

// C++ program to demonstrate accessing of data members

```
#include <bits/stdc++.h>
using namespace std;
class Geeks {
    // Access specifier
public:
    // Data Members
    string geekname;
    // Member Functions()
    void printname() { cout << "Geekname is:" << geekname; }
};
int main()
{
    // Declare an object of class geeks
    Geeks obj1;
    // accessing data member
    obj1.geekname = "Abhi";
    // accessing member function
    obj1.printname();
    return 0;
}
```

There are 2 ways to define a member function:

- Inside class definition
- Outside class definition

To define a member function outside the class definition we have to use the scope resolution :: operator along with class name and function name.

// C++ program to demonstrate function

// declaration outside class

```
#include <bits/stdc++.h>
using namespace std;
class Geeks
{
public:
    string geekname;
    int id;

    // printname is not defined inside class definition
    void printname();
}
```

```

// printid is defined inside class definition
void printid()
{
    cout <<"Geek id is: "<<id;
}
};

// Definition of printname using scope resolution operator ::
void Geeks::printname()
{
    cout <<"Geekname is: "<<geekname;
}
int main() {

    Geeks obj1;
    obj1.geekname = "xyz";
    obj1.id=15;

    // call printname()
    obj1.printname();
    cout << endl;

    // call printid()
    obj1.printid();
    return 0;
}

```

**// Program to illustrate the working of
// objects and class in C++ Programming**

```

#include <iostream>
using namespace std;

// create a class
class Room {

public:
    double length;
    double breadth;
    double height;

    double calculateArea() {
        return length * breadth;
    }
}

```

```

    }

    double calculateVolume() {
        return length * breadth * height;
    }
};

int main() {

    // create object of Room class
    Room room1;

    // assign values to data members
    room1.length = 42.5;
    room1.breadth = 30.8;
    room1.height = 19.2;

    // calculate and display the area and volume of the room
    cout << "Area of Room = " << room1.calculateArea() << endl;
    cout << "Volume of Room = " << room1.calculateVolume() << endl;

    return 0;
}

```

// Program to illustrate the working of // public and private in C++ Class

```

#include <iostream>
using namespace std;

class Room {

private:
    double length;
    double breadth;
    double height;

public:

    // function to initialize private variables
    void initData(double len, double brth, double hgt) {
        length = len;
        breadth = brth;
    }
}

```

```

        height = hgt;
    }

    double calculateArea() {
        return length * breadth;
    }

    double calculateVolume() {
        return length * breadth * height;
    }
};

int main() {

    // create object of Room class
    Room room1;

    // pass the values of private variables as arguments
    room1.initData(42.5, 30.8, 19.2);

    cout << "Area of Room = " << room1.calculateArea() << endl;
    cout << "Volume of Room = " << room1.calculateVolume() << endl;

    return 0;
}

```

/*C++ program to Read and print details of a student using class program in C++.*/*

```

#include <iostream>
using namespace std;

class student
{
    private:
        char name[30];
        int rollNo;
        int total;
        float perc;
    public:
        //member function to get student's details
        void getDetails(void);
        //member function to print student's details

```

```
        void putDetails(void);  
};
```

```
//member function definition, outside of the class
```

```
void student::getDetails(void){  
    cout << "Enter name: " ;  
    cin >> name;  
    cout << "Enter roll number: ";  
    cin >> rollNo;  
    cout << "Enter total marks outof 500: ";  
    cin >> total;
```

```
    perc=(float)total/500*100;  
}
```

```
//member function definition, outside of the class
```

```
void student::putDetails(void){  
    cout << "Student details:\n";  
    cout << "Name:"<< name << ",Roll Number:" << rollNo << ",Total:" << total << ",Percentage:"  
<< perc;  
}
```

```
int main()
```

```
{  
    student std;          //object creation  
  
    std.getDetails();  
    std.putDetails();  
  
    return 0;  
}
```