Networks Lab(1) Tic_Toc

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Demo

Refer to the video attached.

Results

Event#	Time	Relevant Hops	Name	TxUpdate?	Info
#0	0.000	Tic ⟶ Toc	Tic_0		
#1	0.000	Toc ⟶ Tic	Toc_1		
#2	0.000	Tic ⟶ Toc	Tic_2		
#3	0.000	Toc ⟶ Tic	Toc_3		
#4	0.000	Tic ⟶ Toc	Tic_4		
#5	0.000	Toc ⟶ Tic	Toc_5		
#6	0.000	Tic ⟶ Toc	Tic_6		
#7	0.000	Toc ⟶ Tic	Toc_7		
#8	0.000	Tic ⟶ Toc	Tic_8		
#9	0.000	Toc ⟶ Tic	Toc_9		

Node Code:

Initialization for Tic to begin by sending Tic_0

```
20 void Node::initialize()
21 {
22     // TODO - Generated method body
23     if(strcmp(this->getName(),"Tic")==0){
24         // Init for Tic to send Tic_0
25         cMessage *msg=new cMessage("Tic_0");
26         send(msg,"out");
27         EV<<"Sending"<<*msg<<" ..."<<endl;
28     }
29 }
```

Handle Event for the 2 Node instances where end is reached when the index of the message being sent is 10 so no more messages being send by any of them

```
31 void Node::handleMessage(cMessage *msg){
32     // TODO - Generated method body
33     char i=msg->getName()[4];
34     int index=  i - '0';
35     EV<<"Index"<<index<<endl;
36     if(index!=9){
37         //Tic
38         if(strcmp(this->getName(),"Tic")==0){
39             std::string messageName = "Tic_" + std::to_string(index+1);
40             cMessage *send_msg=new cMessage(messageName.c_str());
41             send(send_msg,"out");
42             EV<<"Sending"<<*send_msg<<" ..."<<endl;
43         }
44         //Toc
45         else if(strcmp(this->getName(),"Toc")==0){
46             std::string messageName = "Toc_" + std::to_string(index+1);
47             cMessage *send_msg=new cMessage(messageName.c_str());
48             send(send_msg,"out");
49             EV<<"Sending"<<*send_msg<<" ..."<<endl;
50         }
51     }
52     // End message has been reached
53     else{
54        EV<<"End of sending ..."<<endl;
55     }
56 }
```

Extra Part

Overriding finish function for node:

Node.h

```
26 class Node : public cSimpleModule
27 {
28   protected:
29     virtual void initialize() override;
30     virtual void handleMessage(cMessage *msg) override;
31     virtual void finish() override;
32 };
33
```

Node.cpp

```
58 void Node::finish()
59 {
60   EV<<"End of Simulation"<<endl;
61 }
```

Output:

```
<!> No more events, simulation completed -- at t=0s, event #10
** Calling finish() methods of modules
INFO: End of Simulation
INFO (Node)Network.Toc: End of Simulation
```