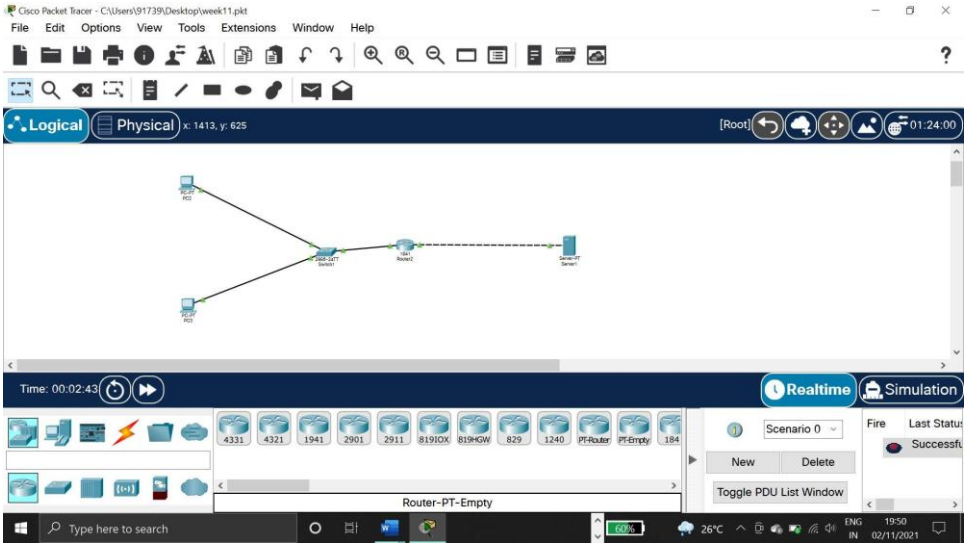
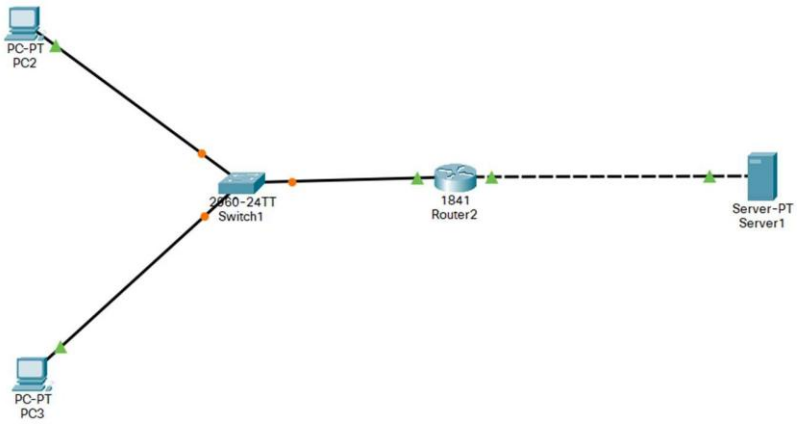
WEEK 11 PROGRAMS

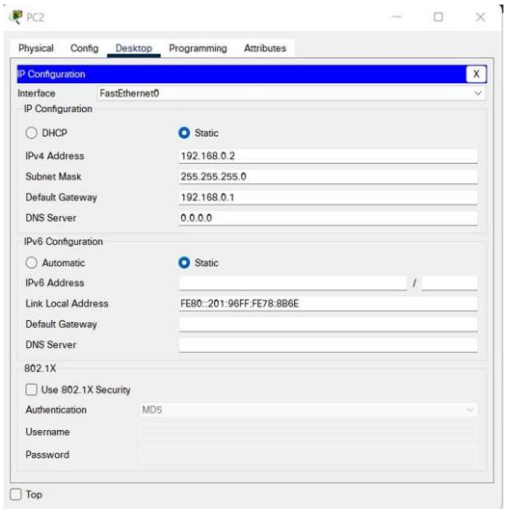
AIM : Configuring any two application layer protocols using packet tracer.

