Advanced C programming
Assignment-2

1) Distinguish between structures and unions

2. Define structure. Illustrate with an example how structure variables are declared with different methods and also initialization of structures and accessing structure members.

3. Explain with an example:
   (i) Arrays of structures
   (ii) Arrays within structures.
   (iii) Structures within structures

4. Write a single program to illustrate the method of sending an entire structure as a parameter to a function.

5. Explain with an example, how the sharing of a storage space done by union members.

6. Write a C program to illustrate the significance of different storage classes wrt scope, & lifetime of variables.

7. What is dynamic memory allocation? Explain with general syntax and a program how dynamic memory functions are used?

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1. Write a C program to perform the following:

a) Define a structure named STUDENT having fields: rollno, name, ia1, ia2, ia3, cta.

b) read ( ) – reads the details of a student.

c) display ( ) – displays the details of the student.

d) compute ( ) – computes and displays the cie marks of the student.

2. Write a C program to perform the following:

a) Define a structure named BOOK having fields: Title, Edition and Price.

b) read ( ) - reads the details of n books.

c) Display () – displays the details of n books.

d) compute ( ) - determine and display the title of the book corresponding to highest price.

3. Write a C program to perform the following:

a) Define a structure named PLAYER having fields: name, score1, score2, score3

b) read ( ) – reads the details of n players.

c) display ( ) – displays the details of the n players.

d) compute ( ) – computes and displays the averages of each player.

4. Write a C program to perform the following:

a) Define a structure named COMPLEX having fields: real, imag.

b) read ( ) - reads a complex number.

c) display( ) – displays a complex number.

d) Add ( ) – finds the sum of the two complex numbers.

e) Diff ( ) – finds the difference between the two complex numbers.

5. Write a C program to perform the following:

a) Define a structure named TIME having fields: hh, mm, ss.

b) read () - reads a time.

c) display() – displays a time.

d) add() – finds the sum of the two timings.

e) diff() – finds the difference of the two timings