

1. Goals

We want to create two classes:

- (1) `Point(x: int, y: int)`. This represents a lattice point (x, y) in a Cartesian plane.
- (2) `Rectangle(p1: Point, p2: Point)`. This represents a rectangle with top-left point p_1 and bottom-right point p_2 .

Within the `Rectangle` class, implement the following method:

```
public boolean isOverlap(Rectangle other)
```

This method should return true if the two rectangles overlap a positive area (not just a point or a line) and false otherwise.

Remark 1. All `Rectangle` instances will be constructed with valid points. $p_1.x < p_2.x$ and $p_1.y > p_2.y$.

2. Tasks

- (1) Implement the `Point` class.
- (2) Implement the `Rectangle` class.
- (3) Implement the `isOverlap` method.
- (4) Create a GitHub pull request (PR) that passes the continuous integration (CI) tests.