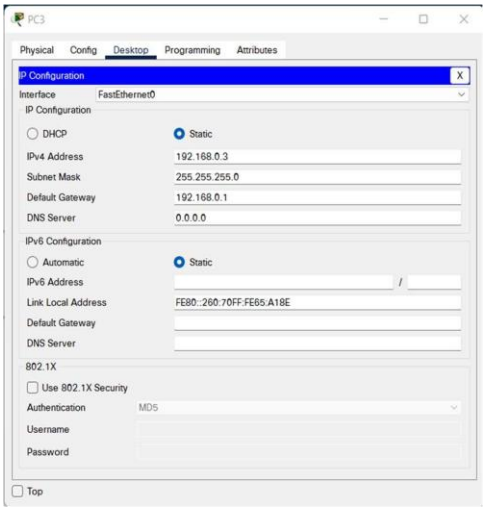
CONFIGURATION OF FTP APPLICATION LAYER PROTOCOL USING CISCO PACKET TRACER

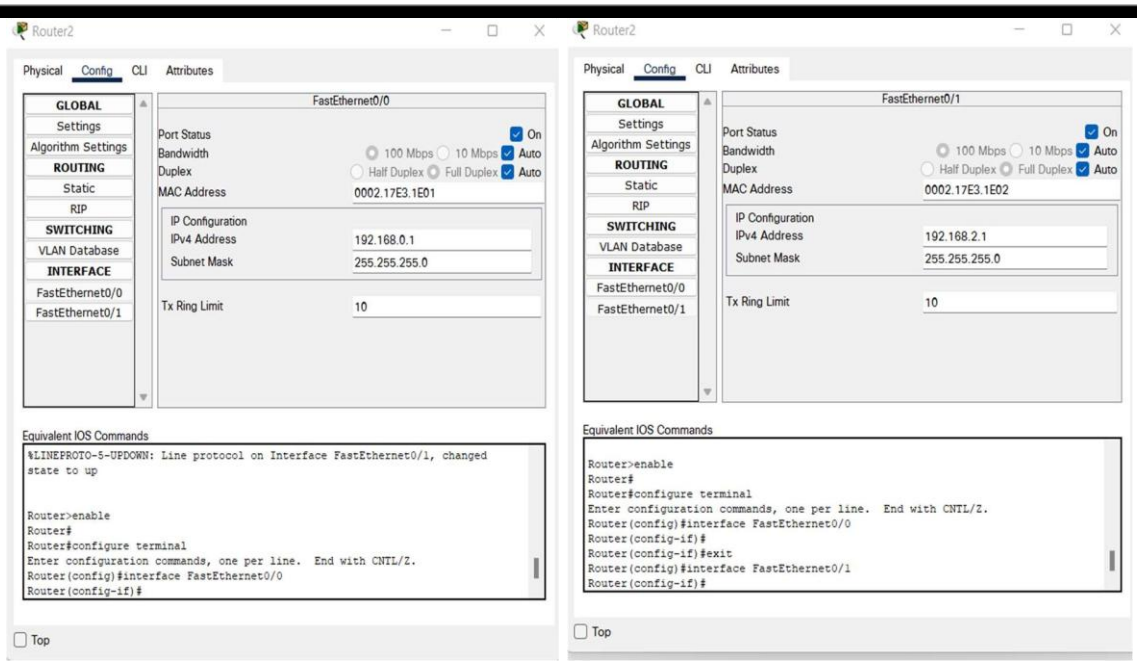


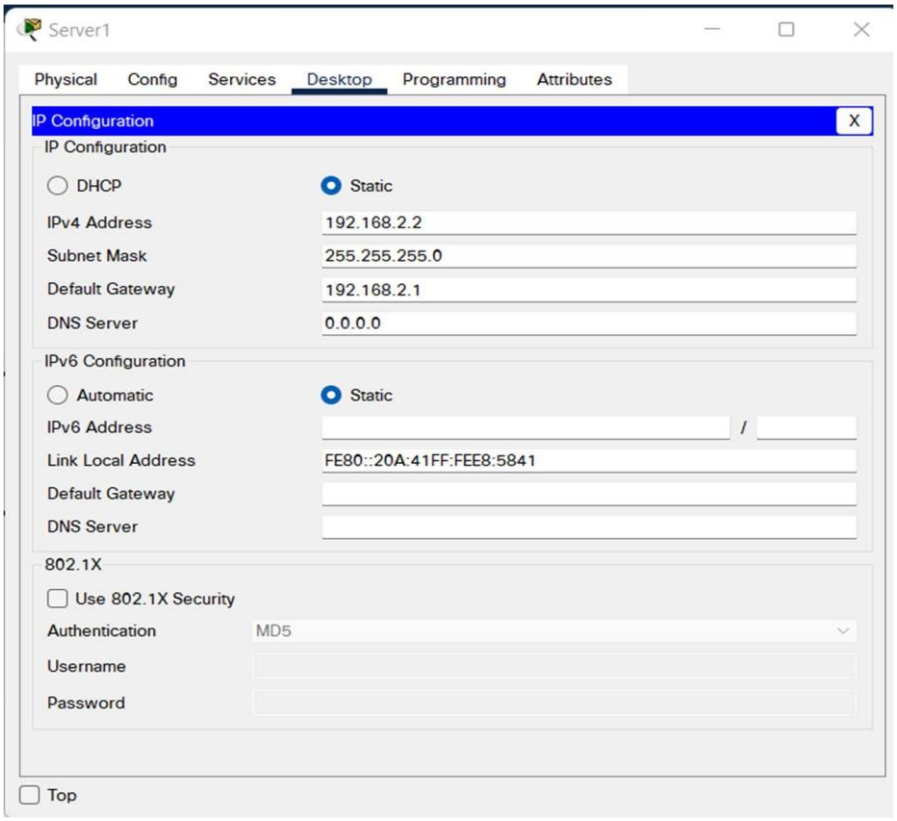


Build the network topology









Email Services:

