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1 // Assignment #2 - 2
2 // CS 504
3 // Wei
4
5 import java.util.*;
6
7 class AssignmentTwo-Two
8 {
9     public static void main(String[] args)
10    {
11        int n = -10; i = -10; j = -10; k = -10;
12
13        do
14        {
15            n = getAndVerifyInput("Enter size of circle(n)", 0, Integer.MAX_VALUE);
16            if (n==0) break;
17
18            i = getAndVerifyInput("Enter first point(i)", 0, n);
19            do
20            {
21                j = getAndVerifyInput("Enter second point(j)", 0, n);
22            } while (j==i);
23
24            k = getAndVerifyInput("Enter third point(k)", 0, n);
25
26            if (j>i)
27            {
28                if (k <= j && k >i)
29                {
30                    System.out.println("\nk does not lie on the arc from" +
31                        "j to i when moving clockwise on a circle of size n.");
32                }
33                else
34                {
35                    System.out.println("\nk lies on the arc from j to i" +
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36         "when moving clockwise on a circle of size n.");
37     }
38 }
39 else
40     if (k > j && k <= i)
41     {
42         System.out.println("\nk lies on the arc from j to i " +
43             "when moving clockwise on a circle of size n.");
44     }
45     else
46     {
47         System.out.println("\nk doesn't lie on the arc from j " +
48             "to i when moving clockwise on a circle of size n.");
49     }
50 } while (n!=0);
51 }
52
53 static int getAndVerifyInput(String userPrompt, int lowerBound,
54                             int upperBound, int temp)
55 {
56     int result;
57     Scanner keyboard = new Scanner(System.in);
58
59     do
60     {
61         System.out.println(userprompt);
62         result = keyboard.nextInt();
63         if (temp > 0 && result == -1)
64         {
65             return temp;
66         }
67     } while (result > upperBound || result < lowerBound);
68
69     return result;
70 }
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71     }  
72
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