Activity :

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

19. 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.

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

21. 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.

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

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

24. 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.

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

26. 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.

27. 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.

28. 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.

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

30. 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.

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

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

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

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

35. 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.

36. 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.

37. 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.

38. 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.