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Rectangle Area

by Skr379

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Create two classes:

Rectangle

The *Rectangle* class should have two data fields-*width* and *height* of *int* types. The class should have *display()* method, to print the *width* and *height* of the rectangle separated by space.

RectangleArea

The *RectangleArea* class is derived from *Rectangle* class, i.e., it is the sub-class of *Rectangle* class. The class should have *read_input()* method, to read the values of *width* and *height* of the rectangle. The *RectangleArea* class should also overload the *display()* method to print the area $(\texttt{width} \times \texttt{height})$ of the rectangle.

Input Format

The first and only line of input contains two space separated integers denoting the width and height of the rectangle.

Constraints

- $1 \leq \texttt{width}, \texttt{height} \leq 100$

Output Format

The output should consist of exactly two lines:
In the first line, print the *width* and *height* of the rectangle separated by space.
In the second line, print the *area* of the rectangle.

Sample Input

```
10 5
```

Sample Output

```
10 5
50
```

Explanation

As, $\texttt{width} = 10$ and $\texttt{height} = 5$, so $\texttt{area} = \texttt{width} \times \texttt{height} = 50$

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Current Buffer (saved locally, editable) C++14

```
#include <iostream>

using namespace std;
class Rectangle
{
protected:
    int m_width;
    int m_height;
public:
    void display()
    {
        std::cout << m_width << " " << m_height << std::endl;
    }
};
class RectangleArea: public Rectangle
{
public:
    void  read_input()
    {
        std::cin >> m_width >> m_height;
    }
    void display()
    {
        std::cout << m_width * m_height << std::endl;
    }
};


int main()
{
    /*
     * Declare a RectangleArea object
     */
    RectangleArea r_area;

    /*
     * Read the width and height
     */
    r_area.read_input();

    /*
     * Print the width and height
     */
    r_area.Rectangle::display();

    /*
     * Print the area
     */
    r_area.display();

    return 0;
}
```

Line: 26 Col: 3

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