

## 30-Day C Language Learning Plan

### Day 19: Structures - Basics

1. Structure for student
2. Array of structures

Notes:

① A structure in C is a user-defined data type that allows grouping variables of different types under one name.

SYNTAX:-

```
struct student {  
    char name[50];  
    int rollNo;  
    float marks;  
};
```

a. Define the structure (outside main() or inside).

b. Declare structure variables :-  
struct student s1;

c. Access members using the dot operator. (.);

② ARRAY OF STRUCTURE:-

↳ purpose : store multiple records (e.g. multiple students) in one variable.

## SYNTAX:-

```
struct student students [3];
```

## ACCESSING:-

① Assign directly at initialization:-

```
struct student {  
    char name[50];  
    int roll;  
    float marks;  
};
```

```
struct student s1 = { "Purvi", 1, 88.5 };
```

② Using `scanf()` or `gets()` to input directly into the member.

```
struct student s1;
```

```
printf ("Enter name: ");
```

```
scanf ("%s", s1.name);
```

(directly stores into char array)

```
printf ("Enter roll: ");
```

```
scanf ("%d", &s1.roll);
```

```
printf ("Enter marks: ");
```

```
scanf ("%f", &s1.marks);
```