

```
#1
#include "Rectangle.h"
#include <iostream>
using namespace std;

int main() {
    Rectangle rect1(5,5);
    Rectangle rect2 = rect1;

    cout << "Area of rect1: " << rect1.area() << endl;
    cout << "Area of rect2: " << rect2.area() << endl;
}
```

```
#ifndef RECTANGLE_H
#define RECTANGLE_H
class Rectangle {

public:
    Rectangle(int a = 0, int b = 0);
    Rectangle(const Rectangle &obj);
    ~Rectangle();
    int area();

private:
    int width;
    int height;
};
#endif
```

```
#include <iostream>
#include "Rectangle.h"
using namespace std;

Rectangle::Rectangle(int a, int b) : width(a), height(b) {}

Rectangle::Rectangle(const Rectangle &obj) {
    width = obj.width;
    height = obj.height;
    cout << "Copy constructor called." << endl;
}
```

```
Rectangle::~Rectangle() {
    cout << "Destructor called." << endl;
}
```

```
int Rectangle::area() {
    return width * height;
}
```

```
Copy constructor called.
Area of rect1: 25
Area of rect2: 25
Destructor called.
Destructor called.
```

#2

```
#include <iostream>
#include <vector>
using namespace std;
int main() {
    vector<int> numbers = {1, 2, 3, 4, 5};

    numbers.push_back(6);

    for (int num : numbers) {
        cout << num << " ";
    }
    return 0;
}
```

```
1 2 3 4 5 6 |
```