Presentation.

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ART OF PROGRAMMING

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What is Structure

- A structure is a collection of variables under a single name.
- A structure is a convenient tool for handling a group of logically related data items.
- Similarly structure is another user defined data type available in C that allows to combine data items of different kinds.
- A structure is a convenient way of grouping several pieces of related information together.

For ex: name, roll, fee, marks, address, gender and phone are related information of a student.

- To store information about a student, we would require to store the name of the student which is array of characters, roll of student which is integer type of data and so on.

Defining a structure…

Syntax: struct structure_name{

data_type member_variable1;

data_type member_variable1;

data_type member_variable1;

……

……

data_type member_variable1;

};

- Once structure_name is declared as new data type, then variables of that type can be declared as

- struct structure_name structure_variable;

For example

Let us create a structure named student that has name, roll, marks and remarks as members.

```
struct student{
        char
    name[20]; int
        roll;
    float marks;
        char
      remarks;
};
```

- Here, student is structure name and its members are name, roll, marks

Declaring Structure Variables…

It is possible to declare variables of a structure, after the structure is defined.

Structure variable declaration is similar to the declaration of variables of any other data types.

Structure variables can be declared in following two ways.

Declaring Structure variables separately

Declaring Structure Variables with Structure definition

Declaring multiple structure variables

Declaring Structure variables separately

```
struct Student
{
        char[20] name;
         int age;
         int rollno;
} ;
struct Student S1 , S2; //declaring variables of Student
```

Structure Initialization

- Like any other data type, structure variable can also be initialized at compile time.

```
struct Patient
{
        float height;
        int weight;
        int age;
};
struct Patient p1 = { 180.75 , 73, 23 };
```

Thank you 😊

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