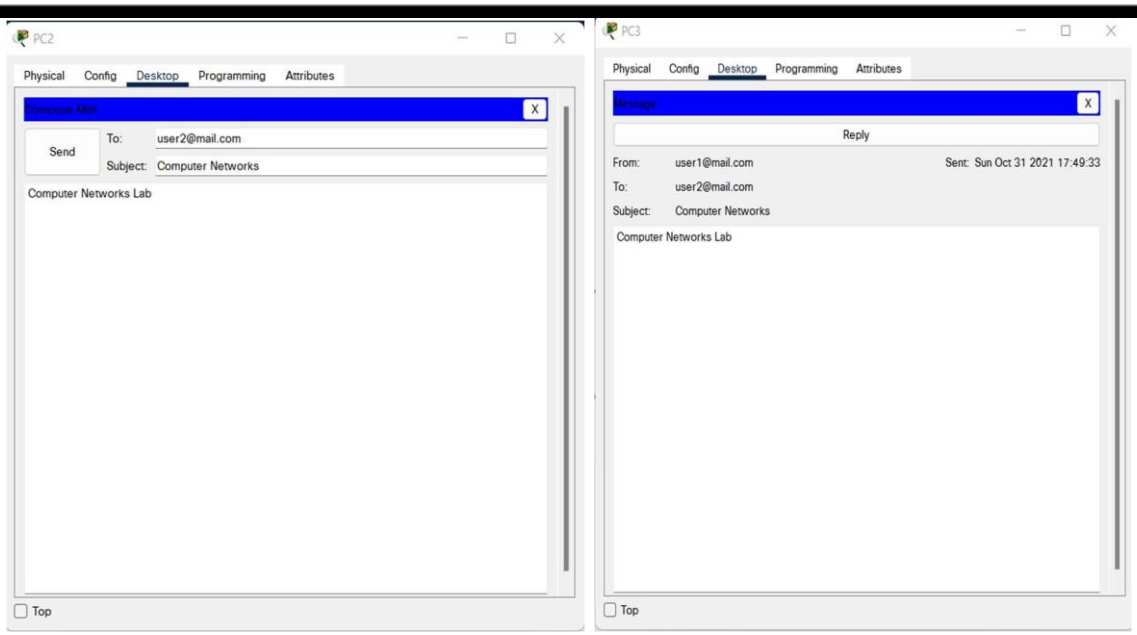
Step 1:- Build the network topology:

Step 2:- Configure IP addresses on the **PCs** and the M**ail Server**.

Step 3:- Now configure **mail clients** on the **PCs** and **mail service** on the **generic server**.

Click on **PC0**. Go to its **Desktop** tab, and click on **Email.** Configure the email client by filling in the user, server and login information. Be sure to **Save.**

Step 4 :- Lastly test the email service. Go to **PC0 email** client, **compose** an email and **send** its to **PC1** email address



FTP:

Step 1:- Build the network topology.

Step 2:- Configure static IP addresses on the System and the server.

System1: **IP address:** 192.168.1.1 **Subnet Mask:** 255.255.255.0

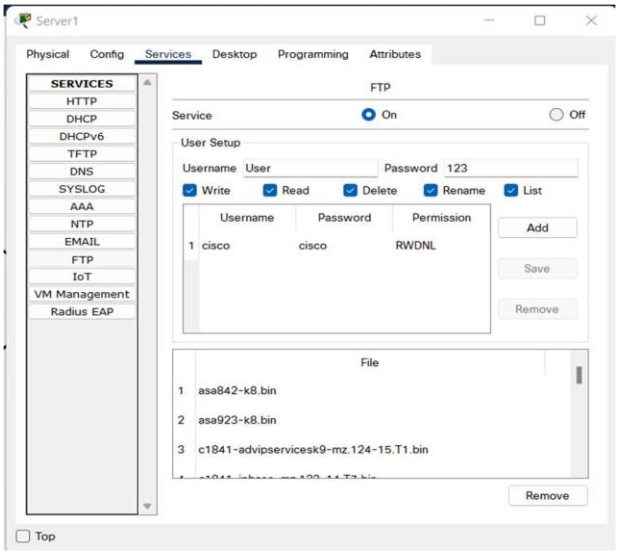
System2: **IP address:** 192.168.1.2 **Subnet Mask:** 255.255.255.0

