Programming in C

Duration time: 90 minutes

Introduction

Requirements

- Pointers – part II.

Exercise 1

Write a program that will ask the user to input three integer values from the keyboard. Then it will return pointer to the smallest and largest of those numbers. Write this in two functions. Each function return a proper pointer.

Exercise 2

Write a program that swap two numbers a and b using pointers.

Exercise 3

Write a program that rises x to the power of y. Function returns pointer to the result.

Exercise 4

Write a program that will prompt the user to input ten integer values. The program will put numbers into array. Write two functions. First function returns pointer to the smallest value. The second function returns pointer to the largest value.

Exercise 5

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

Exercise 6

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. Use two-dimensional array created dynamically. See the example Pascal triangle(size=5) below:

```
1

1       1
```

1 2 1

1 3 3 1

1 4 6 4 1