

**SSN COLLEGE OF ENGINEERING
DEPARTMENT OF CSE**

C PROGRAMMING LABORATORY (CS8261)

Ex. No. 4 Programs using Arrays

- 1) Populate an array with height of persons and find how many persons are above the average height.
- 2) Perform the following operations on a set of n elements. Use switch statement.
 - a. Insert an element at a given position
 - b. Deletion of a given element
 - c. Sort the elements in ascending order using bubble sort
 - d. Find the maximum and minimum element
 - e. Merge two sets of elements
 - f. Print the elements
- 3) Given a set of numbers like <10, 36, 54, 89, 12, 27>, find sum of weights based on the following conditions.
 - Assign 5 if it is a perfect cube.
 - Assign 4 if it is a multiple of 4 and divisible by 6.
 - Assign 3 if it is a prime number.Sort the numbers based on the weight in the increasing order as shown below <10,its weight>,<36,its weight><89,its weight>
- 4) Populate a two dimensional array with height and weight of persons and compute the Body Mass Index of the individuals.
- 5) Find the sum of principal diagonal elements of a square matrix.
- 6) Calculate $XA + YB$ where A and B are matrices and $X = 2$, and $Y = 3$
- 7) Consider an array MARKS[20][5] which stores the marks obtained by 20 students in 5 subjects.
Write a program to
 - a. Find the average marks obtained in each subject
 - b. Find the average marks obtained by each student
 - c. Find the number of students who have scored below 50 in their average
 - d. Display the average obtained by every student
 - e. Display the marks and average of the k^{th} student