AreaOfATriangle.java - Notepad

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```
import java.util.Scanner;
 public class AreaOfATriangle{
  public static void main(String[] args){
   Scanner reader = new Scanner(System.in);
   System.out.print("Enter first point: ");
   double x1 = reader.nextDouble();
   System.out.print("Enter second point: ");
   double y1 = reader.nextDouble();
   System.out.print("Enter third point: ");
   double x2 = reader.nextDouble();
   System.out.print("Enter fourth point: ");
   double y2 = reader.nextDouble();
   System.out.print("Enter fifth point: ");
   double x3 = reader.nextDouble();
   System.out.print("Enter sixth point: ");
   double y3 = reader.nextDouble();

   double diffSquare1 = (x2 - x1)*(x2 - x1);
   double diffSquare2 = (y2 - y1)*(y2 - y1);
   double diffSquare3 = (x3 - x1)*(x3 - x1);
   double diffSquare4 = (y3 - y1)*(y3 - y1);
   double diffSquare5 = (x3 - x2)*(x3 - x2);
   double diffSquare6 = (y3 - y2)*(y3 - y2);

   double side1 = Math.sqrt(diffSquare1 + diffSquare2);
   double side2 = Math.sqrt(diffSquare3 + diffSquare4);
   double side3 = Math.sqrt(diffSquare5 + diffSquare6);

   double side = ((side1) + (side2) + (side3))/2;
   double area = Math.sqrt(side*(side - side1)*(side - side2)*(side - side3));
   System.out.printf("area is %.2f", area);
  }
 }
```

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C:\Windows\System32\cmd.exe

```
C:\Users\Dell\Documents>javac AreaOfATriangle.java

C:\Users\Dell\Documents>java AreaOfATriangle
Enter first point: 1.5
Enter second point: -3.4
Enter third point: 4.6
Enter fourth point: 5
Enter fifth point: 9.5
Enter sixth point: -3.4
area is 33.60
C:\Users\Dell\Documents>
```

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```
  }
 }

 PSEUDOCODE
- prompt the user to collect three points of a triangle
- calculate the area of the triangle
- display the result
Stage2
- prompt the user to enter the first point coordinate for x1 and y1
- collect the first coordinate
- store it as first as x1 and second y1
- prompt the user to enter the second point coordinate for x2 and y2
- collect the second coordinate
- store the second coordinate as x2 and y2 respectively
- Prompt the user to enter the third point coordinate for x3 and y3
- collect the third coordinate as x3 and y3
- store it as x3 and y3 respectively
- caculate square of difference using
  (x2 - x1)*(x2 - x1)
- store the result as diffSquare1
  (y2 - y1)*(y2 - y1)
- store the result as diffSquare2
  (x3 - x1)*(x3 - x1)
- store the result as diffSquare3
  (y3 - y1)*(y3 - y1)
- Store the result as diffSquare4
  (x3 - x2)*(x3 - x2)
- Store the result as diffSquare5
  (y3 - y2)*(y3 - y2)
- Store the result as diffSquare6
-calcuate the length of the sides ot the triangle using
 sqrt(diff1 + diff2)
-store the result as side1
 sqrt(diff3 + diff4)
```

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C:\Windows\System32\cmd.exe

```
C:\Users\Dell\Documents>javac AreaOfATriangle.jav

C:\Users\Dell\Documents>java AreaOfATriangle
Enter first point: 1.5
Enter second point: -3.4
Enter third point: 4.6
Enter fourth point: 5
Enter fifth point: 9.5
Enter sixth point: -3.4
area is 33.60
C:\Users\Dell\Documents>
```

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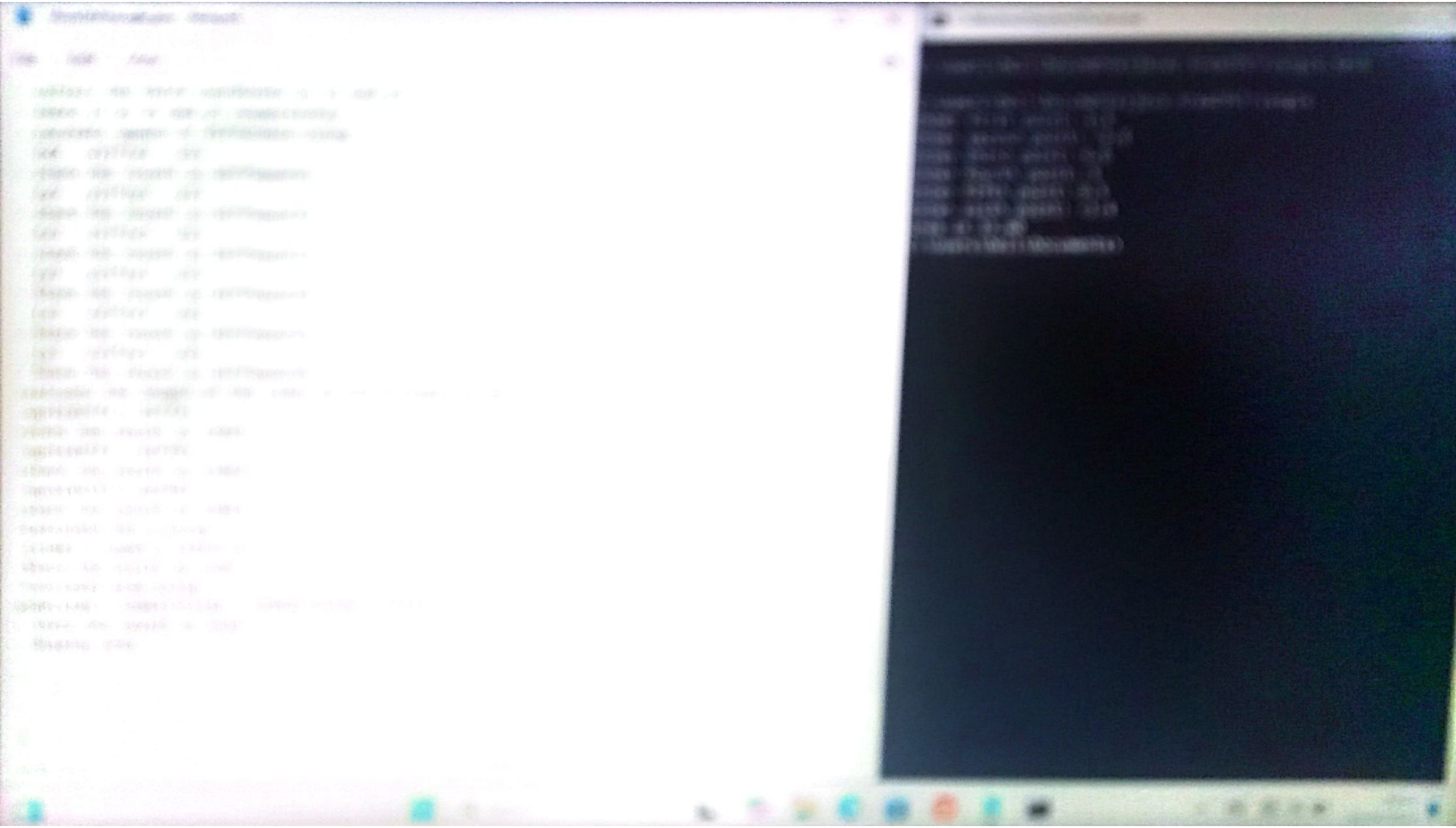

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```
- collect the third coordinate as x3 and y3
- store it as x3 and y3 respectively
- caculate square of difference using
  (x2 - x1)*(x2 - x1)
- store the result as diffSquare1
  (y2 - y1)*(y2 - y1)
- store the result as diffSquare2
  (x3 - x1)*(x3 - x1)
- store the result as diffSquare3
  (y3 - y1)*(y3 - y1)
- Store the result as diffSquare4
  (x3 - x2)*(x3 - x2)
- Store the result as diffSquare5
  (y3 - y2)*(y3 - y2)
- Store the result as diffSquare6
-calcuate the length of the sides ot the triangle using
 sqrt(diff1 + diff2)
-store the result as side1
 sqrt(diff3 + diff4)
-store the result as side2
 sqrt(diff5 + diff6)
-store the result as side3
-Calculate the s using
 (side1 + side2 + side3)/2
-Store the result as side
-Calculate area using
side(side - side1)*(side - side2)*(side - side3)
- Store the result as area
- Display area
```

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