C++ Structure and Function

**Structure** variables can be passed to a **function** and returned in a similar way as normal arguments.

## Passing structure to function in C++

A structure variable can be passed to a function in similar way as normal argument. Consider this example:

### Example 1: C++ Structure and Function

#include <iostream>

using namespace std;

struct Person

{

char name[50];

int age;

float salary;

};

void displayData(Person); // Function declaration

int main()

{

Person p;

cout << "Enter Full name: ";

cin.get(p.name, 50);

cout << "Enter age: ";

cin >> p.age;

cout << "Enter salary: ";

cin >> p.salary;

// Function call with structure variable as an argument

displayData(p);

return 0;

}

void displayData(Person p)

{

cout << "\nDisplaying Information." << endl;

cout << "Name: " << p.name << endl;

cout <<"Age: " << p.age << endl;

cout << "Salary: " << p.salary;

}

**Output**

Enter Full name: Bill Jobs

Enter age: 55

Enter salary: 34233.4

Displaying Information.

Name: Bill Jobs

Age: 55

Salary: 34233.4

In this program, user is asked to enter the name, age and salary of a Person inside main()function.

Then, the structure variable p is to passed to a function using.

displayData(p);

The return type of displayData() is void and a single argument of type structure Person is passed.

Then the members of structure p is displayed from this function.

### Example 2: Returning structure from function in C++

#include <iostream>

using namespace std;

struct Person {

char name[50];

int age;

float salary;

};

Person getData(Person);

void displayData(Person);

int main()

{

Person p;

p = getData(p);

displayData(p);

return 0;

}

Person getData(Person p) {

cout << "Enter Full name: ";

cin.get(p.name, 50);

cout << "Enter age: ";

cin >> p.age;

cout << "Enter salary: ";

cin >> p.salary;

return p;

}

void displayData(Person p)

{

cout << "\nDisplaying Information." << endl;

cout << "Name: " << p.name << endl;

cout <<"Age: " << p.age << endl;

cout << "Salary: " << p.salary;

}

The output of this program is same as program above.

In this program, the structure variable p of type structure Person is defined under main()function.

The structure variable p is passed to getData() function which takes input from user which is then returned to main function.

p = getData(p);