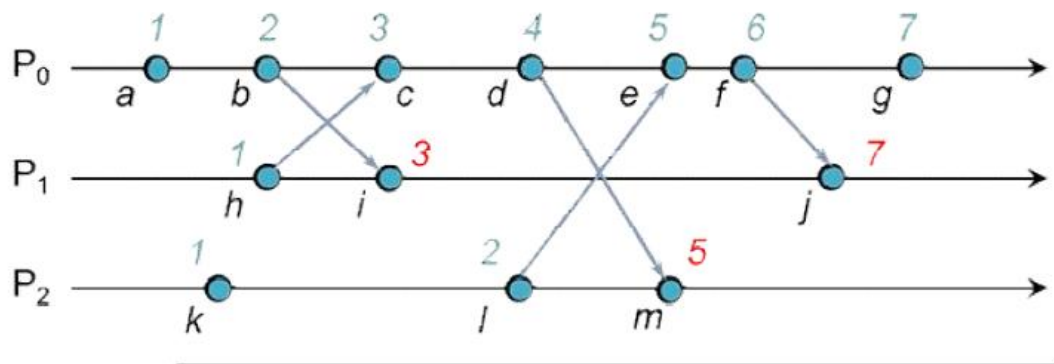
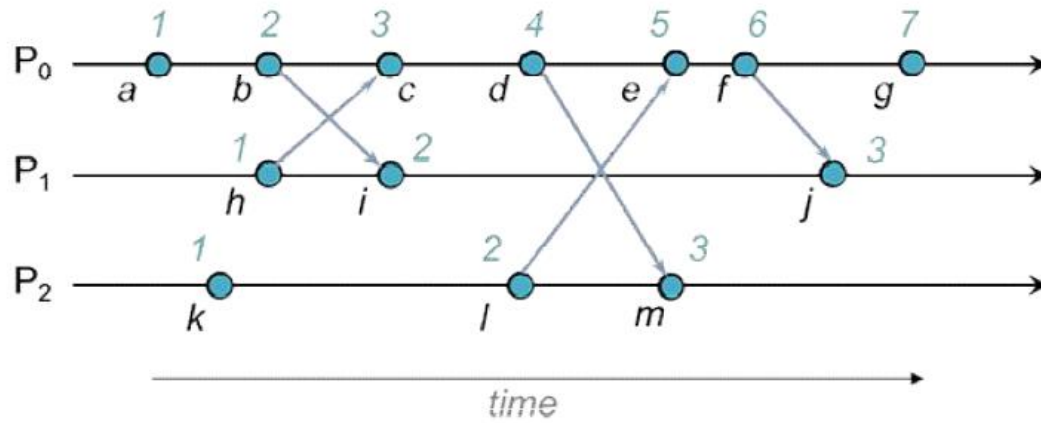


Assignment 8

Implement Lamport's clock synchronization algorithm and discuss its time complexity.

Input:



Code:

```
C:\Nihar\M-Tech\Sem 2\Distributed Systems\LABS\LAB 8>python lamport.py
Enter the no. of events in Process 1 : 7
{1: 1, 2: 2, 3: 3, 4: 4, 5: 5, 6: 6, 7: 7}

Enter the no. of events in Process 2 : 3
{1: 1, 2: 2, 3: 3}

Enter the no. of events in Process 3 : 3
{1: 1, 2: 2, 3: 3}

Enter the no of communication lines : 5

Enter the sending process number : 1
Enter the receiving process number : 2
Enter the sending event number : 2
Enter the receiving event number : 2
P1 --> P2
New lamport value of "event 2" in process P2 is : 3

Enter the sending process number : 2
Enter the receiving process number : 1
Enter the sending event number : 1
Enter the receiving event number : 3
P2 --> P1
New lamport value of "event 3" in process P1 is : 3

Enter the sending process number : 1
Enter the receiving process number : 3
Enter the sending event number : 4
Enter the receiving event number : 3
P1 --> P3
New lamport value of "event 3" in process P3 is : 5

Enter the sending process number : 3
Enter the receiving process number : 1
Enter the sending event number : 2
Enter the receiving event number : 5
P3 --> P1
New lamport value of "event 5" in process P1 is : 5

Enter the sending process number : 1
Enter the receiving process number : 2
Enter the sending event number : 6
Enter the receiving event number : 3
P1 --> P2
New lamport value of "event 3" in process P2 is : 7

Final lamport timestamps of the 3 process are
{1: 1, 2: 2, 3: 3, 4: 4, 5: 5, 6: 6, 7: 7}
{1: 1, 2: 3, 3: 7}
{1: 1, 2: 2, 3: 5}
```