Returning Objects from Functions

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The syntax for defining a function that returns an object by value is

```
class_name function_name (parameter_list) {
 // body of the function
}
```

C++ Return object to a Function:

```
1class_name function_name (parameter_list) {
2 // body of the function
3}
using namespace std;
class Student {
  public:
   int stId;
   int stAge;
   string stName;

   // In this function we returning the student object
   Student input(int n, int a, string s) {
      Student obj:
      obj.stId = n;
      obj.stAge = a;
      obj.stName = s;
      return obj;
   }
   // In this function we pass object as an argument
   void display(Student obj) {

     cout << "Name = " << onj.stName << endl;
     cout << "Id = " << onj.stId << endl;
     cout << "Age = " << onj.stAge << endl;
   }
};
int main() {
   Student s;
   s = s.input (1005, 20, James)
   s.display(s);
   return 0;
}
```

Output

```
Name = James
Id = 1005
Age = 20
```

C++ Return Object from a Function:

```
#include <iostream>
using namespace std;
class Student {
  public:
   int age1, age2;
};
// function that returns object of Student
Student newStudent() {
   Student student;

   // Initialize member variables of Student
   student.age1 = 10;
   student.age2 = 20;

   // print member variables of Student
   cout << "Age of Student 1 = " << student.age1 << endl;
   cout << "Age of Student 2 = " << student.age2 << endl;

   return student;
}
int main() {
   Student student1;

   // Call function
   student1 = newStudent();

   return 0;
}
```

Output

```
Age of Student 1 = 15
Age of Student 2 = 20
```

In this program, we have created a function newStudent() that returns an object of Student class.
We have called newStudent() from the main() method.

```
// Call function
student1 = newStudent();
```

Here, we are storing the object returned by the newStudent() method in the *student1*