# MA122 - Computer Programming and Applications

Indian Institute of Space Science and Technology

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# Lecture 2

# My first program



```
1  #include <iostream>  // a PREPROCESSOR directive
2  int main()       // function header
3  {                      // start of function body
4  using namespace std;
5    // make definitions visible
6
7  cout << "Come up and C++ me some time."; // message
8
9  cout << endl;   // start a new line
10
11 cout << "You  wont  regret it!" << endl;
12   // more output
13
14 return 0; // terminate main()
15
16 }    // end of function body
```

# Lecture 2

# My first variable



```
1  #include <iostream>
2  int main()
3  {
4      using namespace std;
5      int carrots; // declare an integer variable
6      carrots = 25; // assign a value to the variable
7
8      cout << "I have ";
9      cout << carrots; //display the value of the
           variable
10     cout << " carrots.";
11     cout << endl;
12     carrots = carrots - 1; // modify the variable
13
14     cout << "Crunch, crunch. Now I have " << carrots
           << " carrots." << endl;
15     return 0;
16 }
```

# Lecture 2

# cin



```
1  #include <iostream>
2  int main()
3  {
4      using namespace std;
5
6      int carrots;
7
8      cout << "How many carrots do you have?" << endl;
9
10     cin >> carrots;  // C++ input
11     cout << "Here are two more. ";
12     carrots = carrots + 2;
13
14     // the next line concatenates output
15     cout << "Now you have " << carrots << " carrots."
           << endl;
16     return 0;
17 }
```

