import java.util.Scanner;

public class Tring {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the number of nodes: ");

        int n = sc.nextInt();

        // Decides the number of nodes forming the ring

        int token = 0;

        for (int i = 0; i < n; i++)

        System.out.print(" " + i);

        System.out.println(" " + 0);

        try {

        while (true) {

        System.out.print("Enter sender: ");

        int s = sc.nextInt();

        System.out.print("Enter receiver: ");

        int r = sc.nextInt();

        System.out.print("Enter Data: ");

        String d = sc.next();

        System.out.print("Token passing:");

        //current token not equal to sender, increment i by 1 and j by j+1%n

        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: " + d);

        // start forwarding from node after sender until it becomes equal to receiver and increment byi+1%n

        for (int i = (s + 1) % n; i != r; i = (i + 1) % n) {

        System.out.println("Data " + d + " forwarded by " + i);

        }

        System.out.println("Receiver " + r + " received data: " + d);

        token = s;

        }

        } catch (Exception e) {

        System.out.println("Error occurred: " + e.getMessage());

        }

        }

}

Output:  
  
Enter the number of nodes: 4

0 1 2 3 0

Enter sender: 0

Enter receiver: 1

Enter Data: hello

Token passing: 0

Sender 0 sending data: hello

Receiver 1 received data: hello

Enter sender: 1

Enter receiver: 2

Enter Data: hello

Token passing: 0-> 1

Sender 1 sending data: hello

Receiver 2 received data: hello

Enter sender: