Project: Donate Blood Save Life

Course Code: CSE435

Section: 02

Submitted To:

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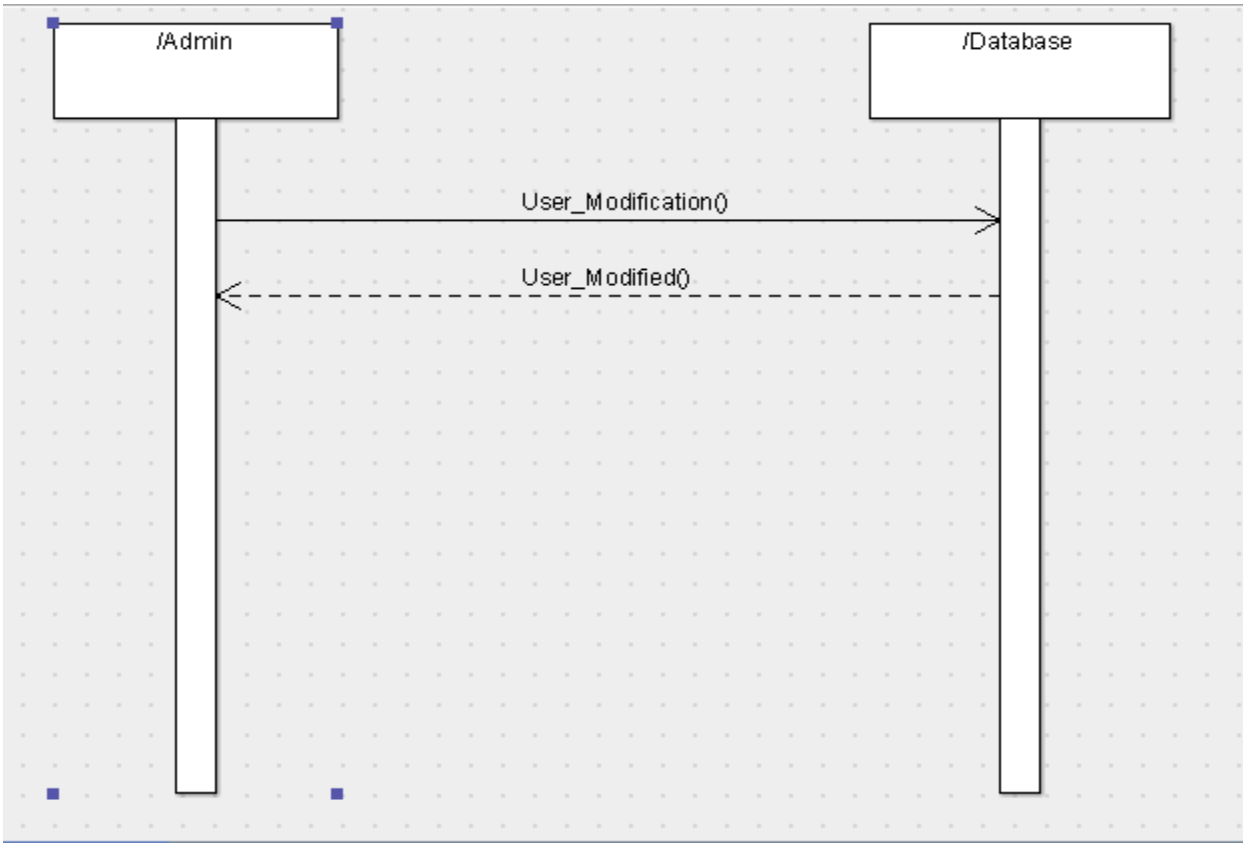
Introduction:

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 :

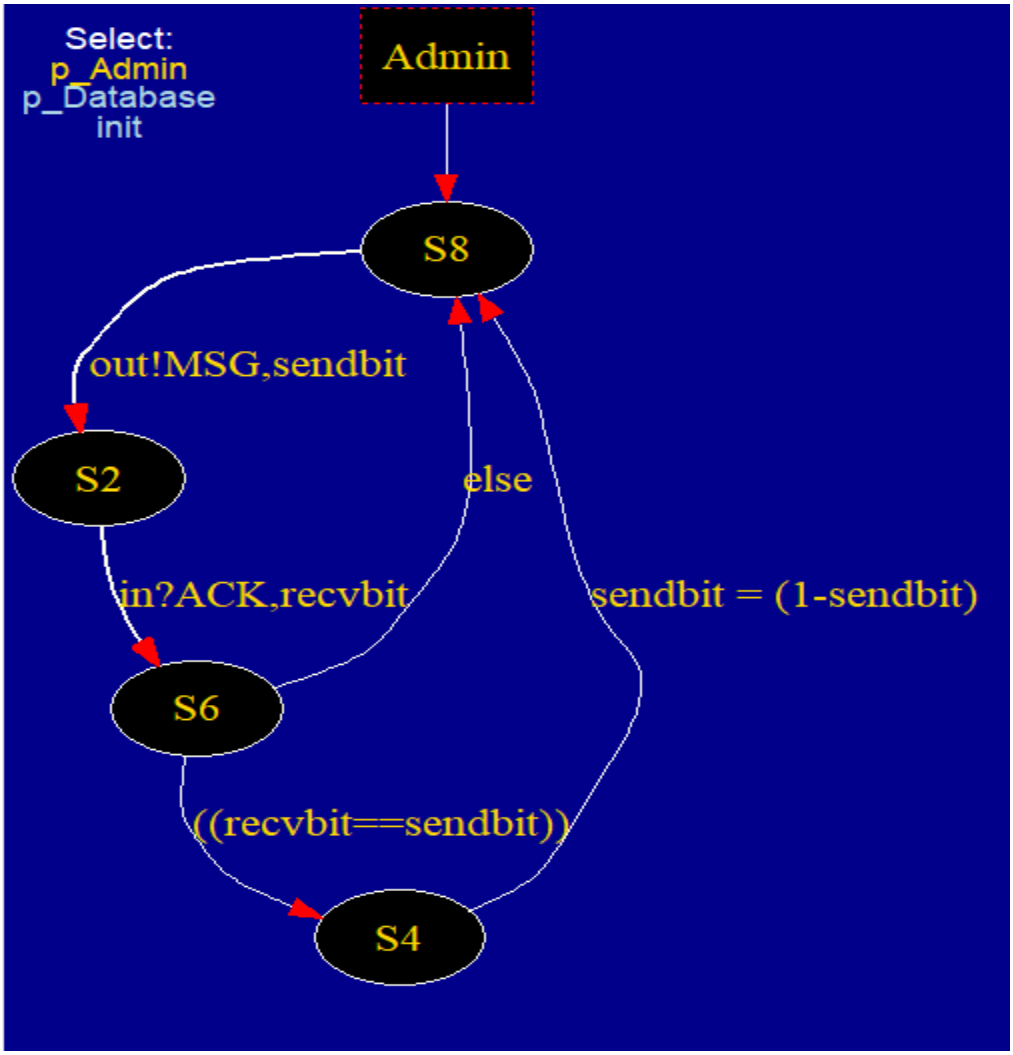


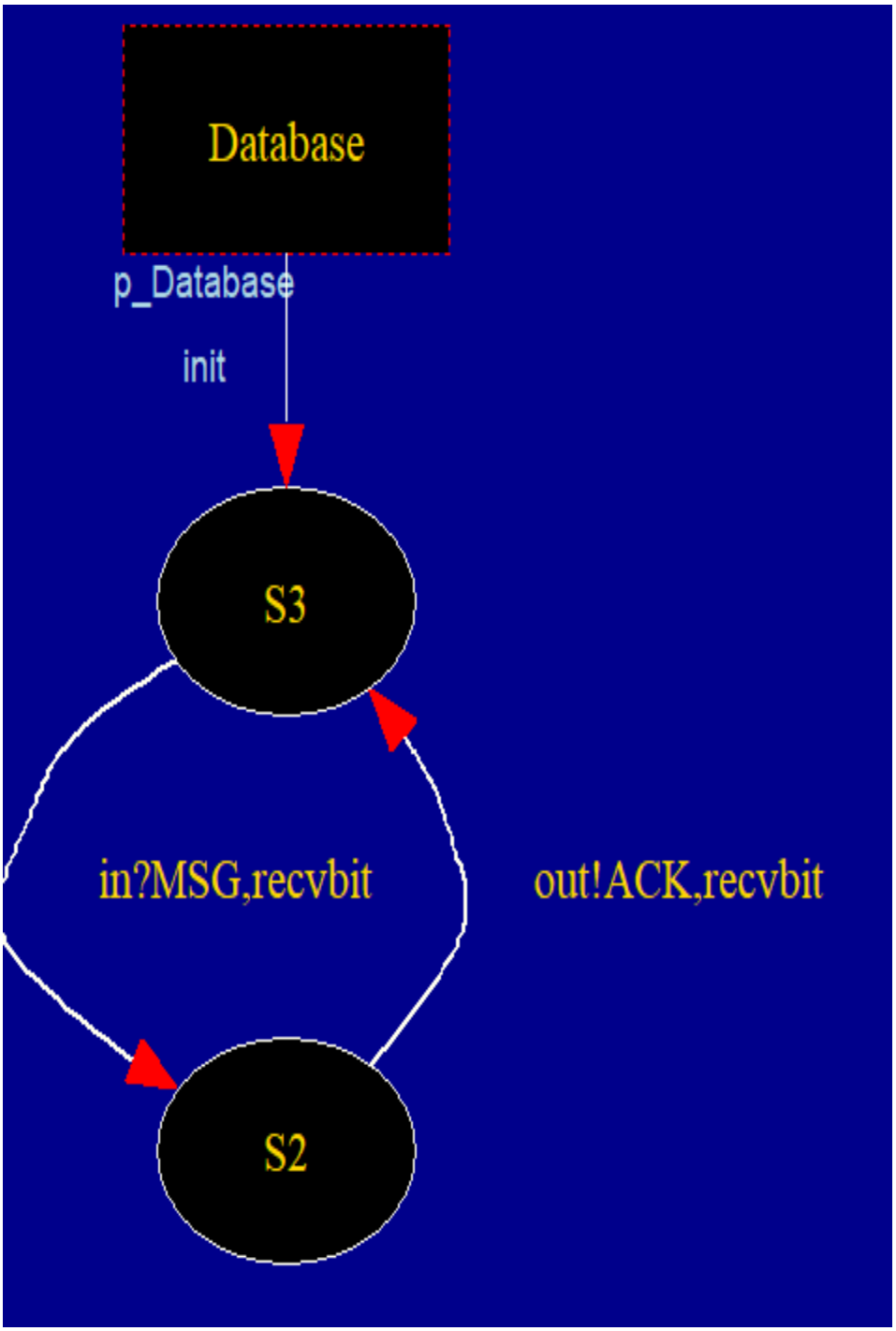
Promela Code(1) :