# cin and cout: A touch of class



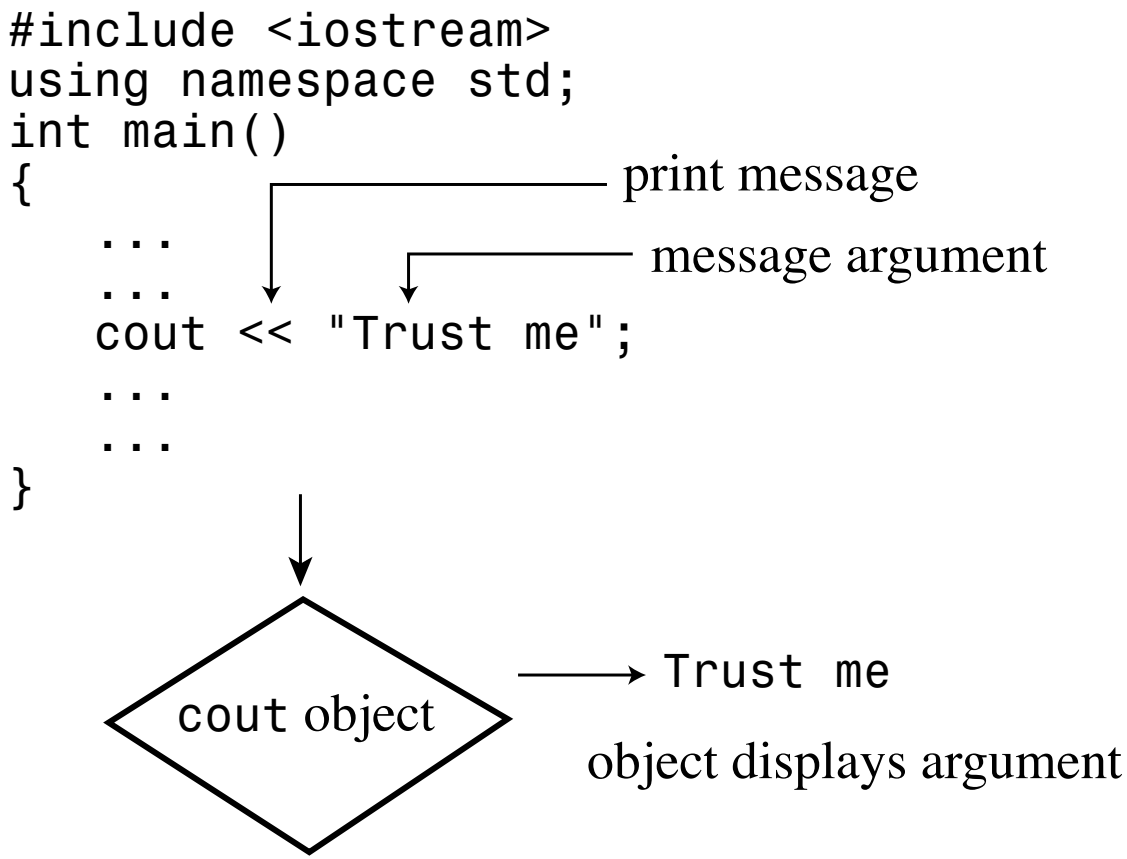


Figure 2.5 Sending a message to an object.

# Lecture 2

# sqrt



```
1  // sqrt.cpp -- using the sqrt() function
2  #include <iostream>
3  #include <cmath> // or math.h
4  int main()
5  {
6      using namespace std;
7      double area;
8      cout << "Enter the floor area, in square feet, of
           your home: ";
9      cin >> area;
10     double side;
11     side = sqrt(area);
12     cout << " Thats  the equivalent of a square " <<
           side
13     << " feet to the side." << endl;
14     cout << "How fascinating!" << endl;
15     return 0;
16 }
```

# explanation



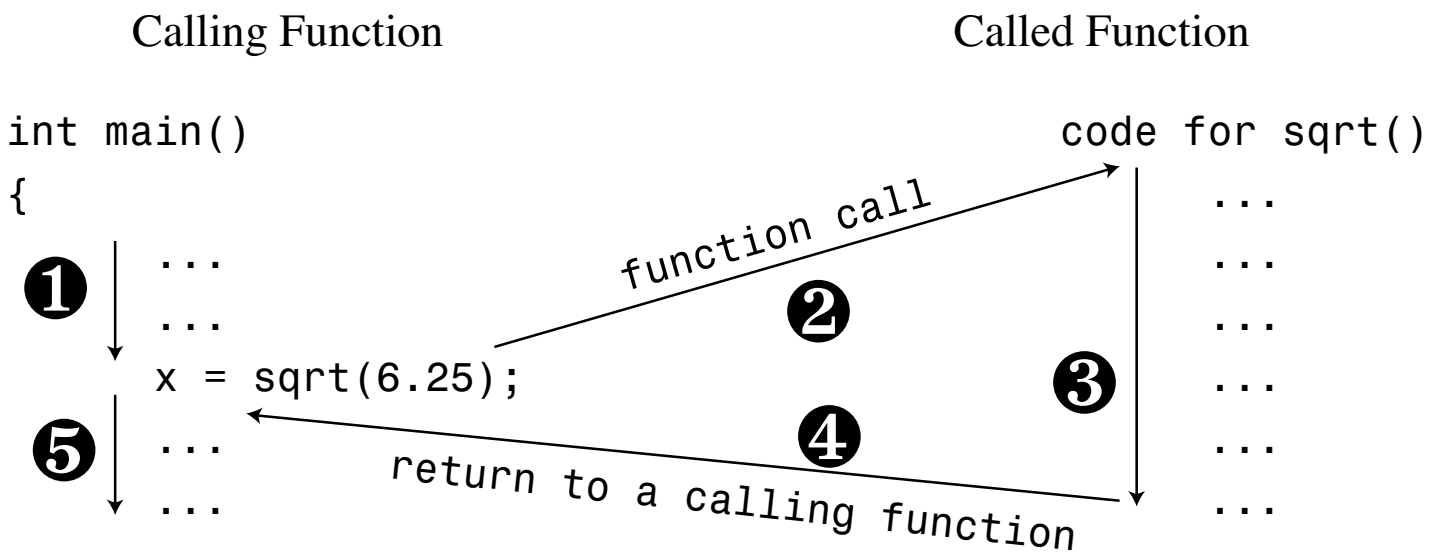


Figure 2.6 Calling a function.

