



COURSE: (CL-1004) OBJECT ORIENTED PROGRAMMING LAB

LAB TASK # 05
Structures

NOTE:

Only submit .cpp file of each question in a folder. Anyone who submits any other format file will get straight **ZERO**. Each question should have a separate .cpp file. Copy Paste or other UFM will also get **ZERO**. Use the following format for naming the folder Roll#_Name (P18-1234_NAME).

Q No.01: Structures

Create a structure called time. Its three members, all type int, should be called hours, minutes, and seconds. Write a program that prompts the user to enter a time value in hours, minutes, and seconds. This can be in 12:59:59 format, or each number can be entered at a separate prompt (“Enter hours:”, and so forth). The program should then store the time in a variable of type struct time, and finally print out the total number of seconds. Time to seconds conversion should be done using member function of struct time.

Q No.02: Structures

Consider the Fraction addition Program Lab 02 – Question 04, Modify the program so that all fractions are stored in variables of type struct fraction, whose two members are the fraction’s numerator and denominator (both type int). All fraction related data should be stored in structures of this type.

Q No.03: Structures

A phone number, such as (212) 767-8900, can be thought of as having three parts: the area code (212), the exchange (767), and the number (8900). Write a program that uses a structure to store these three parts of a phone number separately. Call the structure phone. Create two structure variables of type phone. Initialize one, and have the user input a number for the other one. Then display both numbers. The interchange might look like this:

Enter your area code, exchange, and number: 415 555 1212

My number is (212) 767-8900

Your number is (415) 555-1212

Q No.04: Structures

A point on the two-dimensional plane can be represented by two numbers: an x coordinate and a y coordinate. For example, (4,5) represents a point 4 units to the right of the vertical axis, and 5 units up from the horizontal axis. The sum of two points can be defined as a new point whose x coordinate is the sum of the x coordinates of the two points, and whose y coordinate is the sum of the y coordinates.

Write a program that uses a structure called point to model a point. Define three points, and have the user input values to two of them. Then set the third point equal to the sum of the other two, and display the value of the new point. Interaction with the program might look like this:

Enter coordinates for p1: 3 4

Enter coordinates for p2: 5 7

Coordinates of p1+p2 are: 8, 11