Project: Donate Blood Save Life

Course Code: CSE435

Section: 02

Submitted To:

Dr. Shamim H Ripon

Professor
Department of Computer Science & Engineering

Submitted by:

| Name:	ID:
Muhammad Farabi Hossain	2016-3-60-051
Istiak Ahmed	2016-3-60-042
Md.Tauhidul islam Bhuiyan	2016-2-60-036

Introduction:

Donor seeker is an online platform for all kind of people who need emergency blood. This is not like traditional blood banks, it is a place of regular blood donor. The blood seeker will be able to search blood donor by his/her(blood seeker) location, the blood seeker will be able to search by two available options such as he/she can post to forum by his/her certain location, donor will get notification according to certain location. Another option is blood seeker will see the list of all donors by blood groups and locations, blood seeker will be able to call or notify one by one from the list of donors...

Sequence Diagram(1) for Admin to Database :
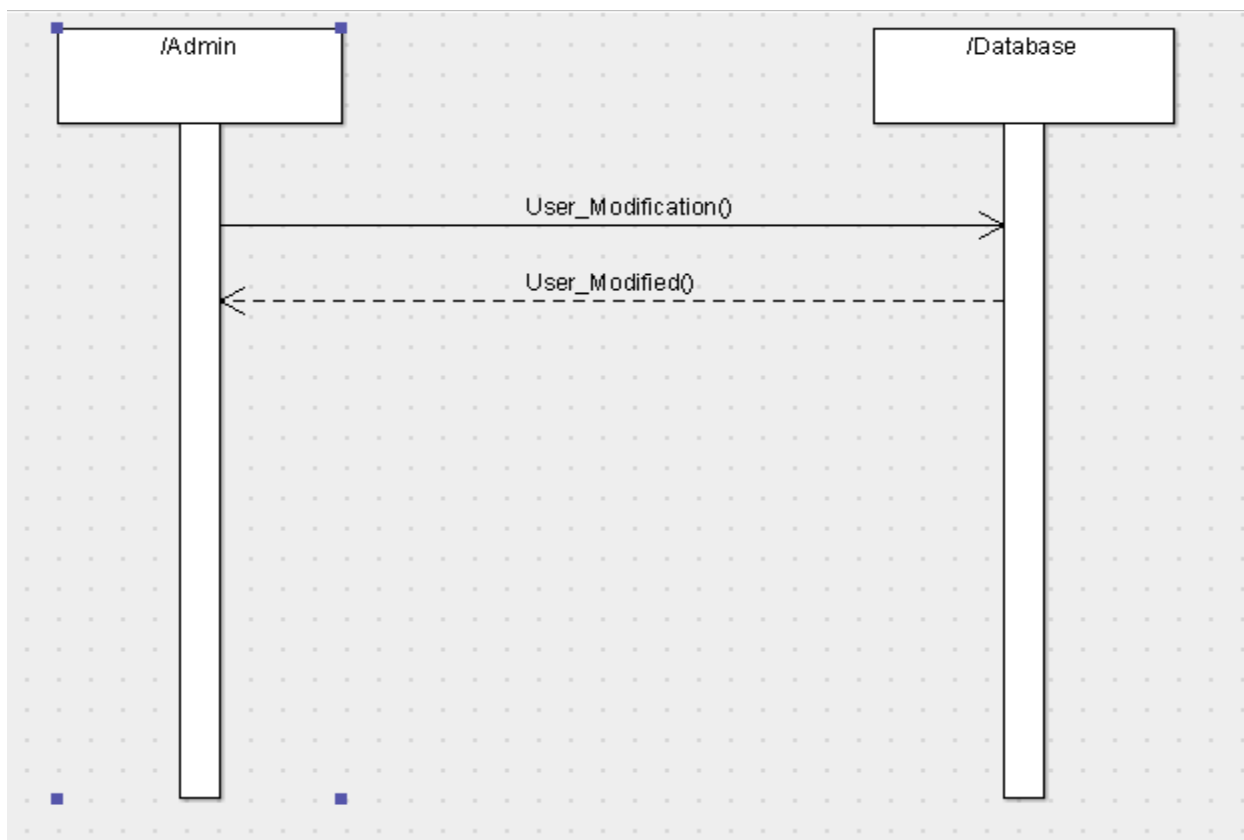
Promela Code(1) :

```
mtype {MSG, ACK};

chan toAdmin = [1] of {mtype, bit};

chan toDatabase = [1] of {mtype, bit};


proctype Admin(chan in, out)

{
        bit sendbit, recvbit;

        do

        :: out ! MSG, sendbit ->

                in ? ACK, recvbit;

                if

                :: recvbit == sendbit ->

                        sendbit = 1-sendbit;

