Assignment 10

[02.02.2021 – Tuesday – Lab 11]

Common to All Students:

Write a C Program using structures for the following problem statements

Note:

The problem statements need to be programmed by

  (i)   using structure variable

 (ii)   using typedef

(iii)   using array of structures

(iv)   using nested structure

 (v)   passing structure to function

(vi)   using union variable

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1. Enter the marks of 5 students in Chemistry, Mathematics and Physics (each out of 100) using a structure named Marks having elements roll no., name, chem_marks, maths_marks and phy_marks and then display the percentage of each student.

2. Write a structure to store the roll no., name, age (between 11 to 14) and address of students (more than 10). Store the information of the students.
    - print the names of all the students having age 14.
    - print the names of all the students having even roll no.
    - display the details of the student whose roll no is given (i.e. roll no. entered by the user).

3. Write a structure to store the name, account number and balance of customers (more than 10) and store their information.
    - print the names of all the customers having balance less than $200.
    - add $100 in the balance of all the customers having more than $1000 in their balance and then print the incremented value of their balance.

4. Write a structure to store the names, salary and hours of work per day of 10 employees in a company. Write a program to increase the salary depending on the number of hours of work per day as follows and then print the name of all the employees along with their final salaries.

Hours of work per day	8	10	>=12
Increase in salary	$50	$100	$150

5. Let us work on the menu of a library. Create a structure containing book information like accession number, name of author, book title and flag to know whether book is issued or not. Create a menu in which the following can be done.

   1 - Display book information

   2 - Add a new book

   3 - Display all the books in the library of a particular author

   4 - Display the number of books of a particular title

   5 - Display the total number of books in the library

   6 - Issue a book

   (If we issue a book, then its number gets decreased by 1 and if we add a book, its number gets increased by 1)

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