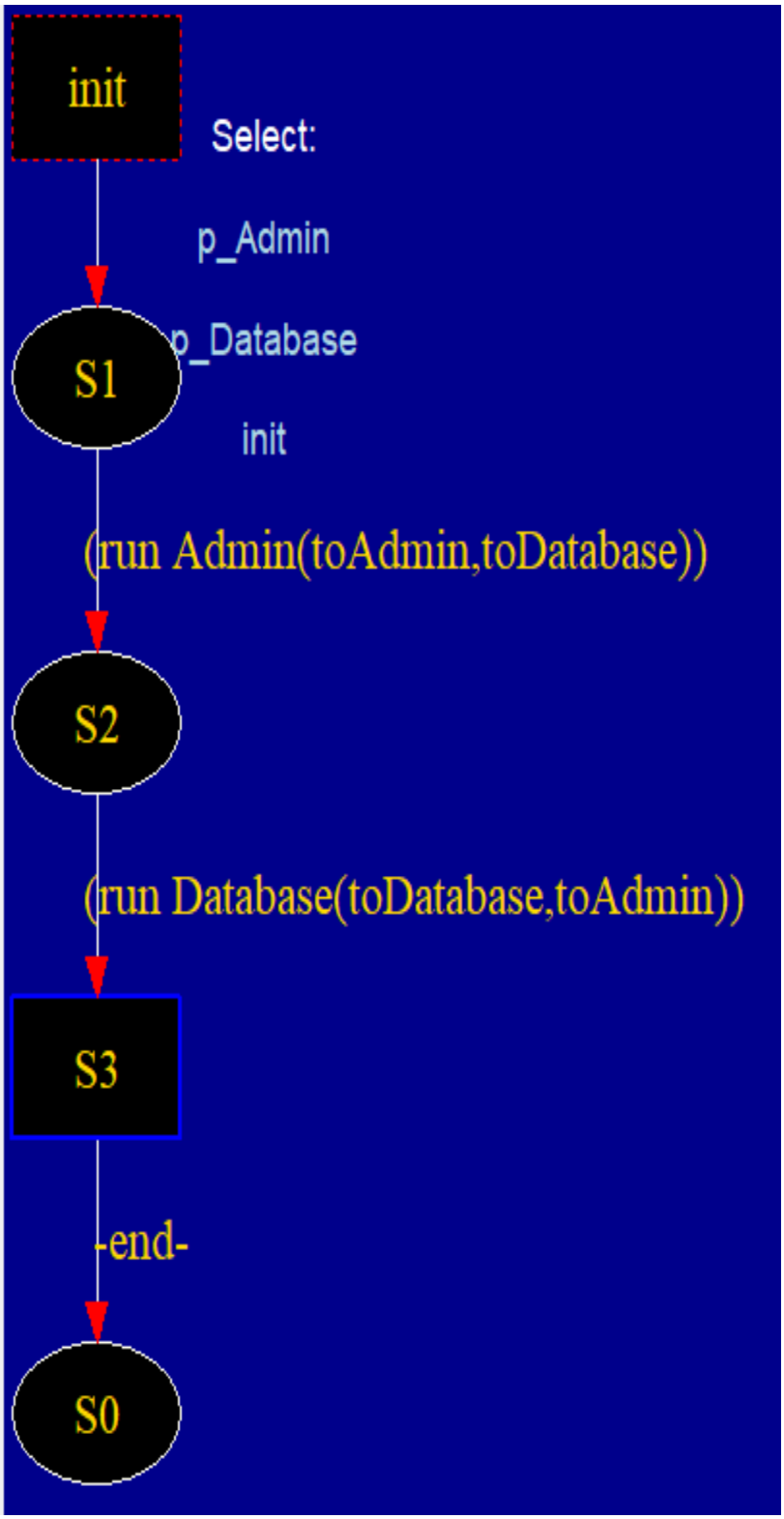
```
mtype {MSG, ACK};
chan toAdmin = [1] of {mtype, bit};
chan toDatabase = [1] of {mtype, bit};

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);
}
```

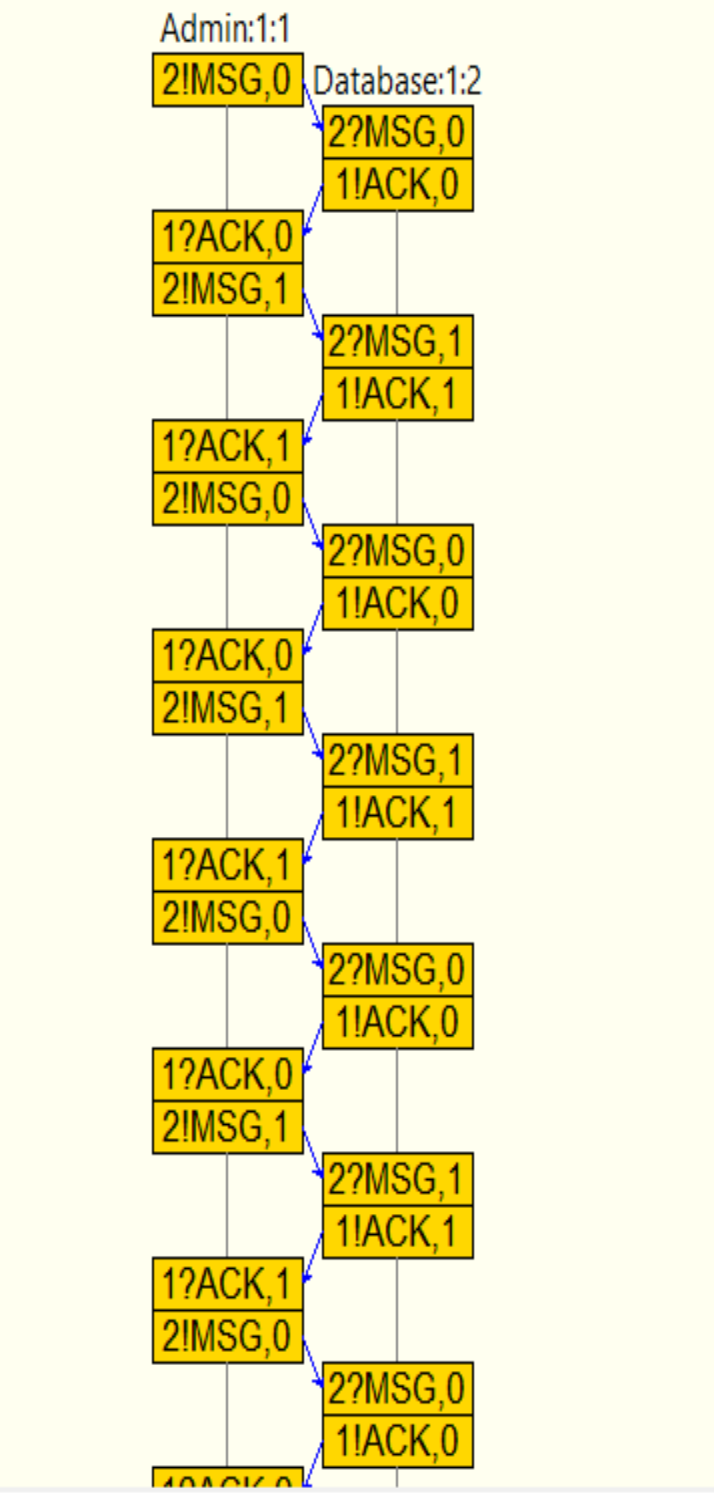
Automata View :

