break Problem (Trie solution)	Amazon Google Hike IBM MAQ Software Microsoft Walmart Zoho
Tries	Given a sequence of words, print all anagrams together	Amazon D-E-Shaw Goldman Sachs Morgan Stanley Snapdeal Microsoft
Tries	Find shortest unique prefix for every word in a given list	Microsoft Google
Tries	Implement a Phone Directory	Amazon + Microsoft + Snapdeal
DP	Knapsack with Duplicate Items	Amazon
DP	BBT counter	Microsoft
DP	Reach a given score	Samsung
DP	Maximum difference of zeros and ones in binary string	Ola
DP	Climbing Stairs	Intuit
DP	Permutation Coefficient	Amazon
DP	Longest Repeating Subsequence	Google + Amazon
DP	Pairs with specific difference	Ola
DP	Longest subsequence-1	Amazon
DP	Coin Change	Microsoft+ Samsung + Barclays + Apple + Adobe
DP	LIS	Amazon + Google + Facebook + Fidelity International
DP	Longest Common Subsequence	Siemens + Amazon + Google
DP	Word Break	Amazon + Google + Microsoft + Walmart + Apple + IBM

DP	Combination Sum IV	Adobe Amazon Microsoft
DP	House Robber	Apple + Uber
DP	House Robber 2	Arrays Dynamic Programming
DP	Decode Ways	Adobe + Uber
DP	Unique Paths	Google + Microsoft
DP	Jumps Game	Facebook Amazon Microsoft Google
DP	Knapsack Problem	Amazon Directi Flipkart GreyOrange Microsoft Mobicip Morgan Stanley Oracle Payu Snapdeal Visa
DP	nCr	Google
DP	Catalan Number	Amazon + Google
DP	Edit Distance	Google + Goldman Sachs + Citrix
DP	Subset Sum	Amazon + Google
DP	Gold mine	Samsung
DP	Assembly Line Scheduling	Goldman Sachs
DP	Maximize The Cut Segments	Amazon OYO Rooms Microsoft
DP	Maximum sum increasing subsequence	Amazon Morgan Stanley Microsoft
DP	Count all subsequences having product less than K	Goldman Sachs
DP	Maximum sum increasing subsequence	Amazon Morgan Stanley Microsoft
DP	Egg dropping puzzle	Amazon D-E-Shaw Goldman Sachs Google Hike MakeMyTrip MAQ Software Myntra Nearbuy Opera Oracle Philips Samsung Service Now Unisys VMWare Microsoft
DP	Max length chain	Amazon Microsoft
DP	Largest Square in Matrix	Amazon Samsung
DP	Maximum Path Sum	Amazon + Microsoft + Oyo + Directi
DP	Minimum Number of Jumps	Adobe Amazon Housing.com Moonfrog Labs Walmart Microsoft Google Flipkart

DP	Minimum removals from array to make $\max - \min \leq K$	Amazon
DP	Longest Common Substring	Webarch Club
DP	Partition Equal Subset Sum	Amazon + Accolite + Traveloca + Adobe
DP	Longest Palindromic Subsequence	Amazon Google
DP	Count Palindromic Subsequences	Myntra
DP	Longest Palindromic Substring	Amazon + Microsoft + Samsung + Visa
DP	Longest Alternating Sequence	Ola
DP	Weighted Job Scheduling	Intuit
DP	Coin Game	Salesforce
DP	Coin Game Winner	Ola
DP	Optimal Strategy for a game	Google + IBM
DP	Word Wrap	Microsoft
DP	Mobile numeric keypad	Amazon Microsoft
DP	Maximum Length of Pair Chain	Amazon Microsoft
DP	Matrix Chain Multiplication	Walmart + Flipkart
DP	Maximum profit by buying and selling a share at most twice	Accolite Amazon Microsoft
DP	Optimal BST	Google
DP	Largest Submatrix with sum 0	Amazon MakeMyTrip Microsoft

DP	Largest area rectangular sub-matrix with equal number of 1's and 0's	Amazon Directi Intuit MakeMyTrip Microsoft Samsung Google Flipkart
Bit Manipulation	Count set bits in an integer	Adobe Apple
Bit Manipulation	Find the two non-repeating elements in an array of repeating elements	Accolite Amazon FactSet Google MakeMyTrip Microsoft Qualcomm Samsung
Bit Manipulation	Program to find whether a no is power of two	Adobe
Bit Manipulation	Find position of the only set bit	Microsoft
Bit Manipulation	Count number of bits to be flipped to convert A to B	Maq Software
Bit Manipulation	Count total set bits in all numbers from 1 to n	Microsoft
Bit Manipulation	Copy set bits in a range	Facebook
Bit Manipulation	Calculate square of a number without using *, / and pow()	Amazon
Bit Manipulation	Divide two integers without using multiplication, division and mod operator	Microsoft

