Array Practice Sheet-2

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

23. Write a Java program to test the equality of two arrays.

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

25. Write a Java program to find common elements from three sorted (in nondecreasing order) arrays.

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.

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

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

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

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

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.

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

33. Write a Java program to find the length of the longest consecutive elements sequence from a given 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.

34. Write a Java program to find the sum of the two elements of a given array which is equal to a given integer. **Sample array:** [1,2,4,5,6] **Target value:** 6.

35. Write a Java program to find all the unique triplets such that 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.

36. Write a Java program to find the two elements from a given array of positive and negative numbers such that their sum is closest to zero.

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

38. Write a Java program to segregate all 0s on left side and all 1s on right side of a given array of 0s and 1s.

39. Write a Java program to find all combination of four elements of a given array whose sum is equal to a given value.

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

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

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

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

44. Write a Java program to arrange the elements of a given array of integers where all negative integers appear before all the positive integers.

45. Write a Java program to arrange the elements of a given array of integers where all positive integers appear before all the negative integers.

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

47. Write a Java program to separate 0s on left side and 1s on right side of an array of 0s and 1s in random order.

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

49. Write a Java program to replace every element with the next greatest element (from right side) in a given array of integers.

50. 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.

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]

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

Input: nums = { 2, 3, 5, 7, -7,

5, 8, -5 } **Output:**

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

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

Input: nums = { 1, 2, 3,

4, 5, 6 } **Output:**

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

53. 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.

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]

54. Write a Java program to find the equilibrium indices from a given array of integers.

Input:

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

Equilibrium indices found at: 3

Equilibrium indices found at: 6

55. Write a Java program to form the largest number from a given list of non negative integers.

Input:

nums = {1, 2, 3, 0, 4, 6} **Output:**

Largest number using the said array numbers: 643210

56. 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.

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