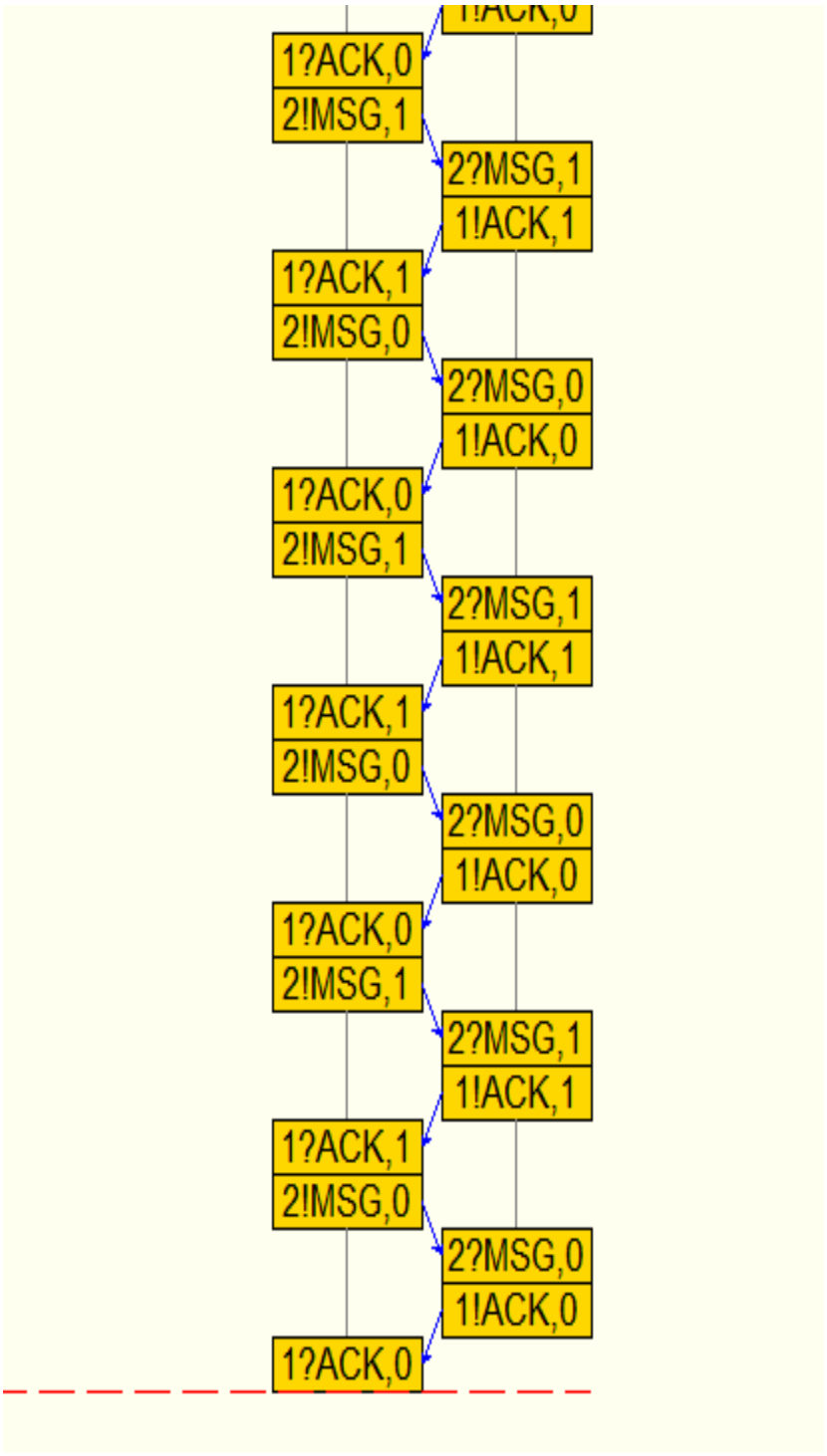



Database
p_Database
init
S3
in?MSG,recvbit
out!ACK,recvbit
S2

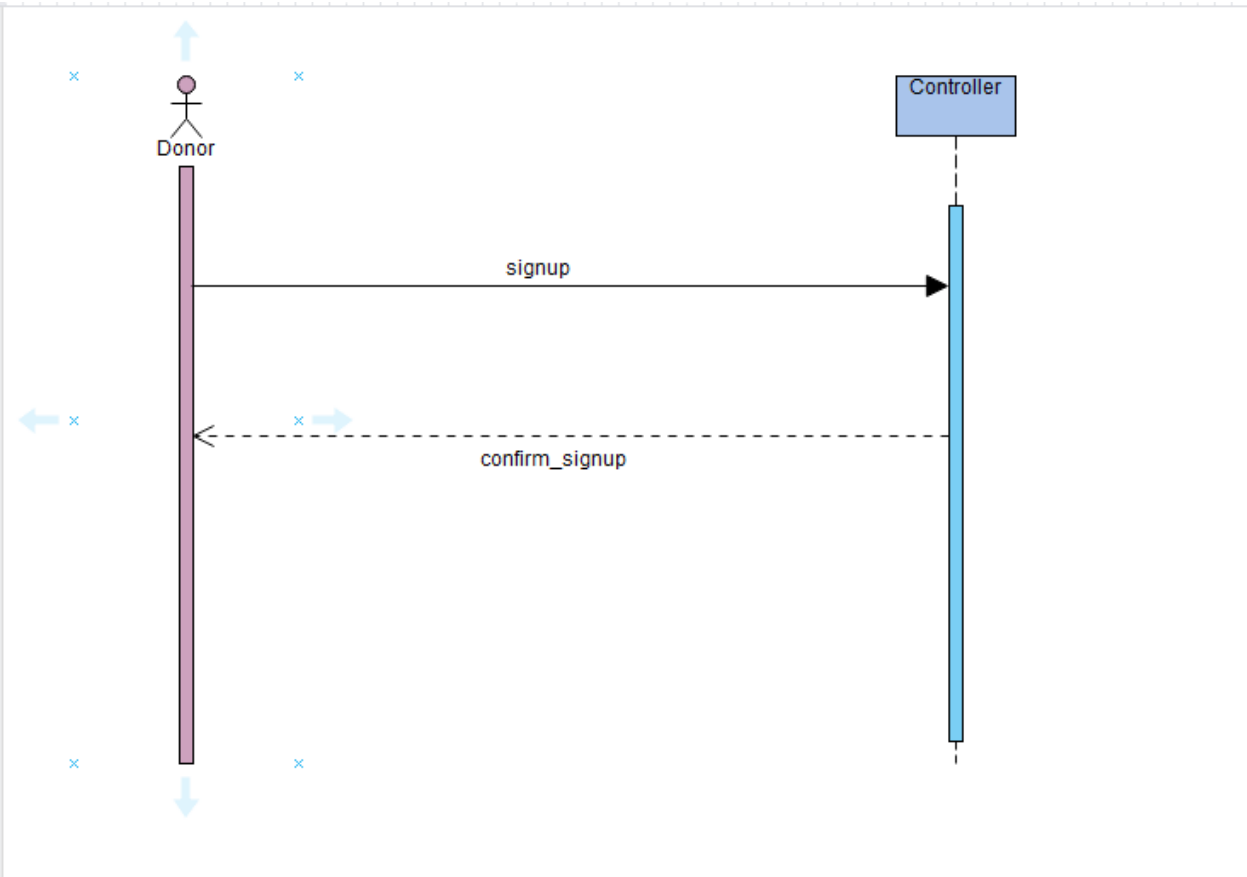

init
Select:
p_Admin
p_Database
S1
init
(run Admin(toAdmin,toDatabase))
S2
(run Database(toDatabase,toAdmin))
S3
-end-
S0

Simulation :


Admin:1:1
Database:1:2
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,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

Sequence Diagram(2) for Donor sign up:

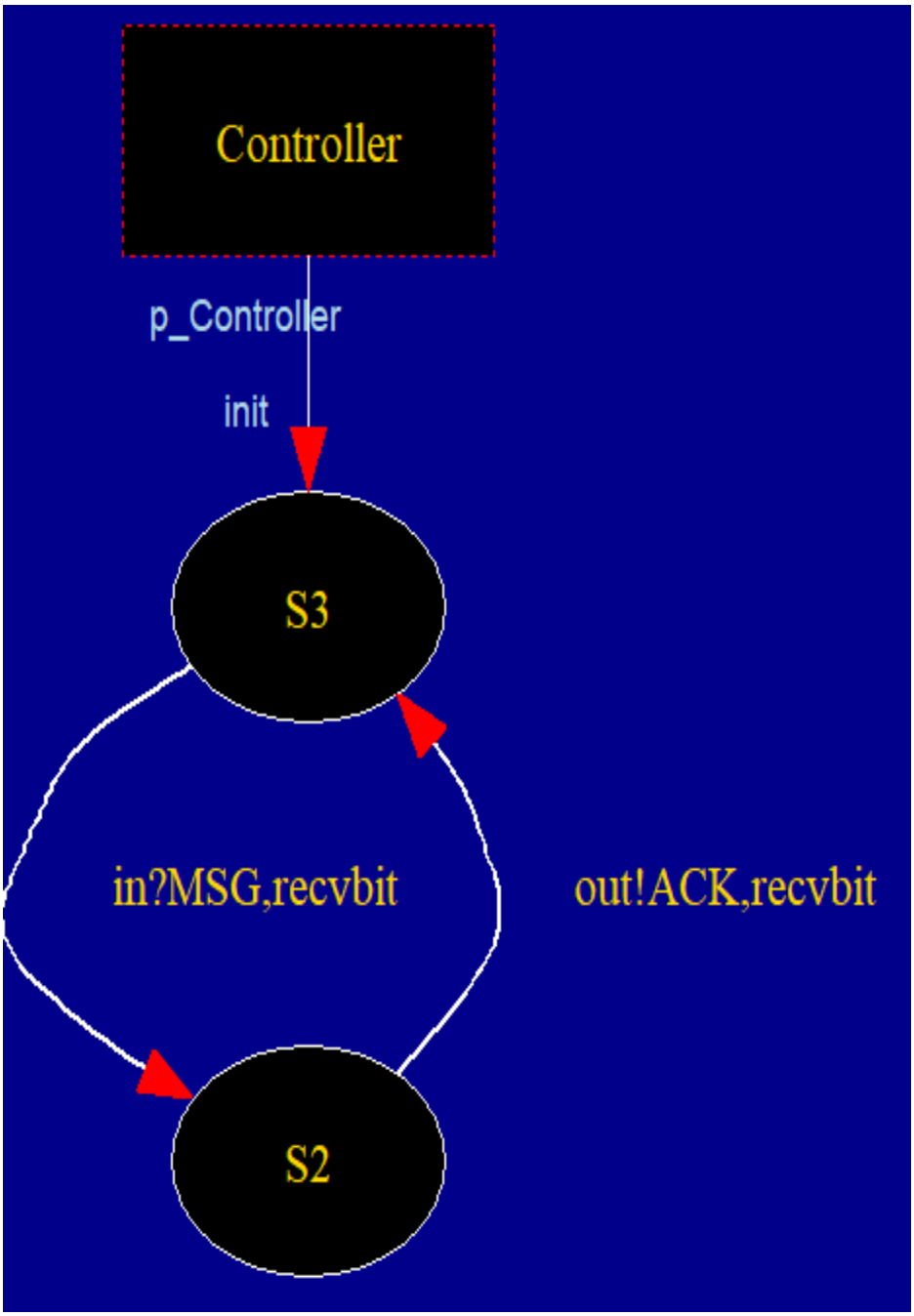


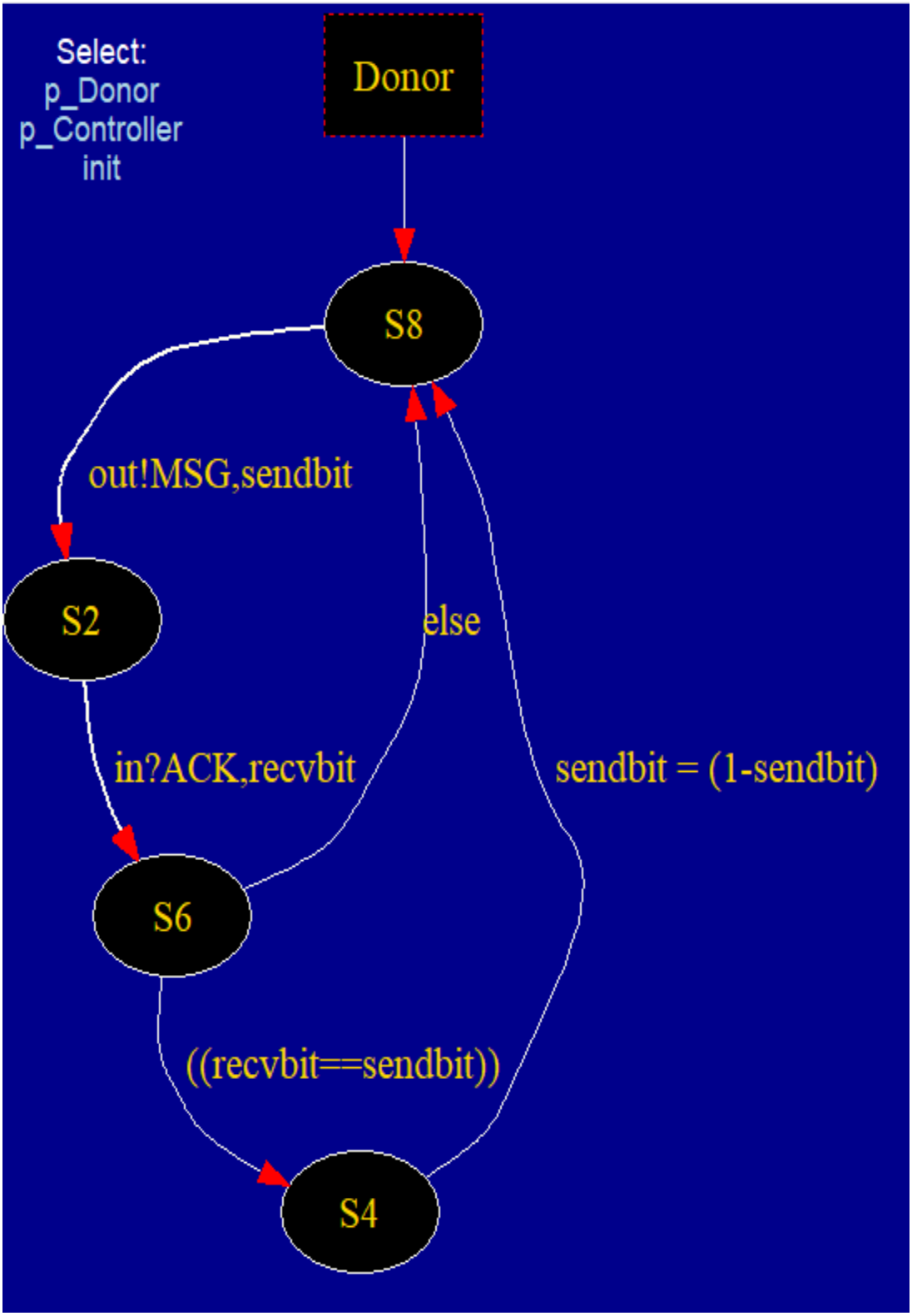
Promela Code(2)