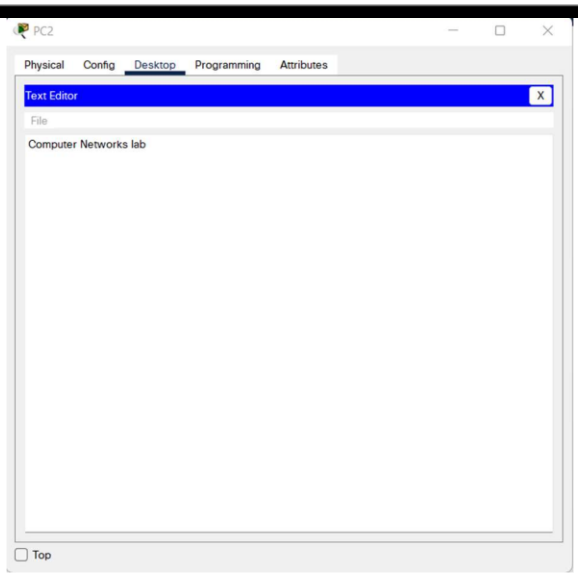
Server: **IP address:** 192.168.1.2 **Subnet Mask:** 255.255.255.0

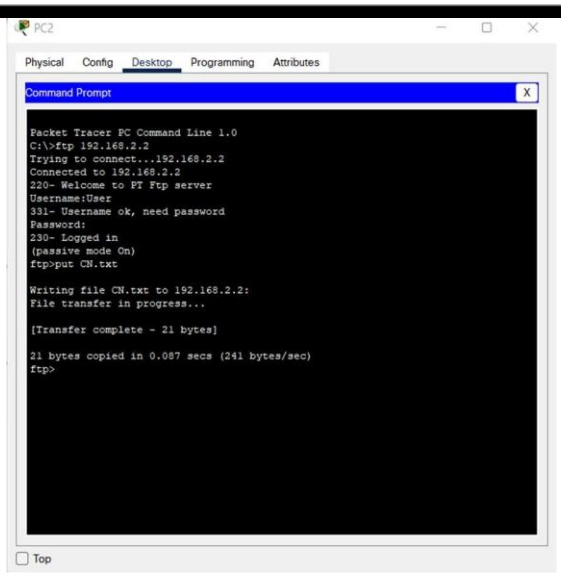
Step 3:- Now try using an **FTP client** built in the System to send files to an **FTP server** configured in the Server.

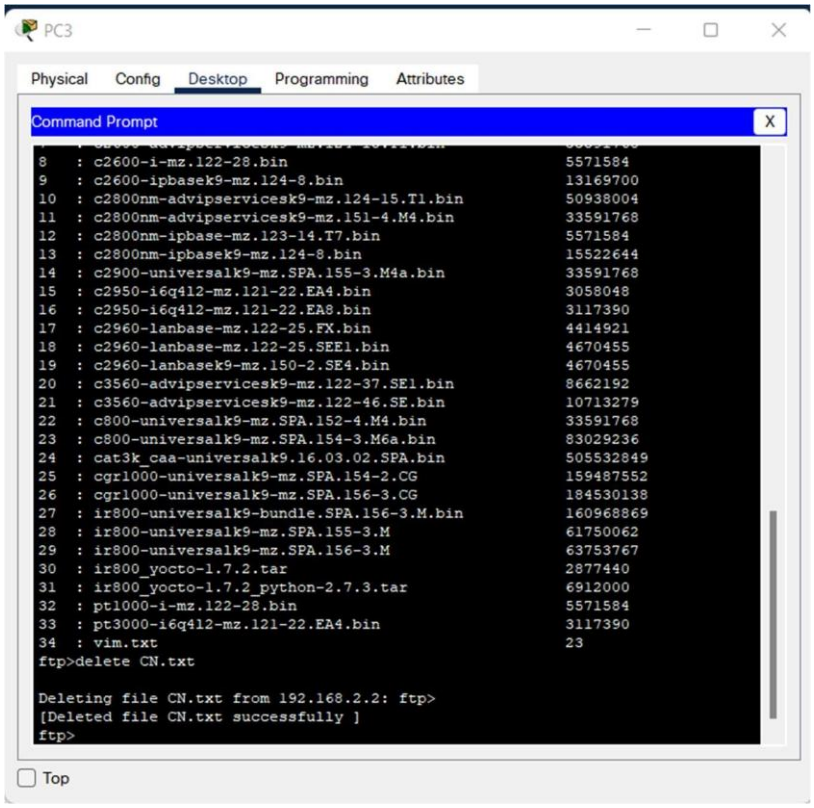
Step 4:- Create a file in the System1 then **upload** it to the server using **FTP**.

Step 5:- Now upload the file from the System1 to the server using FTP.




