

**Lab Assignment 4**  
**Programming Projects with Java1 (CA 3216)**

1	Write a Java program to find the largest element in an array.
2	Write a Java program to count the number of even and odd elements in an array.
3	Write a Java program to reverse an array without using a second array.
4	Write a Java program to find the sum of all elements in an array.
5	Write a Java program to search an element in an array using linear search.
6	Write a Java program to search an element in an array using binary search.
7	Write a Java program to sort an array in ascending order without using built-in methods. (Bubble sort)
8	Write a Java program to find the second largest element in an array.
9	Write a Java program to copy elements of one array into another array.
10	Write a Java program to remove duplicate elements from an array.
11	Write a Java program to print the frequency of each element in an array.
12	Write a Java program to sort an array in ascending order without using built-in methods. (Insertion sort)
13	Write a Java program to sort an array in ascending order without using built-in methods. (Selection sort)
14	Write a Java program to count the number of vowels and consonants in a string.
15	Write a Java program to reverse a string without using built-in functions.
16	Write a Java program to check whether a string is a palindrome.
17	Write a Java program to sort characters in a string alphabetically.
18	Write a Java program to count words in a given sentence.
19	Write a Java program to extract a substring from a given string with and without using the built-in substring() method.
20	Write a Java program to replace all occurrences of a given substring with another substring with and without using replace() method.