

```
1
2 class Question2
3 {
4     public static void main(String arg[])
5     {
6
7
8         Line l1 = new Line();
9         Line l2 = new Line();
10        Point p1 = new Point();
11        Point p2 = new Point();
12        p1.setPoint(2,3);
13        p2.setPoint(2,5);
14
15        l1.set_line_cordinates_using_points(p1,p2);
16        l2.set_line_cordinates_using_coordinates(6,2,9,4);
17
18        l1.slope();
19        l1.display_line();
20        l2.slope();
21        l2.display_line();
22        l1.starting_ending_points();
23        l2.starting_ending_points();
24
25    }
26 }
27 class Line
28 {
29
30     Point a,b;
31     Line() {
32         a = new Point();
33         b = new Point();
34     }
35
36     void set_line_cordinates_using_points(Point p1,Point p2)
37     {
38         this.a = p1;
39         this.b = p2;
40     }
41     void set_line_cordinates_using_coordinates(int x1,int y1,int x2,int y2)
42     {
43         a.x = x1;
44         a.y = y1;
45         b.x = x2;
46         b.y = y2;
47     }
48
49     void slope()
50     {
```

```

51         if(a.x == b.x)
52         {
53             System.out.println("Line is parallel to Y - axis");
54             return;
55         }
56         float m = (a.y - b.y)/(float)(a.x - b.x);
57         System.out.println("slope of the line is:" + m);
58     }
59     void display_line()
60     {
61         if(a.x==b.x)
62         {
63             System.out.println("The equation of the line is: x = "
+ a.x);
64             return;
65         }
66         float m = (a.y - b.y)/(float)(a.x - b.x);
67         System.out.println("Line is: (y - " + a.y + ") " + " = " + m + "(x
- " + a.x + ")");
68     }
69     void starting_ending_points()
70     {
71         System.out.println("starting point is:(" + a.x + "," + a.y +
")");
72         System.out.println("ending point is:(" + b.x + "," + b.y + ")");
73     }
74 }
75 };
76
77
78 C:\Users\Dell\Desktop\JAVA\Assignments>java Question2
79 Line is parallel to Y - axis
80 The equation of the line is: x = 2
81 slope of the line is:0.6666667
82 Line is: (y - 2) = 0.6666667(x -6)
83 starting point is:(2,3)
84 ending point is:(2,5)
85 starting point is:(6,2)
86 ending point is:(9,4)
87
88

```