PC2
Physical
Config
Desktop
Programming
Attributes
Text Editor
File
Computer Networks lab
Top


PC2
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.2.2
Trying to connect...192.168.2.2
Connected to 192.168.2.2
220- Welcome to PT Ftp server
Username:User
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put CN.txt
Writing file CN.txt to 192.168.2.2:
File transfer in progress...
[Transfer complete - 21 bytes]
21 bytes copied in 0.087 secs (241 bytes/sec)
ftp>
Top


PC3
Physical
Config
Desktop
Programming
Attributes
Command Prompt
8 : c2600-i-mz.122-28.bin 5571584
9 : c2600-ipbasek9-mz.124-8.bin 13169700
10 : c2800nm-advipservicesk9-mz.124-15.T1.bin 50938004
11 : c2800nm-advipservicesk9-mz.151-4.M4.bin 33591768
12 : c2800nm-ipbase-mz.123-14.T7.bin 5571584
13 : c2800nm-ipbasek9-mz.124-8.bin 15522644
14 : c2900-universalk9-mz.SPA.155-3.M4a.bin 33591768
15 : c2950-i6q412-mz.121-22.EA4.bin 3058048
16 : c2950-i6q412-mz.121-22.EA8.bin 3117390
17 : c2960-lanbase-mz.122-25.FX.bin 4414921
18 : c2960-lanbase-mz.122-25.SEE1.bin 4670455
19 : c2960-lanbasek9-mz.150-2.SE4.bin 4670455
20 : c3560-advipservicesk9-mz.122-37.SE1.bin 8662192
21 : c3560-advipservicesk9-mz.122-46.SE.bin 10713279
22 : c800-universalk9-mz.SPA.152-4.M4.bin 33591768
23 : c800-universalk9-mz.SPA.154-3.M6a.bin 83029236
24 : cat3k_caa-universalk9.16.03.02.SPA.bin 505532849
25 : cgr1000-universalk9-mz.SPA.154-2.CG 159487552
26 : cgr1000-universalk9-mz.SPA.156-3.CG 184530138
27 : ir800-universalk9-bundle.SPA.156-3.M.bin 160968869
28 : ir800-universalk9-mz.SPA.155-3.M 61750062
29 : ir800-universalk9-mz.SPA.156-3.M 63753767
30 : ir800_yocto-1.7.2.tar 2877440
31 : ir800_yocto-1.7.2_python-2.7.3.tar 6912000
32 : pt1000-i-mz.122-28.bin 5571584
33 : pt3000-i6q412-mz.121-22.EA4.bin 3117390
34 : vim.txt 23
ftp>delete CN.txt
Deleting file CN.txt from 192.168.2.2: ftp>
[Deleted file CN.txt successfully]
ftp>
Top

WEEK 12 PROGRAMS

AIM : Implementation of Wireless Networks using NS2 Simulation Tool.

PROGRAM :

