2. We would like to implement a *Rectangle* class. You are recruited to implement this class again using an existing class called *Line*. Complete the following Rectangle class implementation. More details about each method is provided in comments. Notice: Line class and Location class support the following methods. Based on your particular design, you may or may not need to use all of them.

Line class

- Constructor: `Line(double startx, double starty, double endx, double endy)`
- Moves the line object: `void move(double dx, double dy)`
- Gets the line’s start point: `Location getStart()`
- Gets the line’s end point: `Location getEnd()`

Location class

- Retrieves the Location’s x coordinate: `double getX()`
- Retrieves the Location’s y coordinate: `double getY()`

```java
public class Rectangle {
    //Place all class variables here

    /* Constructor method
     * (x,y) -coordinates of the upper left corner of the bounding rectangle
     * width, height -width and height of the bounding rectangle */
    public Rectangle(double x, double y, double width, double height) {
    }

    //Moves the object in the x and y direction by the amounts specified
    public void move(double dx, double dy) {
    }

    /* Determines if a particular position is contained within the Rectangle. Notice: Your program should return true if
    the point is within the defined rectangle (even if not directly on the boundary lines). */
    public boolean contains(Location point) {
    }
}
```