

BSc (Hons) in Information Technology Year 1

Tutorial 6

IT1010 – Introduction to Programming

Semester 1, 2022

Exercise 1: Practice to store and print data in an array

- a) Write a C program that reads marks of 10 students in to a single subscripted array.
- b) Above marks should be between 0 to 20. Modify the above program to add marks to the array only if the input mark is between the given range.
- c) Display the values stored in the array.

Exercise 2: Practice to access data stored in an array

Modify the above program to find the mean of the marks stored in the array.

Exercise 3: Practice to manipulate data in arrays

Write a C program to create an integer array called **Motion** of size 5. Ask the user to enter values to the array from the keyboard. Rotate the values of the array by one position in the forward direction and display the values.

Ex: number in index 4 should move to index 3, Number in index 3 should move to index 2, number index 0 should move to index 4.

Initial values 10 6 8 2 9 After rotating 6 8 2 9 10

Exercise 4: Practice to manipulate data in arrays

Write a C program that read numbers from an integer array and graph the information in the form of bar chat. Sample output is given below.

| Element | Value | Histogram |
|---------|-------|-----------|
| 0 | 19 | ******* |
| 1 | 3 | *** |
| 2 | 15 | ****** |
| 3 | 7 | ***** |
| 4 | 11 | ***** |
| 5 | 9 | ***** |
| 6 | 13 | ***** |
| 7 | 5 | **** |
| 8 | 17 | ****** |
| 9 | 1 | * |