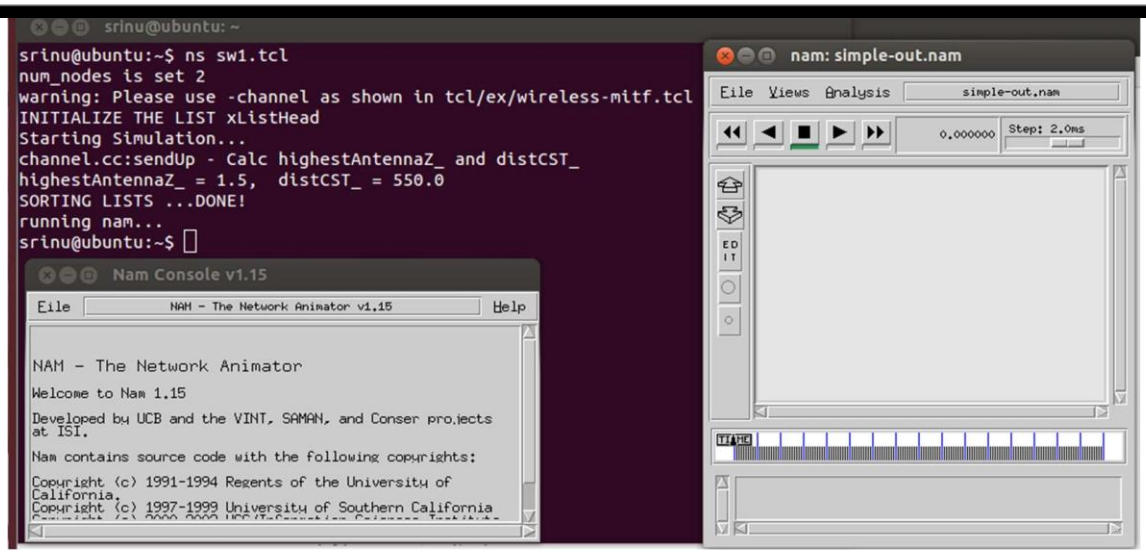
*sw1.tcl (~) - gedit

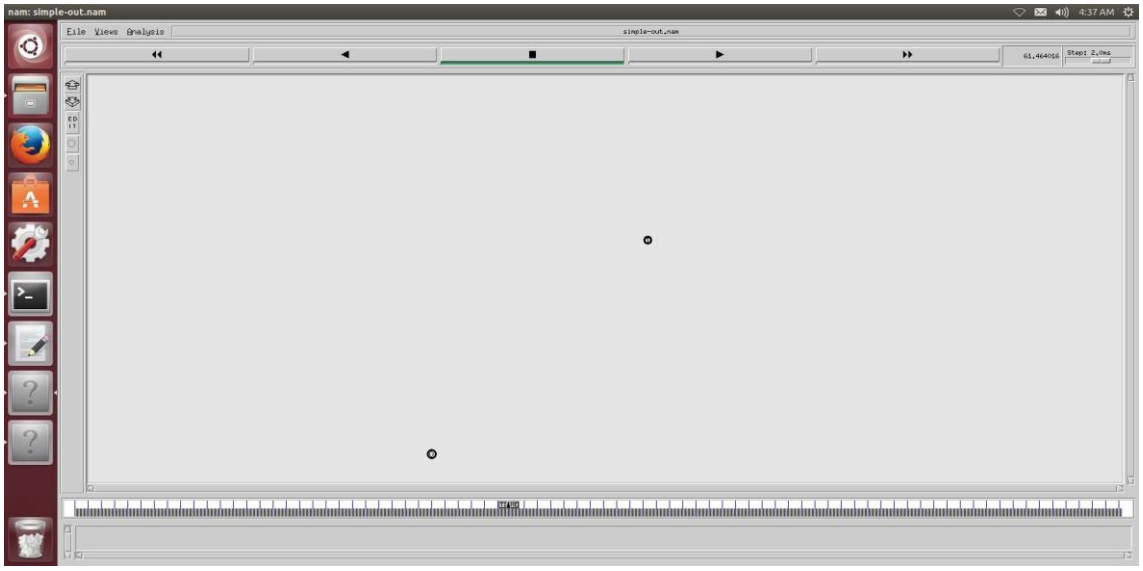
Open Save Undo

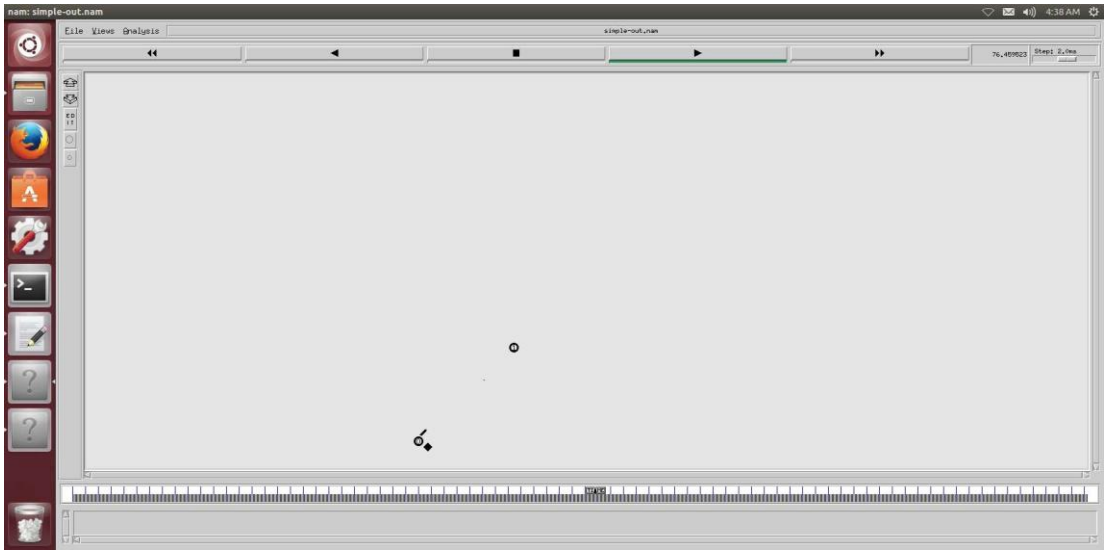
*sw1.tcl × Selective-Repeat-ARQ.tcl × wireless1.tcl ×

