Code- Mutual Exclusion

```
package org.met.ds;
import java.util.*;

class tokenring {
   public static void main(String args[]) throws Throwable {
      Scanner scan = new Scanner(System.in);
      System.out.println("Enter no of Nodes:");
      int n = scan.nextInt();
      int m = n - 1;
      int token = 0;
      int ch = 0, flag = 0;
      for (int i = 0; i < n; i++) {
         System.out.print("" + i);
      }
      System.out.println("" + 0);
      do {
         System.out.println("Enter sender:");
         int s = scan.nextInt();
         System.out.println("Enter receiver:");
         int r = scan.nextInt();
         System.out.println("Enter Data:");
         int a;
         a = scan.nextInt();
         System.out.print("Token Passing");
         for (int i = token, j = token; (i % n) != s; i++, j = (j + 1) % n) {
            System.out.print("" + j + "->");
         }
         System.out.println("" + s);
         System.out.println("Sender" + s + "Sending Data:" + a);
         for (int i = s + 1; i != r; i = (i + 1) % n) {
            System.out.println("Data" + a + "Forwarded By:" + i);
         }
         System.out.println("Receiver" + r + "Received Data:" + a + "\n");
         token = s;
         do {
            try {
               if (flag == 1)
                  System.out.print("Invalid Input!!...");
               System.out.print("Do you want to send again?? Enter 1 for yes and 0 for No:");
               ch = scan.nextInt();
               if (ch != 1 && ch != 0)
                  flag = 1;
               else
                  flag = 0;
            } catch (InputMismatchException e) {
               System.out.println("Invalid Input");
            }
         } while (ch != 1 && ch != 0);
      } while (ch == 1);
   }
}
```

Output-

```
Enter no of Nodes:
6
0123450
Enter sender:
```

2
Enter receiver:
5
Enter Data:
1
Token Passing0->1->2
Sender2Sending Data:1
Data1Forwarded By:3
Data1Forwarded By:4
Receiver5Received Data:1

Do you want to send again?? Enter 1 for yes and 0 for No:0