**Sheikh Fazilatunnesa Mujib University**

**Department of Computer Science and Engineering**

**CSE 112 (Structured Programming)**

**Lab 4**

**Array problems (one-dimensional array, two-Dimensional array)**

**Task 1**

Write a C program that would input three numbers from the user and print sum, then the first number, then the 2nd number followed by 3rd number. If user enters 10, 20, 30. Then output should be 60, 10, 20, and 30.

**Task 2**

Write a C program that reads 10 numbers from the user. The program then reads a number between 0 to 9, and shows the number at the corresponding index number. For instance, if the array’s user enters 3, your program should print the value a[3].

**Task 3**

Write a C program that reads 10 numbers from the user and prints the first odd number in the list.

**Task 4**

Write a C program that reads 10 numbers from the user and prints the first even number in the list.

**Task 5**

Write a C program that reads 10 numbers from the user and prints the last odd number in the list.

**Task 6**

Write a C program that reads 10 numbers from the user and prints the last even number in the list.

**Task 7**

Write a C program which reads 5 numbers into an array and prints the largest number.

If the user enters 7, 13, 2, 10, 6 then your program should print 13.

**Task 8**

Write a C program which reads 5 numbers into an array and prints the largest number and its location in the array.

If the user enters 7, 13, 2, 10, 6 then your program should print “largest number 13 was found at location 1”.

**Task 9**

Write a C program which reads 5 numbers into an array and prints the smallest and largest number and their location in the array.

If the user enters 7, 13, -5, 10, 6 then your program should print

“Smallest number -5 was found at location 2”.

“Largest number 13 was found at location 1”.

**Task 10**

Write a C program which reads 5 numbers into an array, sorts/arranges the numbers from low to high and prints all numbers in the array.

If the user enters 7, 13, 2, 10, 6 then your program should print 2, 6, 7, 10, and 13.

**Task 11**

Write a C program which reads 5 numbers into an array, sorts/arranges the numbers from high to low and prints all numbers in the array.

If the user enters 7, 13, 2, 10, 6 then your program should print 13, 10, 7, 6, 2.

**Task 12:**

Write a C program that reads 10 numbers from the user, and then prints them in the reverse order.

**Task 13:**

Write a C program that reads a 5\*5 Matrix and prints the value in order.

Sample Output

Sample Input

6 4 7 8 9

3 7 1 9 9

8 6 4 2 7

2 4 2 5 9

4 1 6 7 3

6 4 7 8 9

3 7 1 9 9

8 6 4 2 7

2 4 2 5 9

4 1 6 7 3

**Task 14:**

Write a C program that reads a n\*n Matrix and calculate the sum for each row of the matrix.

Sum of the row 1: 34

Sum of the row 2: 29

Sum of the row 3: 27

Sum of the row 4: 22

Sum of the row 5: 21

Sample Output

6 4 7 8 9

3 7 1 9 9

8 6 4 2 7

2 4 2 5 9

4 1 6 7 3

Sample Input