# Hands-on Experiment # 4 : Worksheet

Section\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

No more than 3 students per one submission of this worksheet.

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## Part A: Java API

1. Place the file “Point.class” (which is a Java bytecode) in the same folder as the Java source code files you will be writing in this Hands-on Experiment.
2. Understand the source file “Point.pdf” (Point.java). Assume we want to create a point called “startPoint” at (2,3). Write the code to do the following task:
   1. Create this point
   2. Compute the distance of this point to the original point (origin)
   3. Clear this point

A close up of a logo

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1. Explain the difference between “static data” and “object data”

Static data is stored in classes while object data is stored in each instance/object of a class.

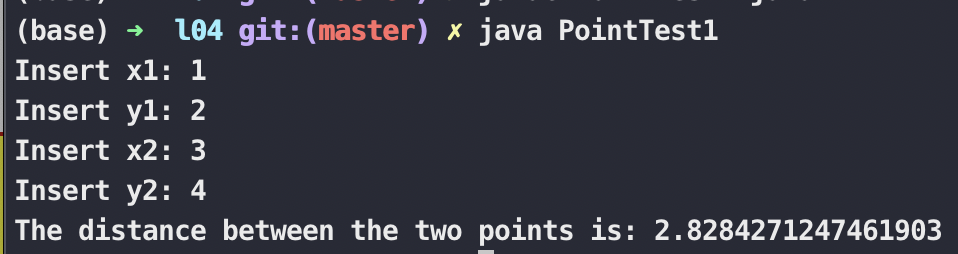
## Part B: Scanner

1. Write a Java program “PointTest1.java” to read two points from user. Locations x and y are entered by user separately. The output is the distance between two points. (Hint: use “Scanner” to input data from user)
   1. List your source code below.

A picture containing text

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* 1. Capture the program output.



## Part C: BufferedReader (Advanced Problem)

1. Place the file “location.txt” in the same folder as the Java source code. In this file there is a single point, where x and y are shown in Line 1 and 2, respectively. Write a Java program “PointTest2.java” to read “location.txt” and output the distance to the original location (origin). (Hint: use “BufferedReader” to read data from file)
   1. What is the location in the text file “location.txt”?

20, 50

* 1. List your source code below.

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* 1. Capture the program output.

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* 1. Modify location in the text file to “(2, 3)”. Then, rerun your program and capture the program output.

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Submit this worksheet (by only one member of the group) via <http://www.myCourseVille.com> (Assignments > Hands-on Experiment # 4) **before noon of the day after your lecture.**