                :: else

                fi

        od

}


proctype Database(chan in, out)

{
        bit recvbit;

        do

        :: in ? MSG(recvbit) ->

          out ! ACK(recvbit);
```
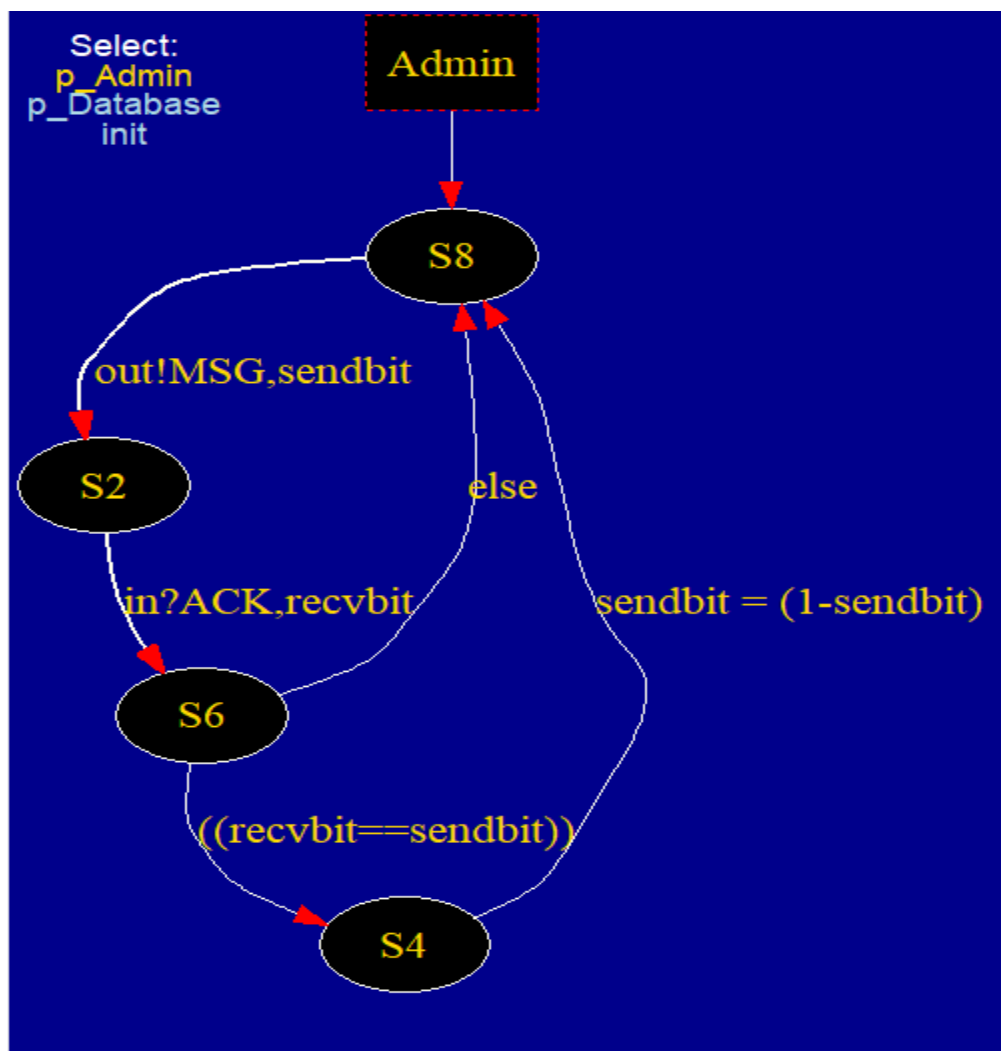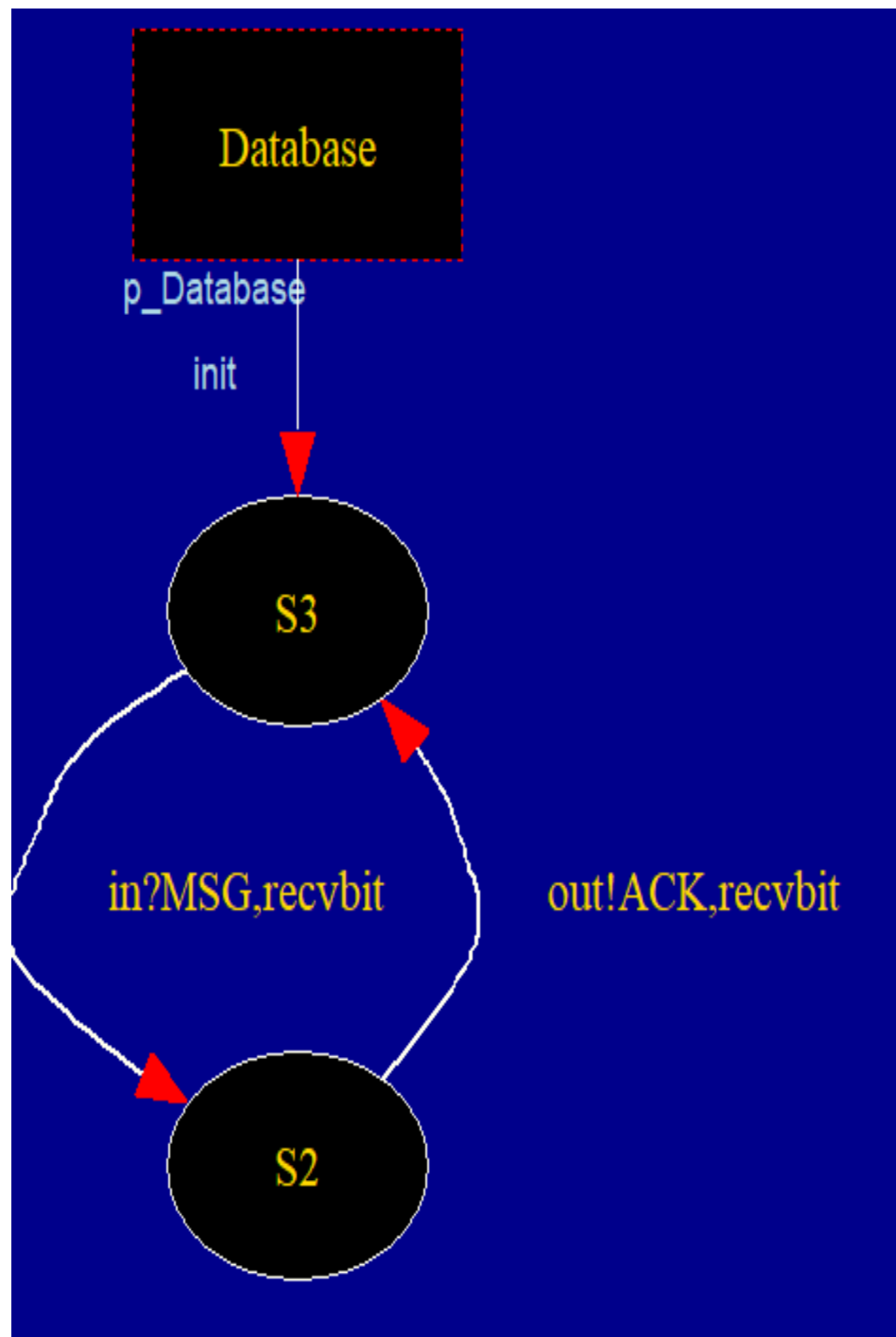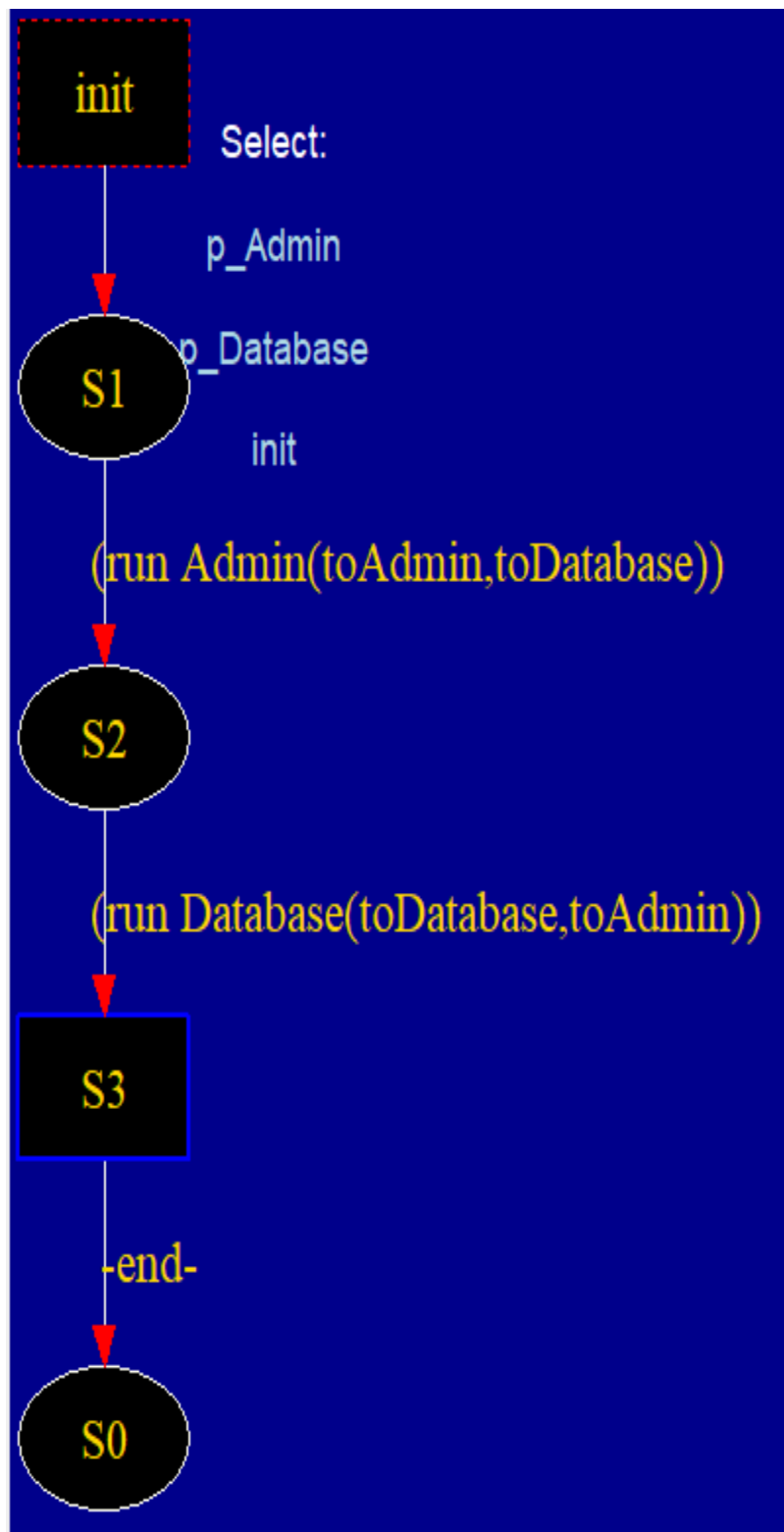
```
        od

}


init

{

        run Admin(toAdmin, toDatabase);

        run Database(toDatabase, toAdmin);

}
```

