# PROGRAM7B:

#Create a simulator object set ns [new Simulator]

#Open the nam trace file set nf [open out.nam w]

$ns namtrace-all $nf

#Define a 'finish' procedure proc finish { } {

global ns nf

$ns flush-trace #Close the trace file close $nf

#Execute nam on the trace file exec nam out.nam &

exit 0

}

#Create eight nodes set n0 [$ns node] set n1 [$ns node] set n2 [$ns node] set n3 [$ns node] set n4 [$ns node] set n5 [$ns node] set n6 [$ns node] set n7 [$ns node]

#Create links between the nodes

$ns duplex-link $n0 $n3 1Mb 10ms RED

$ns duplex-link $n1 $n3 1Mb 10ms RED

$ns duplex-link $n2 $n3 1Mb 10ms RED

$ns duplex-link $n3 $n4 1Mb 10ms RED

$ns duplex-link $n4 $n5 1Mb 10ms RED

$ns duplex-link $n4 $n6 1Mb 10ms RED

$ns duplex-link $n4 $n7 1Mb 10ms RED

$ns duplex-link-op $n0 $n3 orient right-up

$ns duplex-link-op $n3 $n4 orient middle

$ns duplex-link-op $n2 $n3 orient right-down

$ns duplex-link-op $n4 $n5 orient right-up

$ns duplex-link-op $n4 $n7 orient right-down

$ns duplex-link-op $n1 $n3 orient right

$ns duplex-link-op $n6 $n4 orient left Create a UDP agent and attach it to node n2 set udp0 [new Agent/UDP]

$ns attach-agent $n2 $udp0

#Create a CBR traffic source and attach it to udp0 set cbr0 [new Application/Traffic/CBR]

$cbr0 set packetSize\_ 500

$cbr0 set interval\_ 0.005

$cbr0 attach-agent $udp0

#Create a Null agent (a traffic sink) and attach it to node n5 set null0 [new Agent/Null]

$ns attach-agent $n5 $null0

#Connect the traffic sources with the traffic sink

$ns connect $udp0 $null0

#Create a UDP agent and attach it to node n1 set udp1 [new Agent/UDP]

$ns attach-agent $n1 $udp1

#Create a CBR traffic source and attach it to udp1 set cbr1 [new Application/Traffic/CBR]

$cbr1 set packetSize\_ 500

$cbr1 set interval\_ 0.005

$cbr1 attach-agent $udp1

#Create a Null agent (a traffic sink) and attach it to node n6 set null0 [new Agent/Null]

$ns attach-agent $n6 $null0

#Connect the traffic sources with the traffic sink

$ns connect $udp1 $null0

#Create a UDP agent and attach it to node n0 set udp2 [new Agent/UDP]

$ns attach-agent $n0 $udp2

#Create a CBR traffic source and attach it to udp2 set cbr2 [new Application/Traffic/CBR]

$cbr2 set packet size\_ 500

$cbr2 set interval\_ 0.005

$cbr2 attach-agent $udp2

#Create a Null agent (a traffic sink) and attach it to node n7 set null0 [new Agent/Null]

$ns attach-agent $n7 $null0

#Connect the traffic sources with the traffic sink

$ns connect $udp2 $null0

$udp0 set fid\_ 1

$udp1 set fid\_ 2

$udp2 set fid\_ 3

#Define different colors for data flows

$ns color 1 Red

$ns color 2 Green

$ns color 2 Blue

#Schedule events for the CBR agents

$ns at 0.1 "$cbr0 start"

$ns at 0.2 "$cbr1 start"

$ns at 0.5 "$cbr2 start"

$ns at 4.0 "$cbr2 stop"

$ns at 4.2 "$cbr1 stop"

$ns at 4.5 "$cbr0 stop"

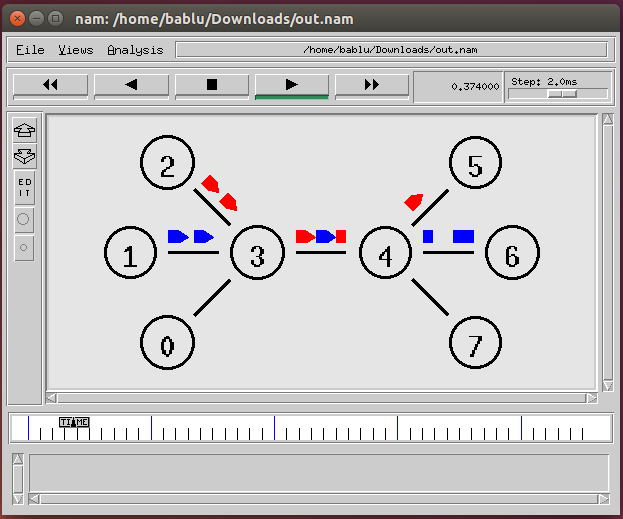
#Call the finish procedure after 5 seconds of simulation time

$ns at 5.0 "finish"

#Run the simulation

$ns run

# OUTPUT:

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