

CS476, Fall 2009, MCCOY
HOMEWORK #1

1. Implement the Midpoint or Bresenham's 'integer' line drawing algorithm. Test it. Make sure it draws the same line from either end of the line, i.e., the line from (x1,y1) to (x2,y2) is the same as the line from (x2,y2) to (x1,y1). Make sure it doesn't omit the end points.
2. The only draw function you are permitted to use at this time is:

```
page.drawRect(x,y,0,0);
```

Print the points that would be plotted between the following (x,y) pairs to validate your line drawing algorithm (save them in a text file for the grader):

x1	y1	x2	y2
1	2	7	5
7	5	1	2
1	2	7	10
10	2	1	7
3	1	5	8

3. Design and test a version that produces a graphical output. Add a parameter that will allow you to draw a thick line three pixels wide.
4. Make sure that you comment your code so that Mr. Yan has an easy time grading it.
5. Needed files may be retrieved from my website: www.cs.nmsu.edu/~hue

Due Date: 9/10/2009 Value: 60 points.

Deliverables:

**Softcopy of all source code and test cases to the grader
(Mr. Yan), submitted to:**

www.cs.nmsu.edu/~jyan