2013. Detect Squares

Description

You are given a stream of points on the X-Y plane. Design an algorithm that:

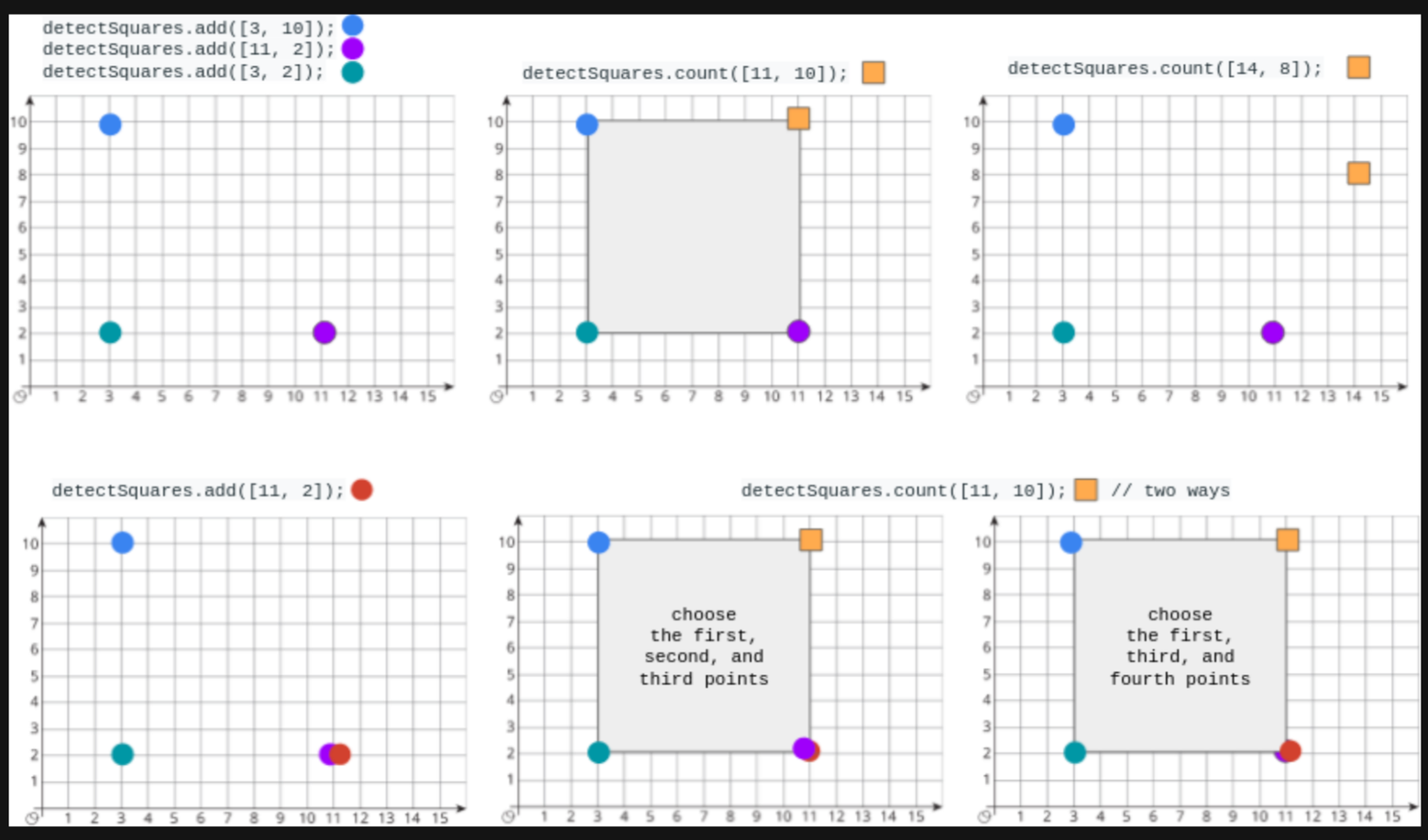
- **Adds** new points from the stream into a data structure. **Duplicate** points are allowed and should be treated as different points.
- Given a query point, **counts** the number of ways to choose three points from the data structure such that the three points and the query point form an **axis-aligned square** with **positive area**.

An **axis-aligned square** is a square whose edges are all the same length and are either parallel or perpendicular to the x-axis and y-axis.

Implement the `DetectSquares` class:

- `DetectSquares()` Initializes the object with an empty data structure.
- `void add(int[] point)` Adds a new point `point = [x, y]` to the data structure.
- `int count(int[] point)` Counts the number of ways to form **axis-aligned squares** with point `point = [x, y]` as described above.

Example 1:



Input
```
["DetectSquares", "add", "add", "add", "count", "count", "add", "count"]
[[], [[3, 10]], [[11, 2]], [[3, 2]], [[11, 10]], [[14, 8]], [[11, 2]], [[11, 10]]]
```
Output
```
[null, null, null, null, 1, 0, null, 2]
```

Explanation
```
DetectSquares detectSquares = new DetectSquares();
detectSquares.add([3, 10]);
detectSquares.add([11, 2]);
detectSquares.add([3, 2]);
detectSquares.count([11, 10]); // return 1. You can choose:
// - The first, second, and third points
detectSquares.count([14, 8]); // return 0. The query point cannot form a square with any points in the data structure.
detectSquares.add([11, 2]); // Adding duplicate points is allowed.
detectSquares.count([11, 10]); // return 2. You can choose:
// - The first, second, and third points
// - The first, third, and fourth points
```

Constraints:

- `point.length == 2`
- `0 <= x, y <= 1000`
- At most `3000` calls **in total** will be made to `add` and `count`.