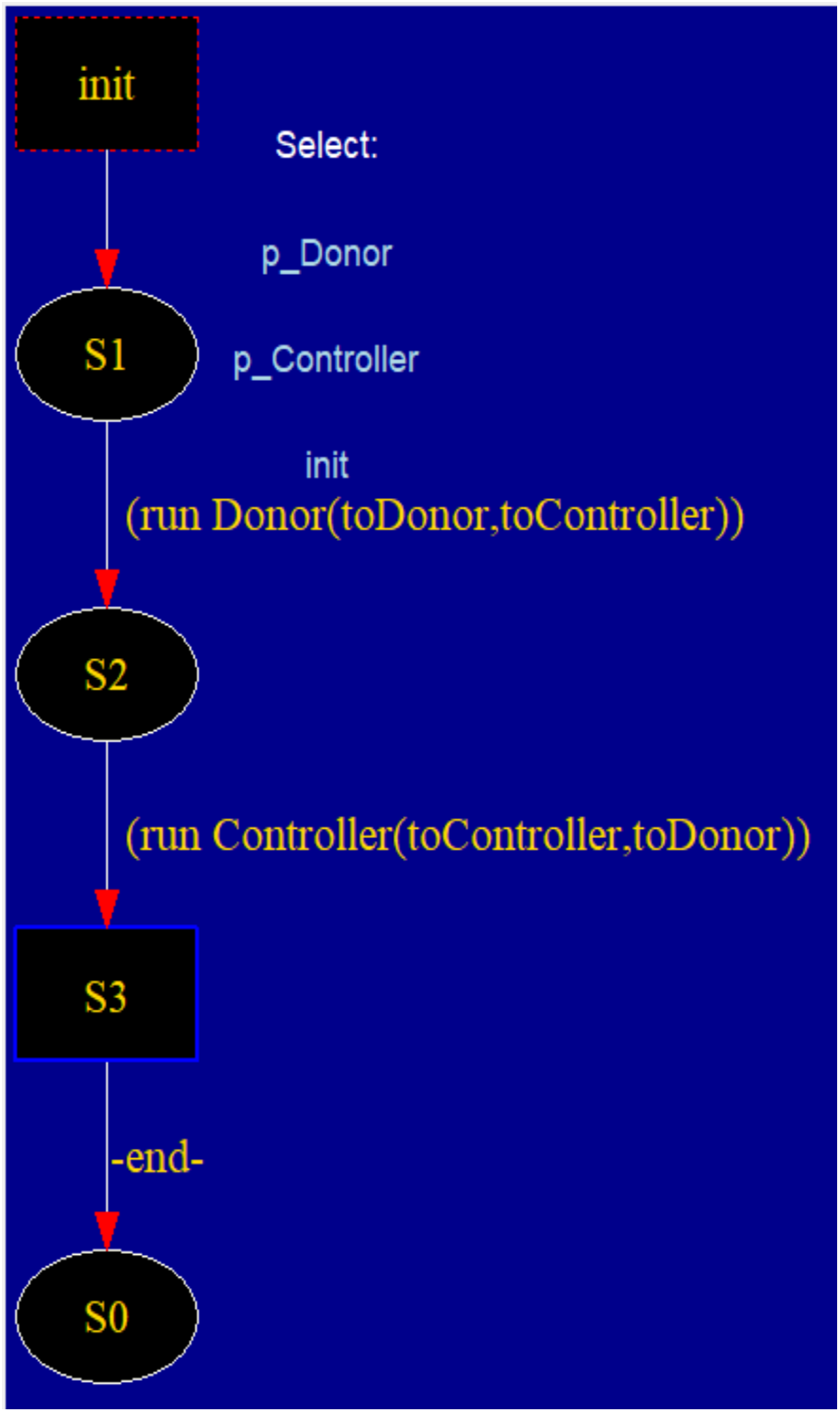
```
mtype {MSG, ACK};
chan toDonor = [1] of {mtype, bit};
chan toController = [1] of {mtype, bit};

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);
}
```

