set ns [new Simulator]

set namfile [open p12.nam w]

$ns namtrace-all $namfile set tracefile [open p12.tr w]

$ns trace-all $tracefile proc finish {} {

global ns namfile tracefile

$ns flush-trace close $namfile close $tracefile

exec nam p12.nam &

exit 0

}

set n0 [$ns node] set n1 [$ns node] set n2 [$ns node] set n3 [$ns node] set n4 [$ns node]

$ns duplex-link $n0 $n1 1Mb 10ms DropTail

$ns duplex-link $n0 $n2 1Mb 10ms DropTail

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

$ns duplex-link $n1 $n2 1Mb 10ms DropTail

$ns duplex-link $n1 $n4 1Mb 10ms DropTail

$ns duplex-link $n2 $n4 1Mb 10ms DropTail

$ns duplex-link-op $n0 $n1 orient right

$ns duplex-link-op $n0 $n2 orient right-down

$ns duplex-link-op $n0 $n3 orient down

$ns duplex-link-op $n1 $n2 orient left-down

$ns duplex-link-op $n1 $n4 orient down

$ns duplex-link-op $n2 $n4 orient right-down set udp0 [new Agent/UDP]

$ns attach-agent $n0 $udp0

set cbr0 [new Application/Traffic/CBR]

$cbr0 set packetSize\_ 500

$cbr0 set interval\_ 0.005

$cbr0 attach-agent $udp0 set null0 [new Agent/Null]

$ns attach-agent $n4 $null0

$ns connect $udp0 $null0 set udp1 [new Agent/UDP]

$ns attach-agent $n2 $udp1

set cbr1 [new Application/Traffic/CBR]

$cbr1 set packetSize\_ 500

$cbr1 set interval\_ 0.005

$cbr1 attach-agent $udp1 set null0 [new Agent/Null]

$ns attach-agent $n4 $null0

$ns connect $udp1 $null0

#The Link state routing algorithm is also known as Dijkstra's algorithm which is used to find the shortest path from one node to every other node in the network.

$ns rtproto LS

$ns rtmodel-at 20.0 down $n1 $n4

$ns rtmodel-at 23.0 up $n1 $n4

$ns rtmodel-at 25.0 down $n2 $n4

$ns rtmodel-at 40.0 up $n2 $n4

$udp0 set class\_ 1

$udp1 set class\_ 2

$ns color 1 Red

$ns color 2 Green

$ns at 1.0 "$cbr0 start"

$ns at 2.0 "$cbr1 start"

$ns at 45 "finish"

$ns run