#create Simulator class set ns [new Simulator]
#open trace file
set nt [open lab42.tr w]
$ns trace-all $nt
#create Topography object set topo [new Topography]
#define grid size
$topo load_flatgrid 1000 1000
#open namtrace file
set nf [open lab42.nam w]
$ns namtrace-all-wireless $nf 1000 1000
#specify node configuration
$ns node-config -adhocRouting DSDV \
-llType LL \
-macType Mac/802_11 \
-ifqType Queue/DropTail \
-ifqLen 20 \
-phyType Phy/WirelessPhy \
-channelType Channel/WirelessChannel \
-propType Propagation/TwoRayGround \
-antType Antenna/OmniAntenna \
-topoInstance $topo \
-agentTrace ON \
-routerTrace ON
#create General Operation Director(god) object that stores total number of mobile nodes.
create-god 4
#create nodes and label them set n0 [$ns node]
set n1 [$ns node] set n2 [$ns node] set n3 [$ns node]
$n0 label "tcp0"
$n1 label "sink0"
$n2 label "bs1"
$n3 label "bs2"
#give initial x, y, z coordinates to nodes
$n0 set X_ 110
$n0 set Y_ 500
$n0 set Z_ 0
$n1 set X_ 600
$n1 set Y_ 500
$n1 set Z_ 0
$n2 set X_ 300
$n2 set Y_ 500
$n2 set Z_ 0
$n3 set X_ 450
$n3 set Y_ 500
$n3 set Z_ 0
$ns attach-agent $n0 $tcp0
set ftp0 [new Application/FTP]
$ftp0 attach-agent $tcp0
set sink1 [new Agent/TCPSink]
$ns attach-agent $n1 $sink1

```
$ns connect $tcp0 $sink1
#attach agent and application to nodes and connect them
 set tcp0 [new Agent/TCP]
 #schedule the event
$ns at 0.5 "$ftp0 start"
#set up destination for mobile nodes. They move to <x><y> coordinates at <s>m/s.
$ns at 0.3 "$n0 setdest 110 500 10"
$ns at 0.3 "$n1 setdest 600 500 20"
$ns at 0.3 "$n2 setdest 300 500 30"
$ns at 0.3 "$n3 setdest 450 500 30"
$ns at 10.0 "$n0 setdest 100 550 5"
$ns at 10.0 "$n1 setdest 630 450 5"
$ns at 70.0 "$n0 setdest 170 680 5"
$ns at 70.0 "$n1 setdest 580 380 5"
$ns at 120.0 "$n0 setdest 140 720 5"
$ns at 135.0 "$n0 setdest 110 600 5"
$ns at 140.0 "$n1 setdest 600 550 5"
$ns at 155.0 "$n0 setdest 89 500 5"
$ns at 190.0 "$n0 setdest 100 440 5"
$ns at 210.0 "$n1 setdest 700 600 5"
$ns at 240.0 "$n1 setdest 650 500 5"
proc finish { } {
global ns nt nf
$ns flush-trace
exec nam lab42.nam & close $nt
close $nf exit 0   }
$ns at 400 "finish"
$ns run
```

Awk file-

```
BEGIN{
PktsSent=0; PktsRcvd=0; PktsAtRTR=0;   }
{  if(($1=="s")&&($4=="RTR")&&($7=="tcp"))
PktsAtRTR++;
if(($1=="s")&&($4=="AGT")&&($7=="tcp"))
PktsSent++;
if(($1=="r")&&($4=="AGT")&&($7=="tcp"))
PktsRcvd++;   }
END{
print " Number of Packets Sent :" PktsSent
print " Number of Packets Received :" PktsRcvd
print " Pacjet Delivery Ratio :" PktsRcvd/PktsSent*100
print " Routing Load :" PktsAtRTR/PktsRcvd  }
```

Output-

$ns pgm6.tcl

$awk -f count.awk lab42.tr Number of Packets Sent :6819

Number of Packets Received :6685 Packet Delivery Ratio :98.0349 Routing Load :1.02004