Every object in C++ has access to its own address through an important pointer called **this** pointer. The **this** pointer is an implicit parameter to all member functions. Therefore, inside a member function, this may be used to refer to the invoking object. Friend functions do not have a **this** pointer, because friends are not members of a class. Only member functions have a **this** pointer.

Let us try the following example to understand the concept of this pointer:

#include <iostream>

using namespace std;

class Box

{

public:

// Constructor definition

Box(double l=2.0, double b=2.0, double h=2.0)

{

cout <<"Constructor called." << endl;

length = l;

breadth = b;

height = h;

}

double Volume()

{

return length \* breadth \* height;

}

int compare(Box box)

{

return this->Volume() > box.Volume();

}

private:

double length; // Length of a box

double breadth; // Breadth of a box

double height; // Height of a box

};

int main(void)

{

Box Box1(3.3, 1.2, 1.5); // Declare box1

Box Box2(8.5, 6.0, 2.0); // Declare box2

if(Box1.compare(Box2))

{

cout << "Box2 is smaller than Box1" <<endl;

}

else

{

cout << "Box2 is equal to or larger than Box1" <<endl;

}

return 0;

}

When the above code is compiled and executed, it produces the following result:

Constructor called.

Constructor called.

Box2 is equal to or larger than Box1