1. 3 Sum (Leetcode)
2. First missing integer (InterviewBit)
3. Largest sum contageous sub-array (InterviewBit)
4. Search in rotated sorted array (GFG)
5. Best time to Buy & Sell stock (Leetcode)
6. Trapping rain water (Leetcode)
7. Container with most water (Leetcode)
8. Print matrix in spiral manner (GFG)
9. Jump game II (Leetcode)
10. Minimize max difference between height (GFG)
11. Majority element (GFG)
12. Search in row-wise & column-wise sorted matrix (GFG)
13. Ra-arrange array in alternating positive & negative items in O(1) space (GFG)

Array

Intermediate level Questions:

1. **Find the Union and Intersection of the two sorted arrays.**
   [practice here: https://practice.geeksforgeeks.org/problems/union-of-two-arrays/0]

2. **Write a program to cyclically rotate an array by one.**
   [Practice here: https://practice.geeksforgeeks.org/problems/cyclically-rotate-an-array-by-one/0]

3. **You are given a list of n-1 integers and these integers are in the range of 1 to n. There are no duplicates in the list. One of the integers is missing in the list. Write an efficient code to find the missing integer.**
   [Practice here: https://practice.geeksforgeeks.org/problems/missing-number-in-array/0]

4. **Find all pairs on integer array whose sum is equal to given number.**
   [Practice here: https://practice.geeksforgeeks.org/problems/count-pairs-with-given-sum/0]

5. **Find duplicates in an array.**
   [Practice here : https://practice.geeksforgeeks.org/problems/find-duplicates-in-an-array/1]

6. **Sort an Array using Quicksort algorithm.**
   [Follow link: https://www.geeksforgeeks.org/quick-sort/]

7. **Find common elements in three sorted arrays**
   [Practice here: https://practice.geeksforgeeks.org/problems/common-elements/0]

8. **Find the first repeating element in an array of integers.**
   [Practice here: https://practice.geeksforgeeks.org/problems/first-repeating-element/0]

9. **Find the first non-repeating element in a given array of integers.**
   [Solution: https://www.geeksforgeeks.org/non-repeating-element/]

10. **Given an array with all distinct elements, find the largest three elements. Expected time complexity is O(n) and extra space is O(1).**

```
Input: arr[] = {10, 4, 3, 50, 23, 90}
Output: 90, 50, 23
```

11. **Rearrange the array in alternating positive and negative items with O(1) extra space.** [follow link : https://www.geeksforgeeks.org/rearrange-array-alternating-positive-negative-items-o1-extra-space/]

12. **Find if there is any subarray with sum equal to zer**
[Practice here: https://practice.geeksforgeeks.org/problems/subarray-with-0-sum/0]

13. **Find Largest sum contiguous Subarray.[Very Important]**
[Practice here: https://practice.geeksforgeeks.org/problems/kadanes-algorithm/0]

14. **Find the factorial of a large number.**
[Practice here: https://practice.geeksforgeeks.org/problems/factorials-of-large-numbers/0]

15. **Find Maximum Product Subarray.**
[Practice here: https://practice.geeksforgeeks.org/problems/maximum-product-subarray/0]

16. **Find longest consecutive subsequence.**
[Practice here: https://practice.geeksforgeeks.org/problems/longest-consecutive-subsequence/0]

17. **Find the minimum element in a rotated and sorted array.**
[Practice here: https://practice.geeksforgeeks.org/problems/minimum-element-in-a-sorted-and-rotated-array/0]

18. **Given an array of size n and a number k, fin all elements that appear more than n/k times.**
[Practice here: https://practice.geeksforgeeks.org/problems/count-element-occurences/1]

19. **GCD of given index ranges in an array**
[Solution : https://www.geeksforgeeks.org/gcds-of-a-given-index-ranges-in-an-array/]

20. **Maximum profit by buying and selling a share at most twice.**
[Practice here : https://www.geeksforgeeks.org/maximum-profit-by-buying-and-selling-a-share-at-most-twice/]

21. **Minimize the maximum difference between the heights.** [***ADOBE spl.***]
[Practice here: https://practice.geeksforgeeks.org/problems/minimize-the-heights/0]

22. Minimum number of Jumps to reach end.
[Practice here: https://practice.geeksforgeeks.org/problems/minimum-number-of-jumps/0]

23.**Find the two repetitive elements in a given array.**
[Practice here: https://practice.geeksforgeeks.org/problems/two-repeated-elements/0]

24.Find a triplet that sum to a given value.
[Practice here: https://practice.geeksforgeeks.org/problems/triplet-sum-in-array/0]

