

Programming in C

Duration time: 90 minutes

Introduction

Requirements

- Arrays.

Exercise 1

Write a program that will prompt the user to input ten integer values. The program will display the smallest and greatest of those values. It also displays the value that occur the most.

Exercise 2

Write a program to sort 10 integer values (reading from keyboard) in ascending and descending order.

Exercise 3

By using two-dimensional array, write C program to display a table of numbers as shown below:

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25

Exercise 4

By using two-dimensional array, write C program to display a matrix as shown below:

0	1	1	1	1
-1	0	1	1	1
-1	-1	0	1	1
-1	-1	-1	0	1
-1	-1	-1	-1	0

Exercise 5

By using two-dimensional array, write C program to display a table that represents a Pascal triangle of any size. In Pascal triangle, the first and the second rows are set to 1. Each element of the triangle (from the third row downward) is the sum of the element directly above it and the element to the left of the element directly above it. See the example Pascal triangle(size=5) below:

```
1
1    1
1    2    1
1    3    3    1
1    4    6    4    1
```