**Single Inheritance**

**Q.1:** Create two classes:

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

**RectangleArea**
The RectangleArea class is derived from the Rectangle class, i.e., it is the sub-class of the Rectangle class. The class should have to override the base class member function, to read the values of width and height of the rectangle. The RectangleArea class should also have the area ()member function to calculate and print the area (width \* height ) of the rectangle.

**Q.2:** Write a program that creates a class Shap. The class should have two data fields-base and height of double. The class should have the getdata() and showdata() member function, to print the width and height of the rectangle separated by space. From base class drive three classes: Rectangle, Triangle, and parallelogram, all drive classes have their own class data member area. The classes should have to override the base class member functions, to read and display the values. Besides, classes also have constructors for the initialization of objects and destructor for the deallocation of objects.

Write a main () function to test the all Shap by creating the objects of them, asking the user to fill in data with getdata(), and then displaying the data with showdata().

**Hints:**

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| [Rectangle](https://www.mathsisfun.com/geometry/rectangle.html)Area = w × hWhere width consider as a base | [Triangle](https://www.mathsisfun.com/triangle.html)Area = ½ × b × h | [Parallelogram](https://www.mathsisfun.com/geometry/parallelogram.html)Area = b × h |

**Q.3:** Imagine a publishing company that markets both book and audiocassette versions of its works. Create a class publication that stores the title (a string) and price (type float) of a publication. From this class derive two classes: book, which adds a page count (type int), and tape, which adds a playing time in minutes (type float). Each of these three classes should have a getdata() function to get its data from the user at the keyboard, and a putdata() function to display its data. Write a main () program to test the book and tape classes by creating instances of them, asking the user to fill in data with getdata(), and then displaying the data with putdata().

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**Q.4:**

