**PROGRAM9A:**

#Create a simulator object set ns [new Simulator]

#Use distance vector routing

$ns rtproto DV

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

$ns namtrace-all $nf

# Open tracefile

set nt [open trace.tr w]

$ns trace-all $nt

#Define 'finish' procedure proc finish {} {

global ns nf

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

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

exit 0

}

# Create 8 nodes

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 [$ns node] set n8 [$ns node]

# Specify link characterestics

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

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

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

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

$ns duplex-link $n5 $n6 1Mb 10ms DropTail

$ns duplex-link $n6 $n7 1Mb 10ms DropTail

$ns duplex-link $n7 $n8 1Mb 10ms DropTail

$ns duplex-link $n8 $n1 1Mb 10ms DropTail

# specify layout as a octagon

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

$ns duplex-link-op $n2 $n3 orient up

$ns duplex-link-op $n3 $n4 orient right-up

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

$ns duplex-link-op $n5 $n6 orient right-down

$ns duplex-link-op $n6 $n7 orient down

$ns duplex-link-op $n7 $n8 orient left-down

$ns duplex-link-op $n8 $n1 orient left

#Create a UDP agent and attach it to node n1 set udp0 [new Agent/UDP]

$ns attach-agent $n1 $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 n4 set null0 [new Agent/Null]

$ns attach-agent $n4 $null0

#Connect the traffic source with the traffic sink

$ns connect $udp0 $null0

#Schedule events for the CBR agent and the network dynamics

$ns at 0.0 "$n1 label Source"

$ns at 0.0 "$n4 label Destination"

$ns at 0.5 "$cbr0 start"

$ns rtmodel-at 1.0 down $n3 $n4

$ns rtmodel-at 2.0 up $n3 $n4

$ns at 4.5 "$cbr0 stop"

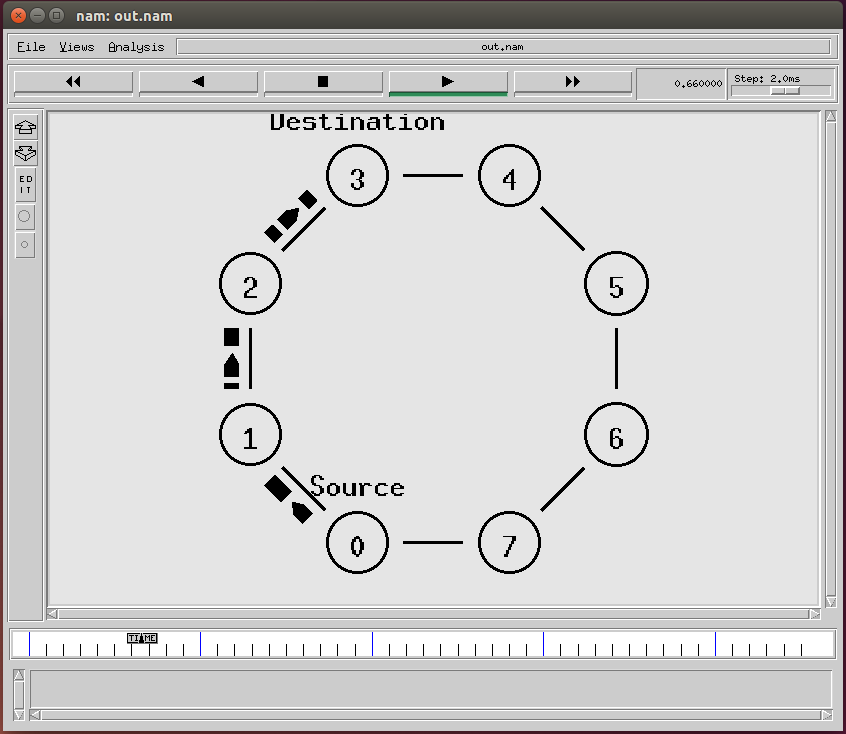
#Call the finish procedure after 5 seconds of simulation time

$ns at 5.0 "finish"

#Run the simulation

$ns run

# OUTPUT:

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