

**SSN COLLEGE OF ENGINEERING**  
**DEPARTMENT OF CSE**

**COMPUTER PRACTICES LABORATORY(GE6161)**

**Ex. No. 11 C Programming using Structures and Unions**

1) Display the mark sheet of 5 students using structures. The mark sheet should contain the following details:

Name  
Reg.No.  
5 Subject names with their corresponding marks  
Average

2) Define a data type for storing complex numbers and implement addition, subtraction and multiplication operations for the defined type. Write as a menu driven program and use functions for each operation. (Note: Declare the structure variable within the main function. Get all the inputs from the main function)

3) Define a structure data type TRAIN\_INFO. The type contains:

i) Train No.:	integer type
ii) Train Name:	string
iii) Departure Time:	aggregate type TIME
iv) Arrival Time:	aggregate type TIME
v) Start Station:	string
vi) End Station:	string

The structure type TIME contains two integer members: hour and minute. Maintain a train timetable with 5 records and implement the following operations:

- a) List all the records from the train timetable.
- b) List all trains that depart from a particular station at a particular time.
- c) List all the trains between a pair of start station and end station.
- d) Display the train number for a given train name.

Use menu for displaying the operations. Write each operation as a function. (Note: Declare the structure variable within the main function. Get all the inputs from the main function)

4) Demonstrate the difference between structure and union with a program. (Hint: Use the same members for both structure and union)