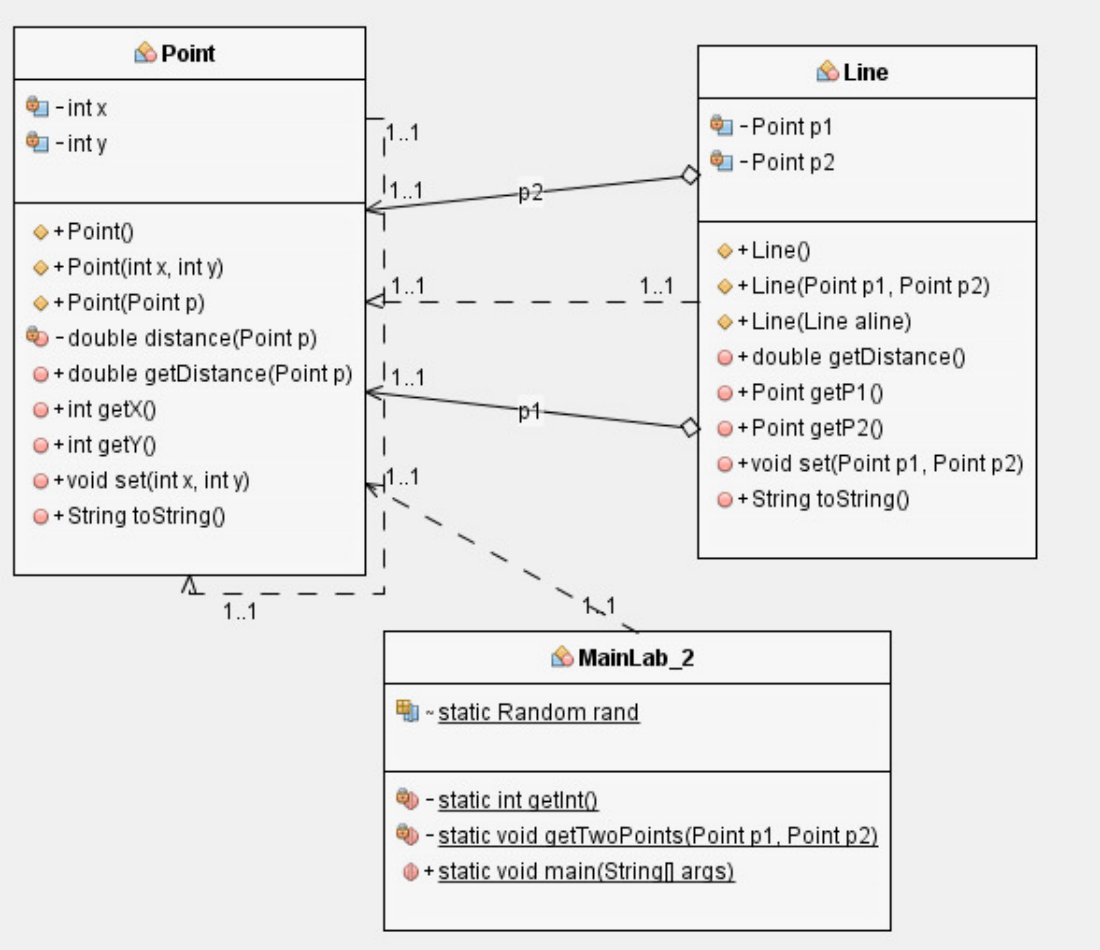
CSIT121 – Lab 2
File name: YourName_Lab_2.java

In Lab 2, you will explore the concepts of class composition.

What is a point? A point has two coordinates x and y. If we have two points, we can compute the distance between the two points.

What is a line? A line has two points. If we have a line, we can get the length (distance) of that line.

The following UML diagrams show the relationship of the two classes, and the main method:



Implement the two classes based on the above UML diagrams. You can add in more methods but not remove any method from the UML.

In the main method, you have to, randomly, generate a few Line objects and display the Line info. Some of the methods or info that I listed in the MainLab_2's UML, you need to implement and use them. For example, a method generates and returns a

random integer; a method generates and returns the two random points. You can add in more methods

Upon executing of your program, the following output will be displayed on the monitor screen:

```
Set 1
Given Point (66, 36)
Given Point (78, -83)
Line ( Point (66, 36),  Point (78, -83), distance = 119.6035)
------------------------
Set 2
Given Point (-13, 90)
Given Point (39, 16)
Line ( Point (-13, 90),  Point (39, 16), distance = 90.4434)
------------------------
Set 3
Given Point (52, 86)
Given Point (70, 14)
Line ( Point (52, 86),  Point (70, 14), distance = 74.2159)
------------------------
Set 4
Given Point (89, 24)
Given Point (23, -68)
Line ( Point (89, 24),  Point (23, -68), distance = 113.2254)
------------------------
Set 5
Given Point (27, 84)
Given Point (-27, -45)
Line ( Point (27, 84),  Point (-27, -45), distance = 139.8463)
```

Put all the classes in one file, and the file name must be `YourName_A2.java` and upload this file to Moodle system.