

```
1 package tp_poo;
2 import java.util.Random;
3 public class Point2d {
4     private int x;
5     private int y;
6
7     public int getX() { return x; }
8     public void setX(int x) {this.x = x;}
9     public void setY(int y) {this.y = y;}
10    public int getY() {return y;}
11    private int rand(){
12        Random r=new Random();
13        return r.nextInt(10);
14    }
15    public Point2d(){
16        setX(rand());
17        setY(rand());
18        //System.out.print("Un nouveau point cree: x= "+x+" y= "+y+" ");
19    }
20    public Point2d(int a,int b){
21        x=a; y=b;
22        //System.out.print("Un nouveau point cree:"+x+" "+y+" ");
23    }
24    double distance(){ return Math.sqrt(x*x+y*y);}
25    double distance(Point2d p){return Math.sqrt((x-p.x)*(x-p.x)+(y-p.y)*(y-p.y));}
26
27    void print(){System.out.println(" x="+x+" y= "+y+" ");}
28    void printAll(){System.out.print(" x="+x+" y= "+y+" distance =" + distance());}
29
30    void change(int a,int b){x=a;y=b;}
31    void move(int dx,int dy){x=x+dx;y=y+dy;}
32    void rotate(){ int t=x; x=y;y=-x; }
33
34    static boolean isEquel(Point2d a,Point2d b){return a.distance()==b.distance();}
35    Point2d Merge(Point2d p){ return new Point2d(x+p.x,Math.max(y,p.y));}
36 }
```

```
5 package tp_poo;
```

```
6  
7 public class NewMain {
```

```
8  
9  
10 public static void main(String[] args) {
```

```
11  
12     Point2d [] T=new Point2d[7];
```

```
13     for(int i=0;i<T.length;i++) {
```

```
14         T[i]=new Point2d();
```

```
15         T[i].print();
```

```
16     }
```

```
17  
18     Point2d p=new Point2d();
```

```
19  
20     for(int i=0;i<T.length;i++) {
```

```
21         System.out.println("distance= "+ p.distance(T[i]));
```

```
22     }
```

```
23  
24     p.rotate();
```

```
25     for(int i=0;i<T.length;i++) {
```

```
26         System.out.println("distance= "+ p.distance(T[i]));
```

```
27     }
```