Automata View :

Database

p_Database

init

S3

in?MSG,recvbit

out!ACK,recvbit

S2

Simulation :

Admin:1:1
2!MSG,0
Database:1:2
2?MSG,0
1!ACK,0
1?ACK,0
2!MSG,1
2?MSG,1
1!ACK,1
1?ACK,1
2!MSG,0
2?MSG,0
1!ACK,0
1?ACK,0
2!MSG,1
2?MSG,1
1!ACK,1
1?ACK,1
2!MSG,0
2?MSG,0
1!ACK,0
1?ACK,0
2!MSG,1
2?MSG,1
1!ACK,1
1?ACK,1
2!MSG,0
2?MSG,0
1!ACK,0
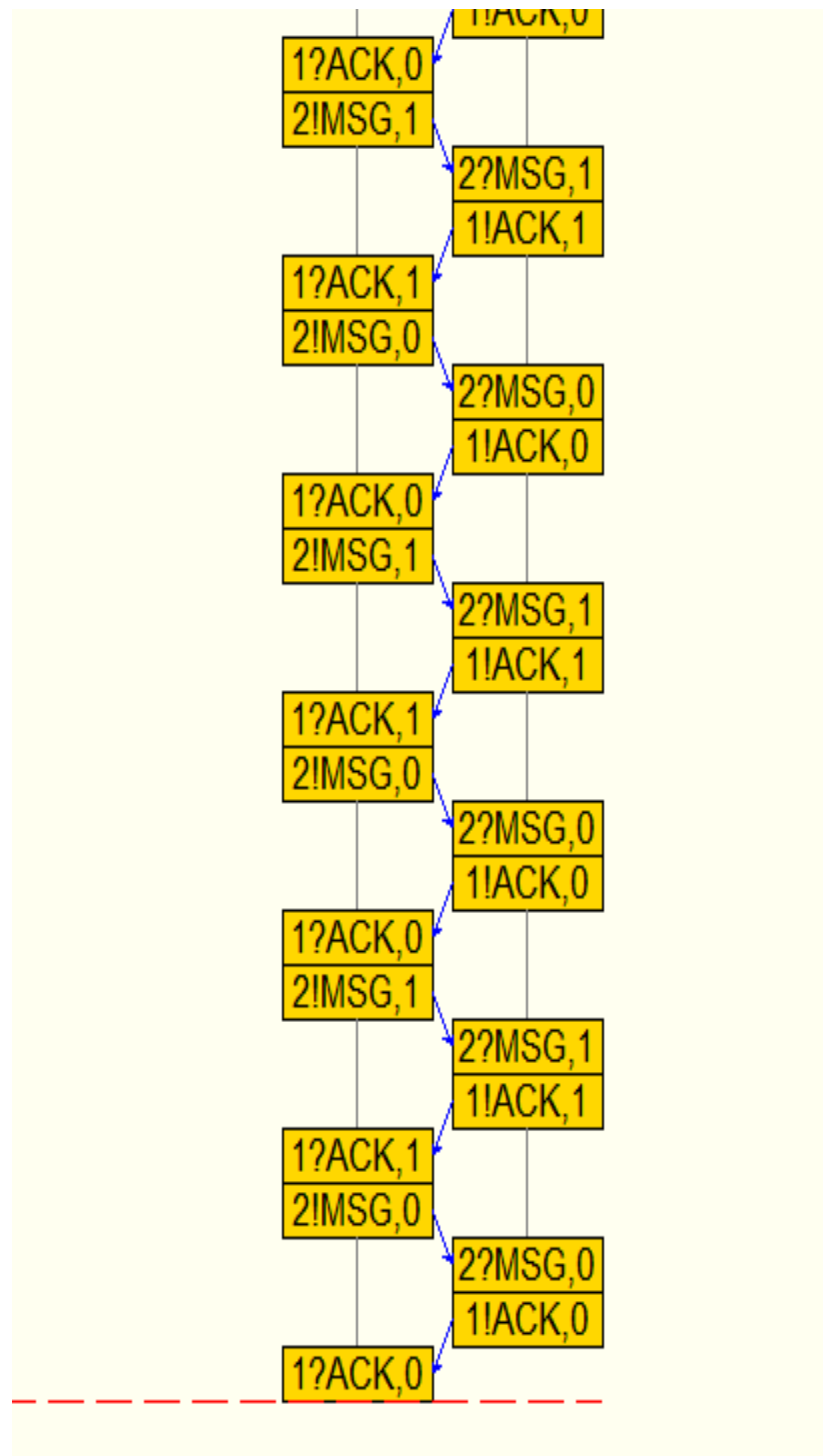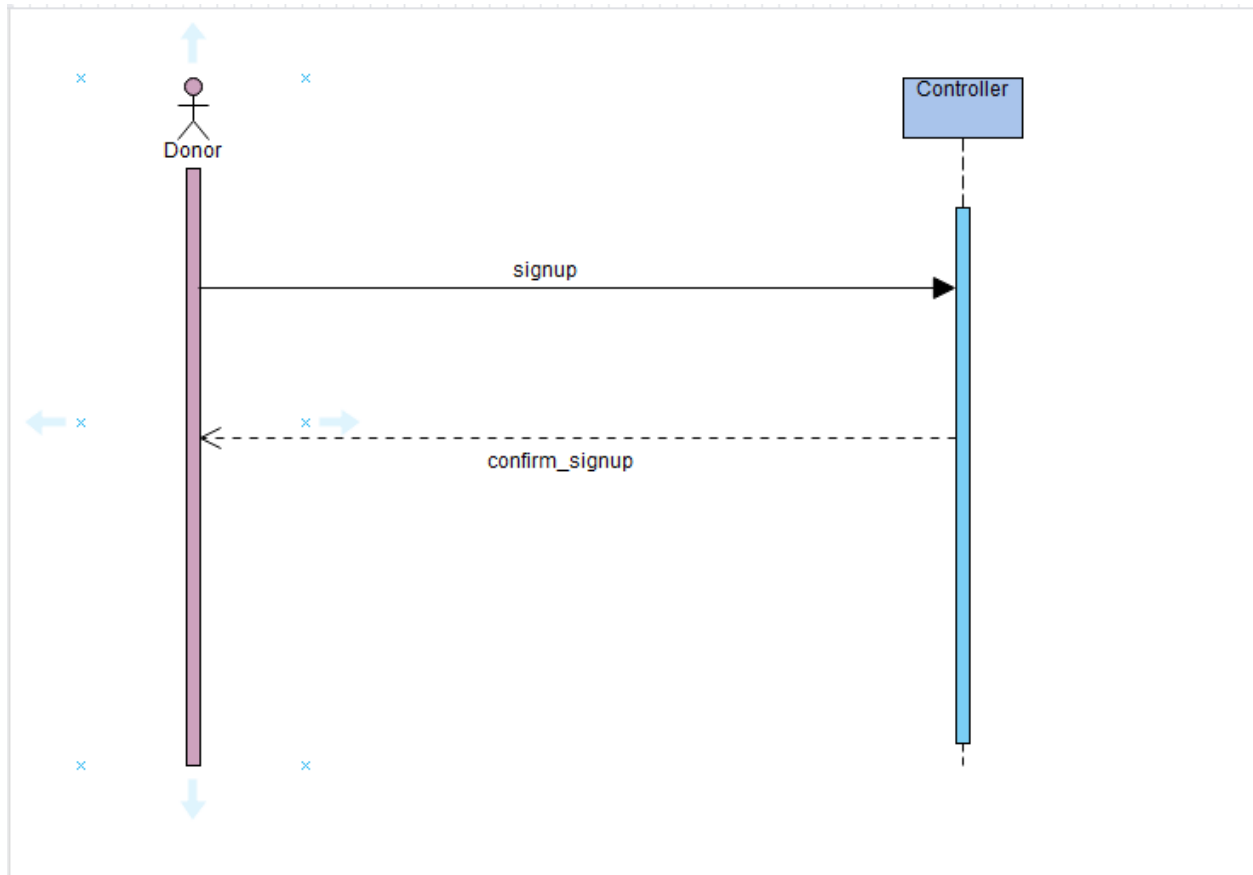
Sequence Diagram(2) for Donor sign up:

Promela Code(2)

```
mtype {MSG, ACK};

chan toDonor = [1] of {mtype, bit};

chan toController = [1] of {mtype, bit};


proctype Donor(chan in, out)

{

        bit sendbit, recvbit;

        do

        :: out ! MSG, sendbit ->
```

```
            in ? ACK, recvbit;

            if

            :: recvbit == sendbit ->

                    sendbit = 1-sendbit;

            :: else

            fi

        od

}


proctype Controller(chan in, out)

{

        bit recvbit;

        do

        :: in ? MSG(recvbit) ->

          out ! ACK(recvbit);

        od

}


init

{

        run Donor(toDonor, toController);

        run Controller(toController, toDonor);

}
```
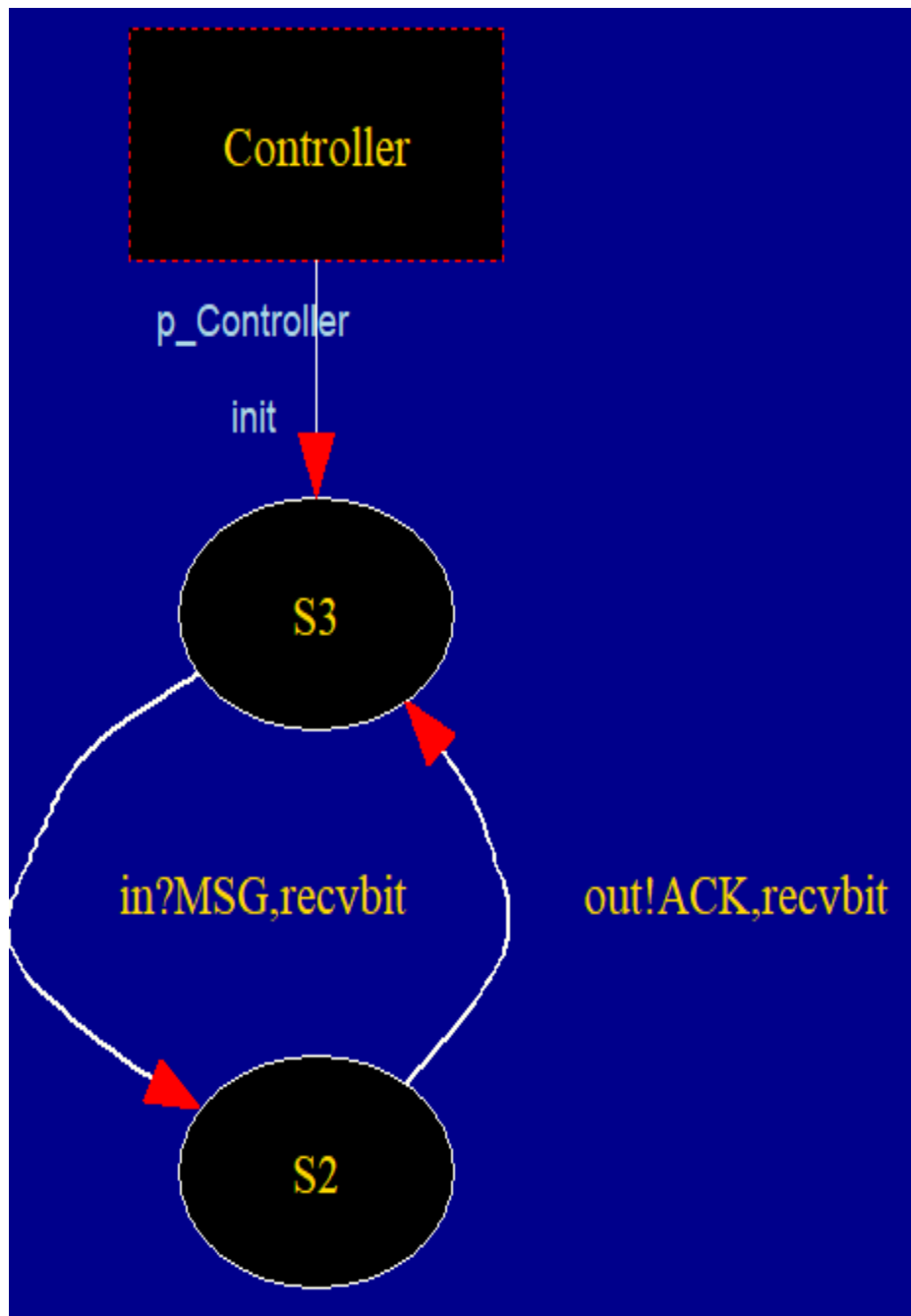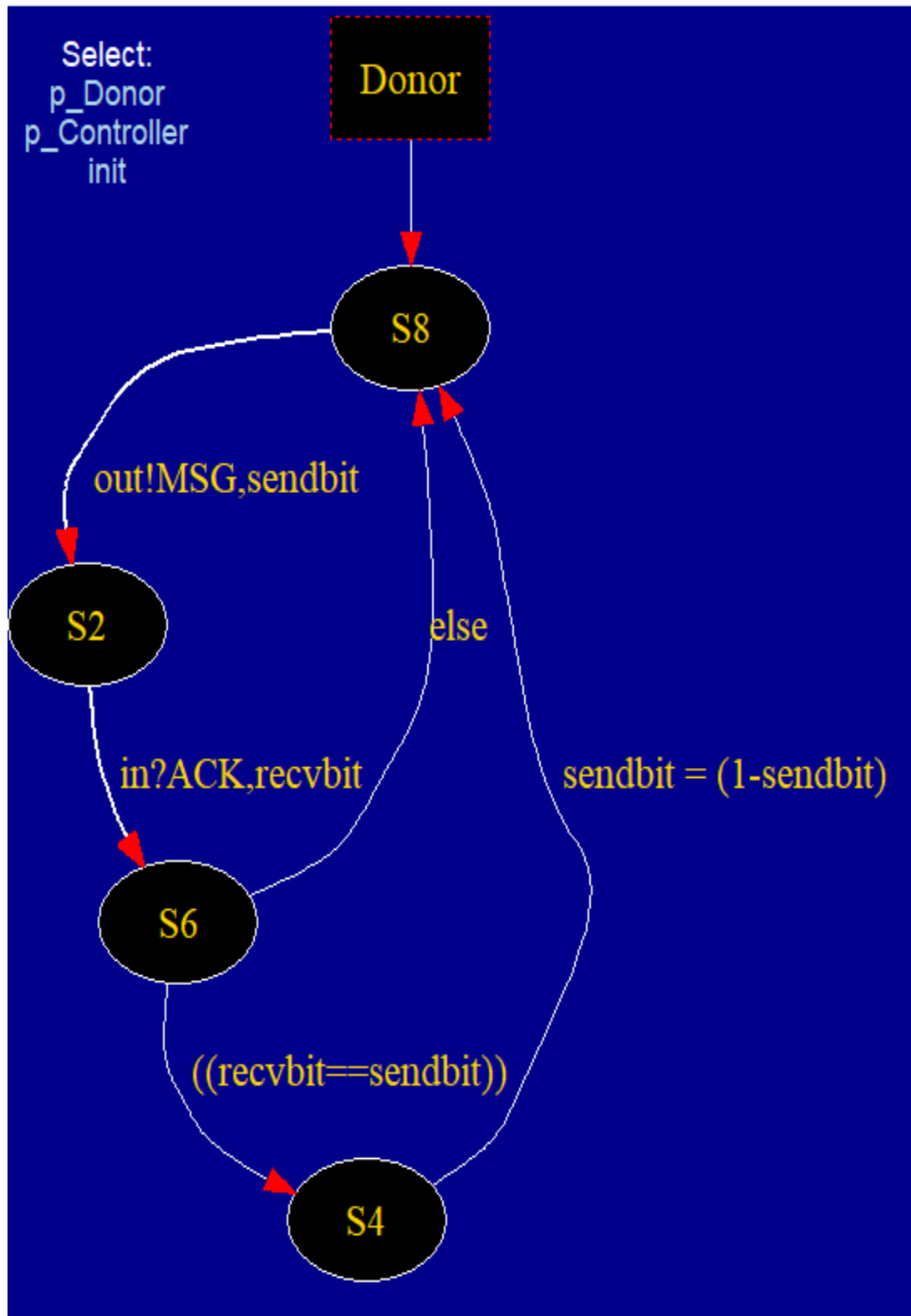
Automata View :

Simulation:

Donor:1:1
```
2!MSG,0      Controller:1:2
                2?MSG,0
                1!ACK,0
1?ACK,0
2!MSG,1
                2?MSG,1
                1!ACK,1
1?ACK,1
2!MSG,0
                2?MSG,0
                1!ACK,0
1?ACK,0
2!MSG,1
                2?MSG,1
                1!ACK,1
1?ACK,1
2!MSG,0
                2?MSG,0
                1!ACK,0
1?ACK,0
2!MSG,1
                2?MSG,1
                1!ACK,1
1?ACK,1
2!MSG,0
                2?MSG,0
                1!ACK,0
1?ACK,0
2!MSG,1
                2?MSG,1
```

```
1?ACK,0
2!MSG,1
        2?MSG,1
        1!ACK,1
1?ACK,1
2!MSG,0
        2?MSG,0
        1!ACK,0
1?ACK,0
2!MSG,1
        2?MSG,1
        1!ACK,1
1?ACK,1
2!MSG,0
        2?MSG,0
        1!ACK,0
1?ACK,0
2!MSG,1
        2?MSG,1
        1!ACK,1
1?ACK,1
2!MSG,0
        2?MSG,0
        1!ACK,0
1?ACK,0
```