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Assignment 5

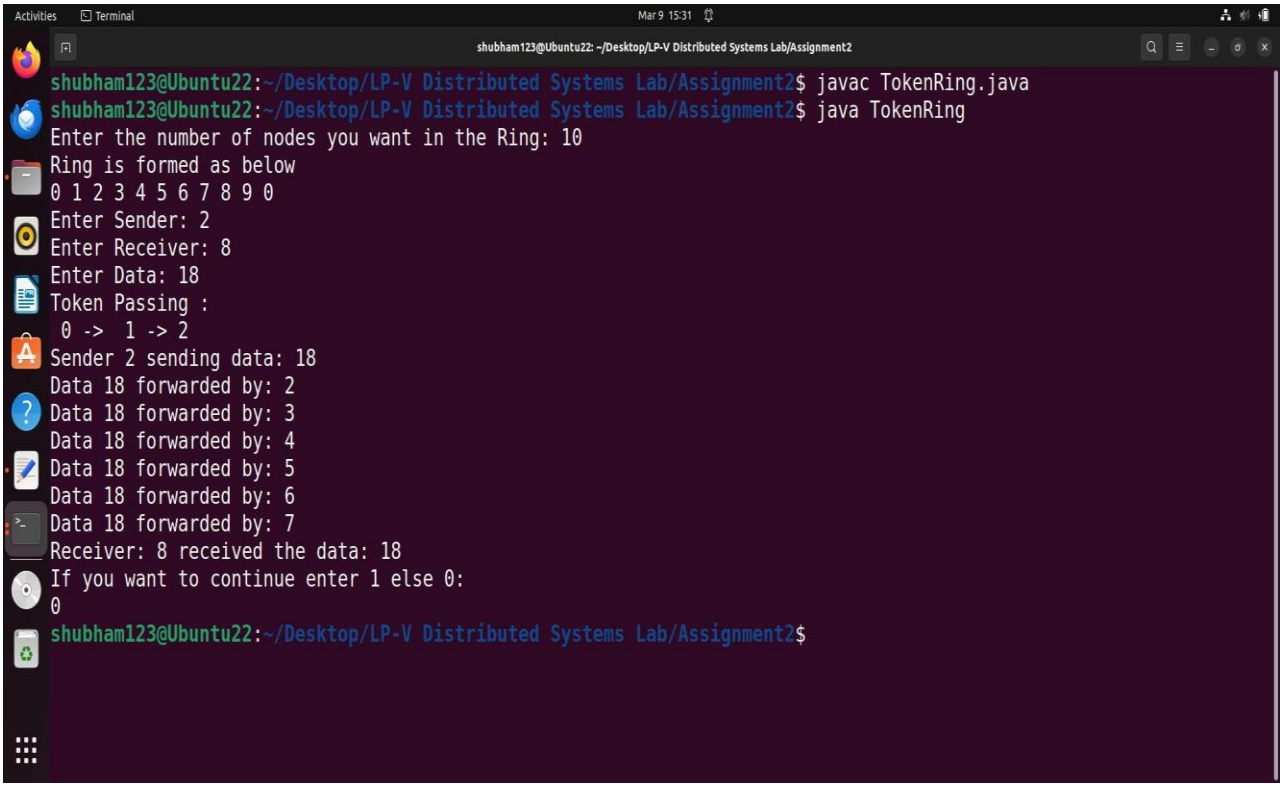
Code:

TokenRing.java

```
import java.util.Scanner;

public class TokenRing {

    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the number of nodes you want in the Ring: ");
        int n = sc.nextInt();

        System.out.println("Ring is formed as below");

        for (int i = 0; i < n; i++) {
            System.out.print(i + " ");
        }

        System.out.println("0");

        int choice = 0;

        do {
            System.out.print("Enter Sender: ");
            int sender = sc.nextInt();

            System.out.print("Enter Receiver: ");
            int receiver = sc.nextInt();

            System.out.print("Enter Data: ");
            int data = sc.nextInt();

            int token = 0;

            System.out.println("Token Passing :");

            for (int i = token; i < sender; i++) {
                System.out.print(" " + i + " -> ");
            }

            System.out.println(sender);
            System.out.println("Sender " + sender + " sending data: " + data);

            for (int i = sender; i != receiver; i = (i + 1) % n) {
                System.out.println("Data " + data + " forwarded by: " + i);
            }
```

```
            System.out.println("Receiver: " + receiver + " received the data: " + data);
            token = sender;

            System.out.println("If you want to continue enter 1 else 0: ");
            choice = sc.nextInt();

        } while (choice == 1);
    }
}
```

Output
:



Conclusion:
In this way Token Ring algorithm has been implemented. This algorithm is easy to implement and verify but the biggest drawback of this algorithm is that if a token is lost, it will have to be generated. Determining that a token is lost can be difficult.