**Class Assignment**

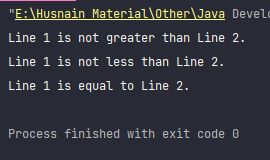
**Code:**

package com.company;  
  
*//Creating the abstract class AbstractLine*abstract class *AbstractLine*{  
  
 *//Defining the abstract methods* public abstract double getLength();  
 public abstract boolean isGreater(Object *a*, Object *b*);  
 public abstract boolean isLess(Object *a*, Object *b*);  
 public abstract boolean isEqual(Object *a*, Object *b*);  
}  
  
*//Creating the concrete child class*public class ConcreteLine extends *AbstractLine* {  
  
 *//Declaring fields* int x1;  
 int y1;  
 int x2;  
 int y2;  
  
 public ConcreteLine(int *x1*, int *y1*, int *x2*, int *y2*){  
 this.x1 = *x1*;  
 this.x2 = *x2*;  
 this.y1 = *y1*;  
 this.y2 = *y2*;  
 }  
  
 *//Length getter* @Override  
 public double getLength() {  
 return Math.*sqrt*((x2-x1)\*(x2-x1) + (y2-y1)\*(y2-y1));  
 }  
  
 *//Overriding the abstract method isGreater()* @Override  
 public boolean isGreater(Object *a*, Object *b*) {  
 ConcreteLine c = (ConcreteLine) *a*;  
 ConcreteLine d = (ConcreteLine) *b*;  
 return c.getLength() > d.getLength();  
 }  
 *//Overriding the abstract method isLess()* @Override  
 public boolean isLess(Object *a*, Object *b*) {  
 ConcreteLine c = (ConcreteLine) *a*;  
 ConcreteLine d = (ConcreteLine) *b*;  
 return c.getLength() < d.getLength();  
 }  
 *//Overriding the abstract method isEqual()* @Override  
 public boolean isEqual(Object *a*, Object *b*) {  
 ConcreteLine c = (ConcreteLine) *a*;  
 ConcreteLine d = (ConcreteLine) *b*;  
 return c.getLength() == d.getLength();  
 }  
}

**Test Class:**

package com.company;  
  
*//Creating the Test class*public class TestLine {  
  
 *//Main method* public static void main(String[] *args*) {  
  
 *//Creating two objects of ConcreteLine class* ConcreteLine line1 = new ConcreteLine(1,2,3,4);  
 ConcreteLine line2 = new ConcreteLine(8,7,6,5);  
  
 double l1 = line1.getLength();  
 double l2 = line2.getLength();  
  
 *//Printing the output whether line1 is greater, smaller or equal to line2* if (l1 > l2){  
 System.*out*.println("Line 1 is greater than Line 2.");  
 }else{  
 System.*out*.println("Line 1 is not greater than Line 2.");  
 }  
  
 if (l1 < l2){  
 System.*out*.println("Line 1 is less than Line 2.");  
 }else{  
 System.*out*.println("Line 1 is not less than Line 2.");  
 }  
  
 if (l1 == l2){  
 System.*out*.println("Line 1 is equal to Line 2.");  
 }else{  
 System.*out*.println("Line 1 is not equal to Line 2.");  
 }  
 }  
}

**Output Screenshot:**

****