25. Create an N*M matrix and take input from the user to populate it and then print the matrix

26. Find the row with maximum number of 1's.
[Practice here: https://practice.geeksforgeeks.org/problems/row-with-max-1s/0]

27. Find the median in a row wise sorted matrix.
[Practice here: https://practice.geeksforgeeks.org/problems/median-in-a-row-wise-sorted-matrix/0]

28. **Print the matrix in a Spiral manner.** [***Very IMP***]
[Practice here: https://practice.geeksforgeeks.org/problems/spirally-traversing-a-matrix/0]

29. Find whether an array is a subset of another array.
[Practice here: https://practice.geeksforgeeks.org/problems/array-subset-of-another-array/0]

30. Implement two Stacks in an array.
[Practice here: https://practice.geeksforgeeks.org/problems/implement-two-stacks-in-an-array/1]

Array

Basic Questions:

1) **Create an Array of size 10 of integers. Take input from the user for these 10 elements and print the entire array after that.**

2) **Check whether n is present in an array of size m or not.**

Input - n,m (Input number, size of array)

- Take input n elements for the array

Output -> true/false

[Hint : - Create a dynamic array]

Sample Input :
3
5
1 2 3 4 5

Sample Output : TRUE

3) **Find the minimum and maximum element in an array.**

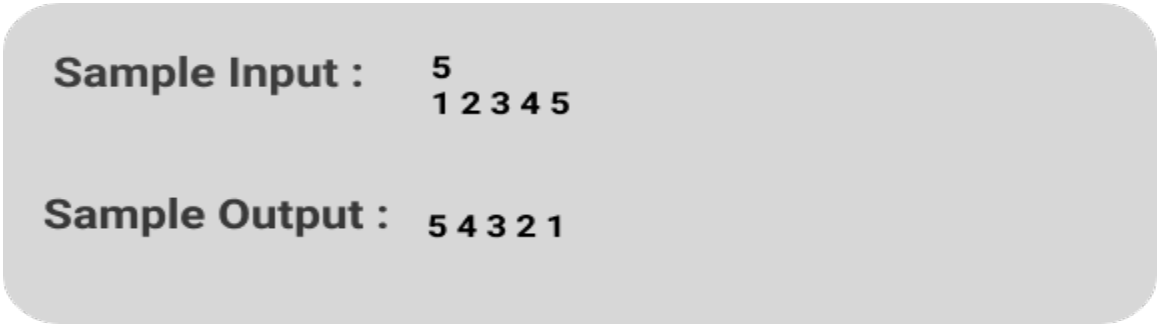
[Solution: https://www.geeksforgeeks.org/program-find-minimum-maximum-element-array/]

Here in sample input : 5 is the size of array

4) **Write a program to reverse the array.**

[Hint: use indexes]

Here , 5 is the size of array and then elements of arrays are input



5) **Write a program to sort the given array.**

[Hint: use any sorting algorithm i.e. https://www.geeksforgeeks.org/sorting-algorithms/]

Here, 6 is the size of array and then the elements are input by the user

6) Find the Kth largest and Kth smallest number in an array.

Here , K = 3 , 9 is the size of array :

Sample Input :
```
3
9
1 2 3 4 5 9 6 33 19
```

Sample Output :
```
largest : 9
smallest : 3
```

7) Given an number n. Find the number of occurrences of n in the array.

Here n = 3 in the sample input , 11 is size of array and occurrence of 3 is 6 times in the given array

Sample Input :
```
3
11
1 2 3 3 3 3 5 3 4 5 3
```

Sample Output :
```
6
```

8) Given an array which consists of only 0, 1 and 2. Sort the array without using any sorting algorithm.

Here, 9 is the size of array input by the user followed by the elements input

Sample Input :
```
9
0 1 2 1 1 0 0 2 2
```

Sample Output :
```
0 0 0 1 1 1 2 2 2
```

9) Find the range of the array. Range means the difference between the maximum and minimum element in the array.

here , 6 is the size of array followed by the input of elements

Sample Input :
```
6
-1 -3 3 47 21 91
```

Sample Output :
```
Range : 94
```

Here , Range = 91-(-3) = 94

10) Move all the negative elements to one side of the array.

Sample Input :
```
6
-1 -3 3 -4 21 91
```

Sample Output :
```
-1 -3 -4 3 21 91
```

NOTE:
You have to write the code for each question
Such that,
First you have to write the code to input the size of array
Second input the elements also by the user
And then perform the mentioned algorithm