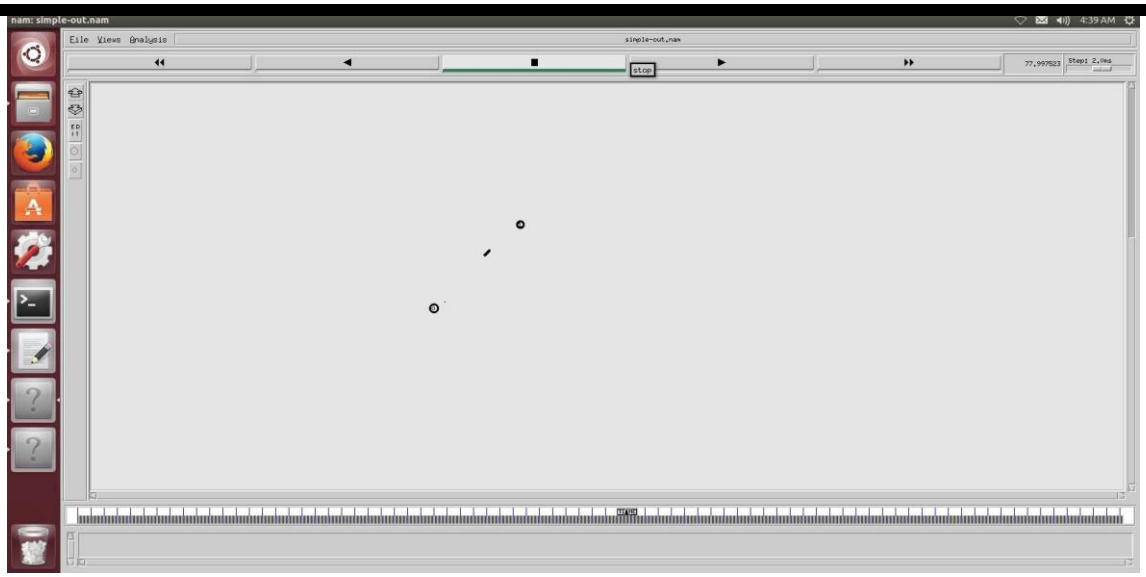
```
set val(chan)           Channel/WirelessChannel    ;
set val(prop)           Propagation/TwoRayGround   ;
set val(netif)          Phy/WirelessPhy            ;
set val(mac)            Mac/802_11                 ;
set val(ifq)            Queue/DropTail/PriQueue    ;
set val(ll)             LL                         ;
set val(ant)            Antenna/OmniAntenna        ;
set val(ifqlen)         50                         ;
set val(nn)             2                          ;
set val(rp)             DSDV                       ;
set ns_         [new Simulator]
set tracefd     [open simple.tr w]
set namtrace    [open simple-out.nam w]
$ns_ trace-all $tracefd
$ns_ namtrace-all-wireless $namtrace 500 500
set topo        [new Topography]
$topo load_flatgrid 500 500
create-god $val(nn)
        $ns_ node-config -adhocRouting $val(rp) \
                         -llType $val(ll) \
                         -macType $val(mac) \
                         -ifqType $val(ifq) \
                         -ifqLen $val(ifqlen) \
                         -antType $val(ant) \
                         -propType $val(prop) \
                         -phyType $val(netif) \
                         -channelType $val(chan) \
                         -topoInstance $topo \
                         -agentTrace ON \
                         -routerTrace ON \
                         -macTrace OFF \
                         -movementTrace OFF
        for {set i 0} {$i < $val(nn) } {incr i} {
                set node_($i) [$ns_ node]
                $node_($i) random-motion 0;
        }
$node_(0) set X_ 5.0
$node_(0) set Y_ 2.0
$node_(0) set Z_ 0.0
$node_(1) set X_ 390.0
```

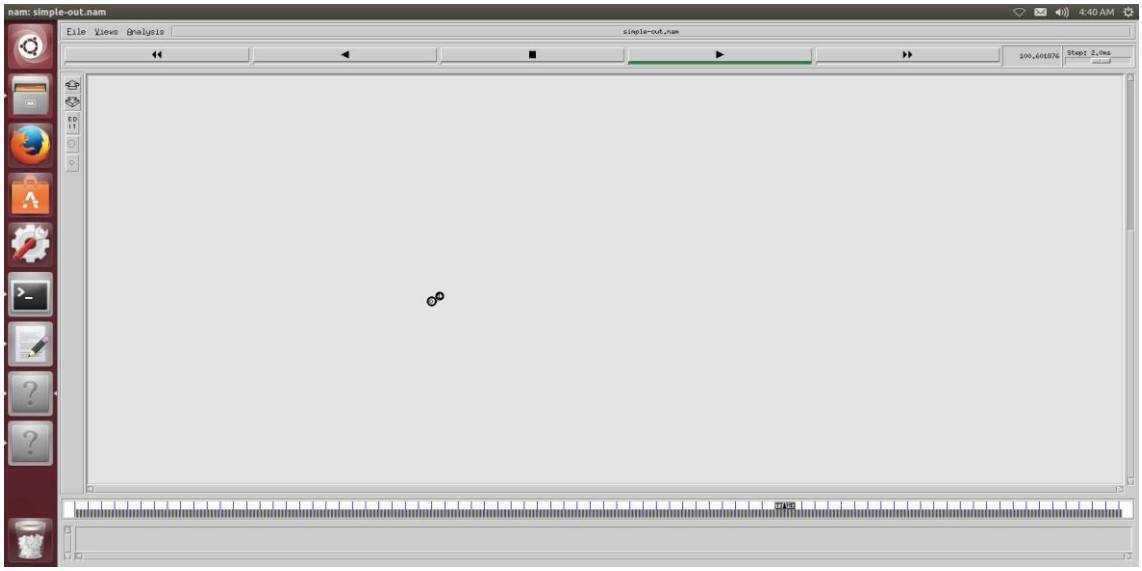
```
$node_(1) set X_ 390.0
$node_(1) set Y_ 385.0
$node_(1) set Z_ 0.0
$ns_ at 50.0 "$node_(1) setdest 25.0 20.0 15.0"
$ns_ at 10.0 "$node_(0) setdest 20.0 18.0 1.0"
$ns_ at 100.0 "$node_(1) setdest 490.0 480.0 15.0"
set tcp [new Agent/TCP]
$tcp set class_ 2
set sink [new Agent/TCPSink]
$ns_ attach-agent $node_(0) $tcp
$ns_ attach-agent $node_(1) $sink
$ns_ connect $tcp $sink
set ftp [new Application/FTP]
$ftp attach-agent $tcp
$ns_ at 10.0 "$ftp start"
for {set i 0} {$i < $val(nn) } {incr i} {
    $ns_ at 150.0 "$node_($i) reset";
}
$ns_ at 150.0 "stop"
$ns_ at 150.01 "puts \"NS EXITING...\" ; $ns_ halt"
proc stop {} {
    global ns_ tracefd
    $ns_ flush-trace
    close $tracefd
    puts "running nam..."
    exec nam simple-out.nam &
    exit 0
}
puts "Starting Simulation..."
$ns_ run
```

