```java
1  // Assignment #2
2  // CS 504
3  // Wei
4
5  import java.util.*;
6
7  class AssignmentTwo
8      {
9          public static void main(String[] args)
10             {
11                 int n,i,j,k;
12
13                 do
14                 {
15                     n = getAndVerfyInput("Enter size of circle(n)", 0, Integer.MAX_VALUE);
16                     if (n==0) break;
17
18                     i = getAndVerfyInput("Enter first point(i)", 0, n);
19                     do
20                     {
21                         j = getAndVerfyInput("Enter second point(j)", 0, n);
22                     } while (j==i);
23
24                     k = getAndVerfyInput("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 getAndVerfyInput(String userPrompt, int lowerBound, int upperBound)
54            {
55                System.out.println(userPrompt);
56
57                int result;
58                Scanner keyboard = new Scanner(System.in);
59                result = keyboard.nextInt();
60
61                while   (result > upperBound || result < lowerBound)
62                {
63                    System.out.println(userPrompt);
64                    result = keyboard.nextInt();
65                }
66
67                return result;
68            }
69    }
70
```