# more details



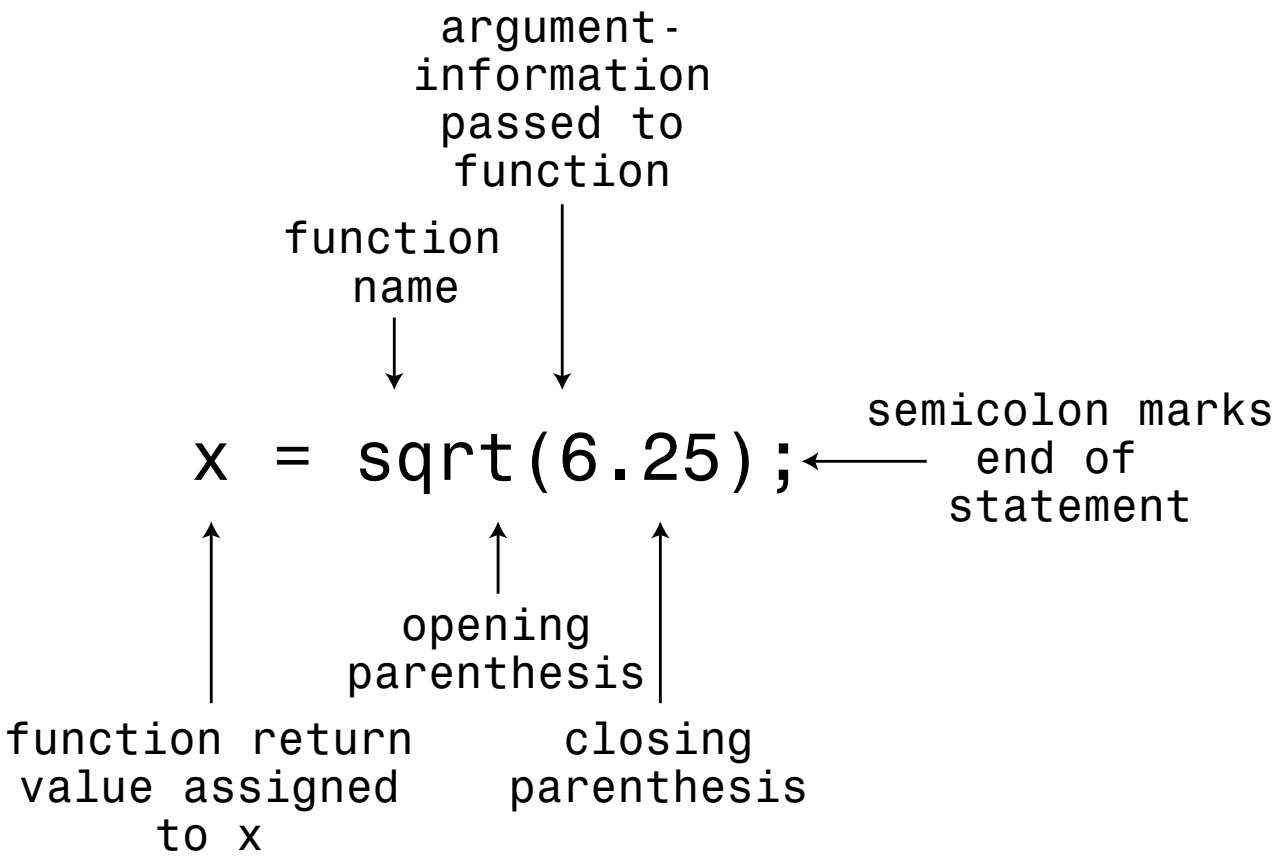


Figure 2.7 Function call syntax.