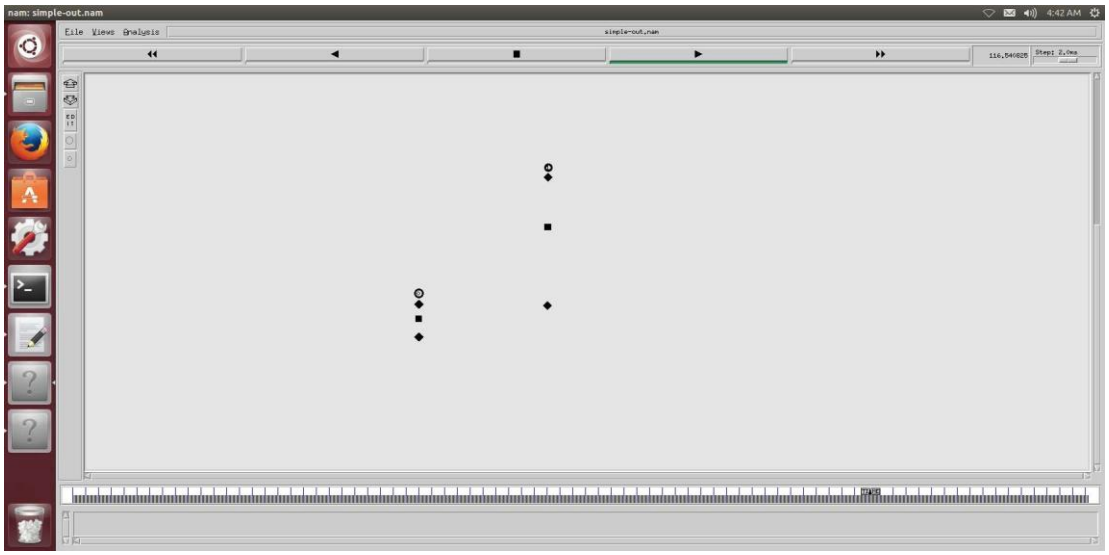

srinu@ubuntu: ~
srinu@ubuntu:~$ ns sw1.tcl
num_nodes is set 2
warning: Please use -channel as shown in tcl/ex/wireless-mitf.tcl
INITIALIZE THE LIST xListHead
Starting Simulation...
channel.cc:sendUp - Calc highestAntennaZ_ and distCST_
highestAntennaZ_ = 1.5, distCST_ = 550.0
SORTING LISTS ...DONE!
running nam...
srinu@ubuntu:~$
Nam Console v1.15
File
NAM - The Network Animator v1.15
Help
NAM - The Network Animator
Welcome to Nam 1.15
Developed by UCB and the VINT, SAMAN, and Conser projects at ISI.
Nam contains source code with the following copyrights:
Copyright (c) 1991-1994 Regents of the University of California.
Copyright (c) 1997-1999 University of Southern California
nam: simple-out.nam
File Views Analysis
simple-out.nam
0.000000
Step: 2.0ms


nam: simple-out.nam
File Views Analysis
simple-out.nam


nam: simple-out.nam
File Views Analysis
simple-out.nam


nam: simple-out.nam
4:39 AM
File Views Analysis
simple-out.nam
stop
Step: 2.0ms


nam: simple-out.nam
4:40 AM
File Views Analysis
simple-out.nam
Step: 2.0ms


nam: simple-out.nam
4:42 AM
File Views Analysis
simple-out.nam
Step: 2.0ms