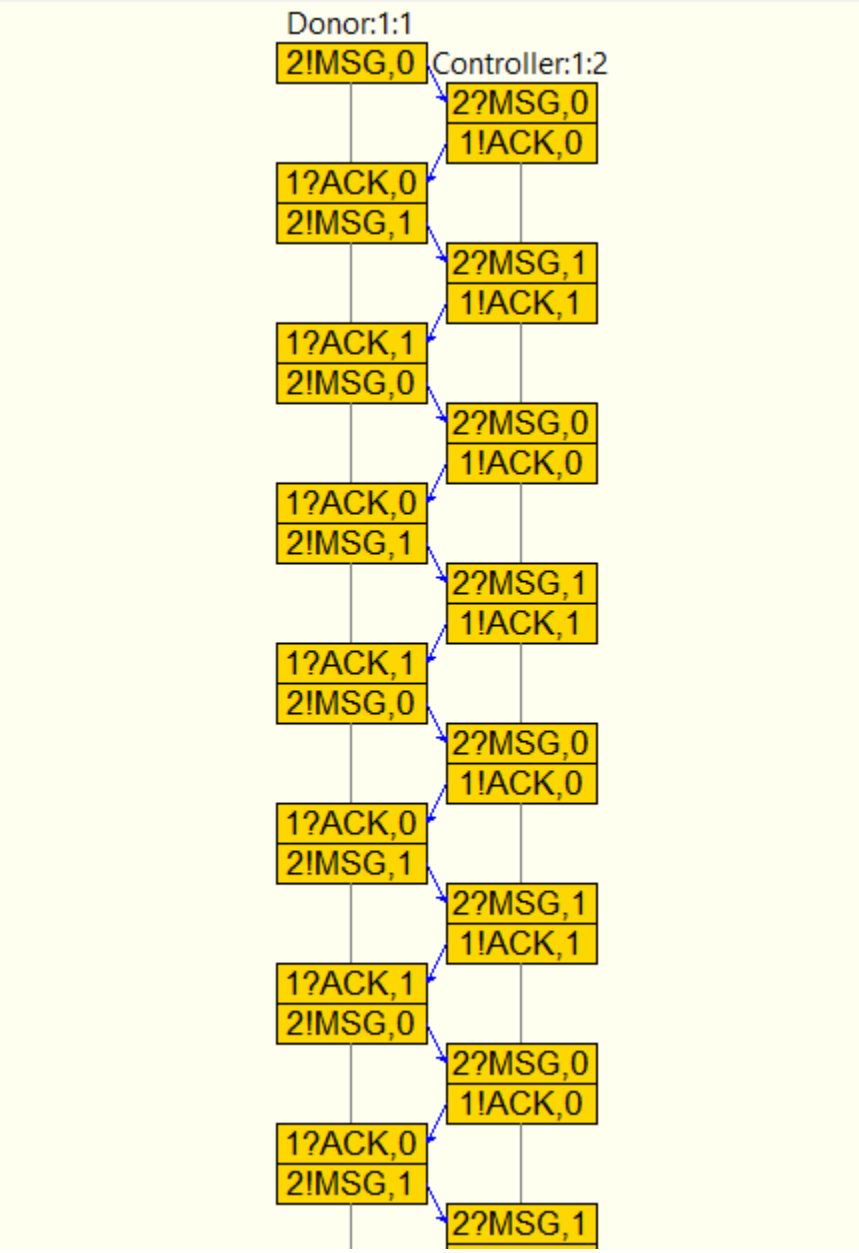
Automata View :

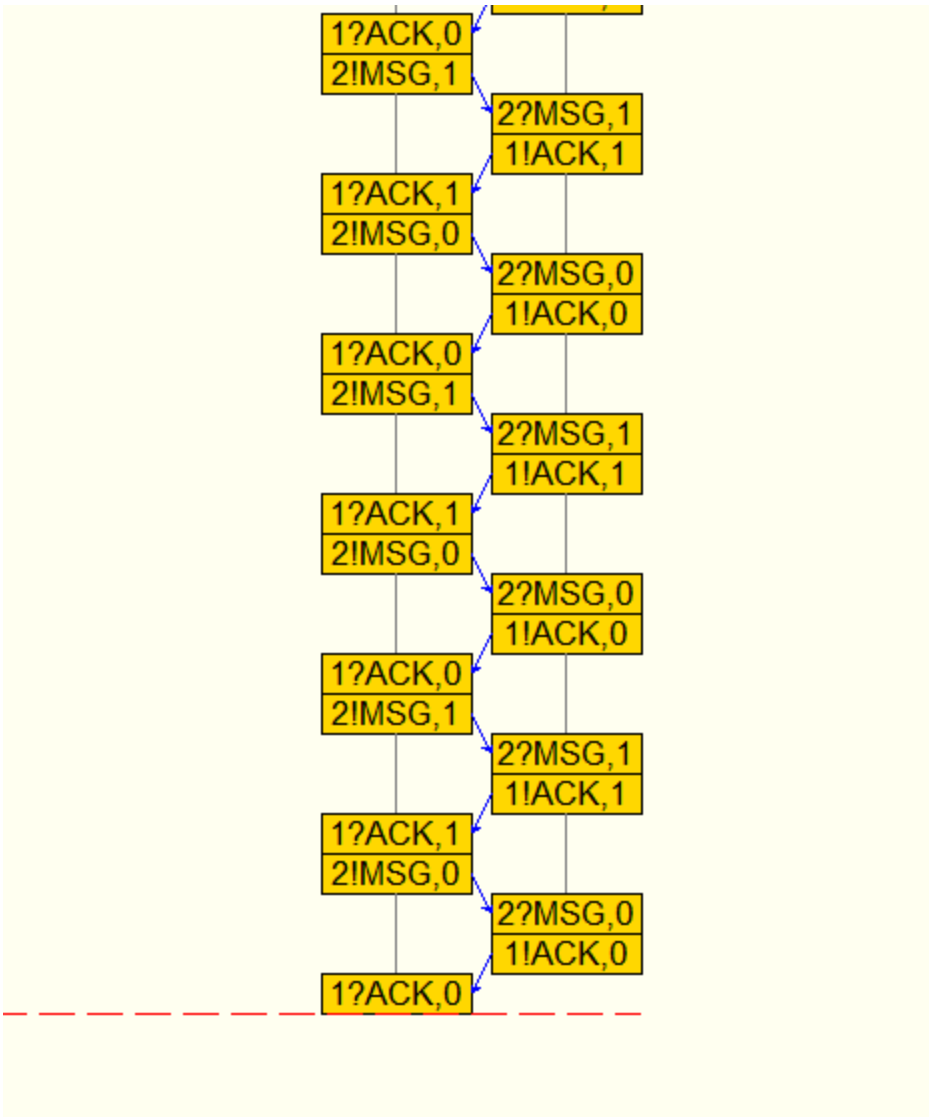



Select:
p_Donor
p_Controller
init
Donor
S8
out!MSG,sendbit
S2
else
in?ACK,recvbit
sendbit = (1-sendbit)
S6
((recvbit==sendbit))
S4


init
Select:
p_Donor
S1
p_Controller
init
(run Donor(toDonor,toController))
S2
(run Controller(toController,toDonor))
S3
-end-
S0

Simulation:


Donor:1:1
Controller:1:2
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,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