**PROGRAM 2**

set ns [new Simulator]

set nf [open pg2.nam w]

set tf [open pg2.tr w]

$ns trace-all $tf

$ns namtrace-all $nf

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]

$n0 label "Ping0"

$n2 label "Router"

$n5 label "Ping5"

$n6 label "Ping6"

$n4 label "Ping4"

$ns color 1 "red"

$ns color 2 "blue"

$ns duplex-link $n0 $n2 100Mb 300ms DropTail

$ns duplex-link $n5 $n2 100Mb 300ms DropTail

$ns duplex-link $n2 $n6 1Mb 300ms DropTail

$ns duplex-link $n2 $n4 1Mb 300ms DropTail

$ns duplex-link $n1 $n2 1Mb 300ms DropTail

$ns duplex-link $n3 $n2 1Mb 300ms DropTail

$ns queue-limit $n0 $n2 5

$ns queue-limit $n5 $n2 5

$ns queue-limit $n2 $n6 2

$ns queue-limit $n2 $n4 3

set ping0 [new Agent/Ping]

set ping4 [new Agent/Ping]

set ping5 [new Agent/Ping]

set ping6 [new Agent/Ping]

$ns attach-agent $n0 $ping0

$ns attach-agent $n4 $ping4

$ns attach-agent $n5 $ping5

$ns attach-agent $n6 $ping6

$ns connect $ping0 $ping4

$ns connect $ping5 $ping6

$ping0 set class\_ 1

$ping5 set class\_ 2

$ping0 set packetSize\_ 50000

$ping0 set interval\_ 0.0001

$ping5 set packetSize\_ 60000

$ping5 set interval\_ 0.00001

Agent/Ping instproc recv {from rtt} {

$self instvar node\_

puts "The node [$node\_ id] received a reply from $from at a round trip time of $rtt"

}

$ns rtmodel-at 0.9 down $n2 $n6

$ns rtmodel-at 1.5 up $n2 $n6

$ns at 0.1 "$ping0 send"

$ns at 0.2 "$ping0 send"

$ns at 0.3 "$ping0 send"

$ns at 0.4 "$ping0 send"

$ns at 0.5 "$ping0 send"

$ns at 0.6 "$ping0 send"

$ns at 0.7 "$ping0 send"

$ns at 0.8 "$ping0 send"

$ns at 0.9 "$ping0 send"

$ns at 1.0 "$ping0 send"

$ns at 1.1 "$ping0 send"

$ns at 1.2 "$ping0 send"

$ns at 1.3 "$ping0 send"

$ns at 1.4 "$ping0 send"

$ns at 1.5 "$ping0 send"

$ns at 1.6 "$ping0 send"

$ns at 1.7 "$ping0 send"

$ns at 1.8 "$ping0 send"

$ns at 0.1 "$ping5 send"

$ns at 0.2 "$ping5 send"

$ns at 0.3 "$ping5 send"

$ns at 0.4 "$ping5 send"

$ns at 0.5 "$ping5 send"

$ns at 0.6 "$ping5 send"

$ns at 0.7 "$ping5 send"

$ns at 0.8 "$ping5 send"

$ns at 0.9 "$ping5 send"

$ns at 1.0 "$ping5 send"

$ns at 1.1 "$ping5 send"

$ns at 1.2 "$ping5 send"

$ns at 1.3 "$ping5 send"

$ns at 1.4 "$ping5 send"

$ns at 1.5 "$ping5 send"

$ns at 1.6 "$ping5 send"

$ns at 1.7 "$ping5 send"

$ns at 1.8 "$ping5 send"

proc finish {} {

global nf tf ns

$ns flush-trace

close $nf

close $tf

exec nam pg2.nam &

exit 0

}

$ns at 5 "finish"

$ns run