**Programming with C Language**

**Practical Session – Control Structures & Arrays**

1. Write a program to input an item number, description, price of a product, quantity, and display item number, description with the total price

Total price = price of a product \* quantity

2. Write a program to an input birth year of a student and display the student is a ‘Teenager’ or ‘Not a Teenager’.

3. Display each of the following number series using 1. While 2. Do while and 3. For loops

1. 1 2 3 4 …………..100
2. 50 45 40 …………...5
3. -2 -4 -6 ……………… -20

4. Modify the program in Question 2 to display the ‘Teenager’ count of 10 students. (Use while loop)

5. Allow the user to input a series of numbers terminates when the user enters either ‘N’ or ‘n’ and display the running total (Sum of all the entered numbers). (Use do-while loop)

6. Input 10 numbers and display the total count of odd, even numbers in the entered number series. (Use for loop)

7. Declare a Single dimensional array with 10 elements. Input the values to the array and find the followings;

1. Minimum value
2. Maximum value
3. Average value
4. Reverse order of values

8. Declare two 3 x 3 square matrices and display the matrix sum.

The following illustration shows the process of calculating the matrix sum. The values are used as samples.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 2 | 4 | + | 2 | 6 | 3 | = | 5 | 8 | 7 |
| 1 | 4 | 6 | 4 | 3 | 2 | 5 | 7 | 8 |
| 4 | 3 | 2 | 5 | 1 | 7 | 9 | 4 | 9 |