Structures in C Programming:- 10-03-2022 Theory Session:-


```
Keyword        struct myStruct    ← Structure tag
struct         {                    or structure
                                     name
                   int var1;
                   char var2[8];   Structure
                   float var3;      members
               }struct_var;
```


Memory representation for struct_var
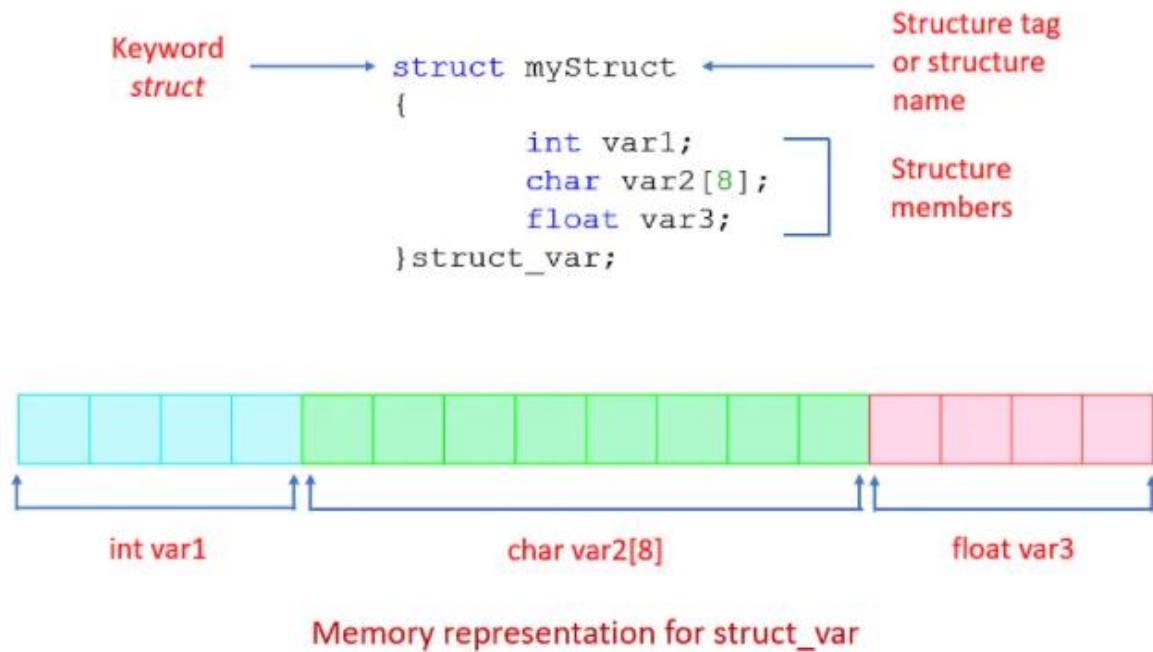
struct **Student** { // structure name- Student

       int Sl_No;   // members of the structure Student

       char Name [50];

       char Gender[1];

       float percentage;

       char Branch[75];

//   } student1, student2; // structure variables (or)

    } ;

// struct **Student** Stud1, Stud2 ;

struct **Student** stud[100];

int main()

{

   Struct **Student** stud1, stud2;

Structure with in Structure

Sl_No	Name	Gender	DOB			Percentage	Branch
			DD	MM	YY		
1	Madiajagan M	M				89	SCOPE
2		F					SENSE

Sample Structure C program:-

```c
#include <stdio.h>
#include <string.h>
struct Books {
   char  title[50];
   char  author[50];
   char  subject[100];
   int   book_id;
};
int main( ) {

   struct Books Book1;      /* Declare Book1 of type Book */
   struct Books Book2;      /* Declare Book2 of type Book */
    /* book 1 specification */
   strcpy( Book1.title, "C Programming");
   strcpy( Book1.author, "Nuha Ali");
   strcpy( Book1.subject, "C Programming Tutorial");
   Book1.book_id = 6495407;
   /* book 2 specification */
   strcpy( Book2.title, "Telecom Billing");
   strcpy( Book2.author, "Zara Ali");
   strcpy( Book2.subject, "Telecom Billing Tutorial");
   Book2.book_id = 6495700;
    /* print Book1 info */
   printf( "Book 1 title : %s", Book1.title);
   printf( "Book 1 author : %s", Book1.author);
   printf( "Book 1 subject : %s", Book1.subject);
   printf( "Book 1 book_id : %d", Book1.book_id);
   /* print Book2 info */
   printf( "Book 2 title : %s\n", Book2.title);
   printf( "Book 2 author : %s\n", Book2.author);
   printf( "Book 2 subject : %s\n", Book2.subject);
   printf( "Book 2 book_id : %d\n", Book2.book_id);
   return 0;
}
```