

C++ Structures

⇒ Structures

- The structure is a **user defined datatype** in C++, used to combine different type of datatypes.
- Stores dissimilar datatypes.
- Elements stored in **contiguous memory locations**.

→ NOTE

1. Structure can be nested with another structure.
2. We can pass entire structure variable as argument to a function.

⇒ Creating structure

Struct **Structure-name** {

// Structure elements

}

→ Example 1

```
13 #include<iostream>
14 using namespace std;
15
16 struct student{ // structure name : student
17     string name;
18     int prn;
19     int Percentage;
20 };
21
22 int main(){
23     student s1; // student datatype and variable name s1
24     // just like int a;
25
26     s1.name = "Dhyey";
27     s1.prn = 1032220001;
28     s1.Percentage = 99;
29
30     cout<<s1.name<<endl;
31     cout<<s1.prn<<endl;
32     cout<<s1.Percentage<<endl;
33
34     return 0;
35 }
36
```

→ Example 2

```
1 // Example I
2
3 #include<iostream>
4 using namespace std;
5
6 struct car{
7     string brand;
8     int price_inL;
9     string origin;
10 };
11
12 int main(){
13
14     struct car c1,c2;
15
16     cout<<"Enter car brand = ";
17     cin>>c1.brand;
18
19     cout<<"Enter price in L = ";
20     cin>>c1.price_inL;
21
22     cout<<"Origin country = ";
23     cin>>c1.origin;
24
25     cout<<-----<<endl;
26
27     cout<<c1.brand<<" "<<c1.price_inL<<" "<<c1.origin<<endl;
28
29     return 0;
30 }
```