Bit Manipulation	Power Set	Google + Adobe + Paytm
Segment Trees	Range Sum Query - Immutable	
Segment Trees	Range Minimum Query	Google Interview Qs
Segment Trees	Range Sum Query - Mutable	Alibaba
Segment Trees	Create Sorted Array through Instructions	Samsung + Accolite
Segment Trees	Count of Range Sum	Walmart
Segment Trees	Count of Smaller Numbers After Self	Codenation Google

Java Singly Linked List Programs

- 1) Singly linked list Examples in Java
 - 2) Java Program to create and display a singly linked list
 - 3) Java program to create a singly linked list of n nodes and count the number of nodes
 - 4) Java program to create a singly linked list of n nodes and display it in reverse order
 - 5) Java program to delete a node from the beginning of the singly linked list
 - 6) Java program to delete a node from the middle of the singly linked list
 - 7) Java program to delete a node from the end of the singly linked list
 - 8) Java program to determine whether a singly linked list is the palindrome
 - 9) Java program to find the maximum and minimum value node from a linked list
 - 10) Java Program to insert a new node at the middle of the singly linked list
 - 11) Java program to insert a new node at the beginning of the singly linked list
 - 12) Java program to insert a new node at the end of the singly linked list
 - 13) Java program to remove duplicate elements from a singly linked list
 - 14) Java Program to search an element in a singly linked list
-

Java Circular Linked List Programs

- 1) Java program to create and display a Circular Linked List
- 2) Java program to create a Circular Linked List of N nodes and count the number of nodes
- 3) Java program to create a Circular Linked List of n nodes and display it in reverse order
- 4) Java program to delete a node from the beginning of the Circular Linked List

- 5) Java program to delete a node from the end of the Circular Linked List
 - 6) Java program to delete a node from the middle of the Circular Linked List
 - 7) Java program to find the maximum and minimum value node from a circular linked list
 - 8) Java program to insert a new node at the beginning of the Circular Linked List
 - 9) Java program to insert a new node at the end of the Circular Linked List
 - 10) Java program to insert a new node at the middle of the Circular Linked List
 - 11) Java program to remove duplicate elements from a Circular Linked List
 - 12) Java program to search an element in a Circular Linked List
 - 13) Java program to sort the elements of the Circular Linked List
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Java Doubly Linked List Programs

- 1) Java program to convert a given binary tree to doubly linked list
- 2) Java program to create a doubly linked list from a ternary tree
- 3) Java program to create a doubly linked list of n nodes and count the number of nodes
- 4) Java program to create a doubly linked list of n nodes and display it in reverse order
- 5) Java program to create and display a doubly linked list
- 6) Java program to delete a new node from the beginning of the doubly linked list
- 7) Java program to delete a new node from the end of the doubly linked list
- 8) Java program to delete a new node from the middle of the doubly linked list
- 9) Java program to find the maximum and minimum value node from a doubly linked list

- 10) Java program to insert a new node at the beginning of the Doubly Linked list
 - 10) Java program to insert a new node at the end of the Doubly Linked List
 - 12) Java program to insert a new node at the middle of the Doubly Linked List
 - 13) Java program to remove duplicate elements from a Doubly Linked List
 - 14) Java program to rotate doubly linked list by N nodes
 - 15) Java program to search an element in a doubly linked list
 - 16) Java program to sort the elements of the doubly linked list
-

Java Tree Programs

- 1) Java Program to calculate the Difference between the Sum of the Odd Level and the Even Level Nodes of a Binary Tree
- 2) Java program to construct a Binary Search Tree and perform deletion and In-order traversal
- 3) Java program to convert Binary Tree to Binary Search Tree
- 4) Java program to determine whether all leaves are at same level
- 5) Java program to determine whether two trees are identical
- 6) Java program to find maximum width of a binary tree
- 7) Java program to find the largest element in a Binary Tree
- 8) Java program to find the maximum depth or height of a tree
- 9) Java program to find the nodes which are at the maximum distance in a Binary Tree
- 10) Java program to find the smallest element in a tree
- 11) Java program to find the sum of all the nodes of a binary tree
- 12) Java program to find the total number of possible Binary Search Trees with N keys

13) Java program to implement Binary Tree using the Linked List

14) Java program to search a node in a Binary Tree

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