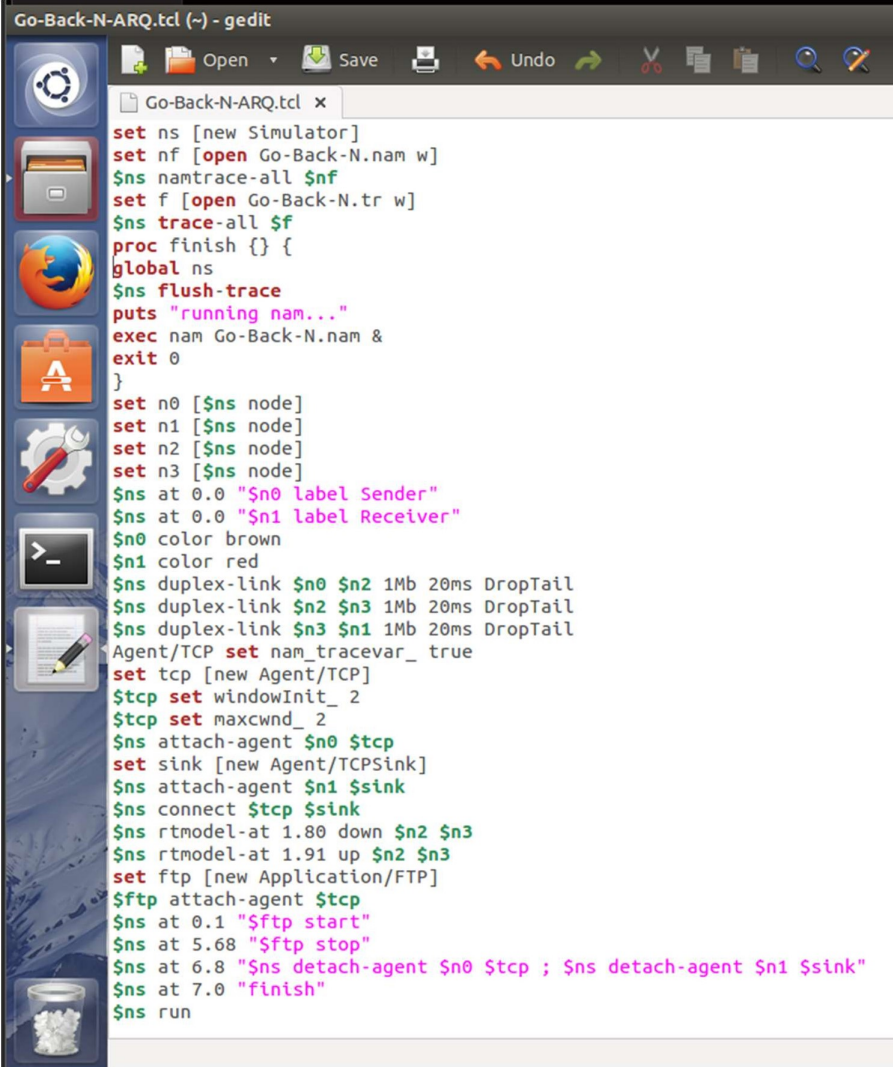


# WEEK 06 PROGRAMS

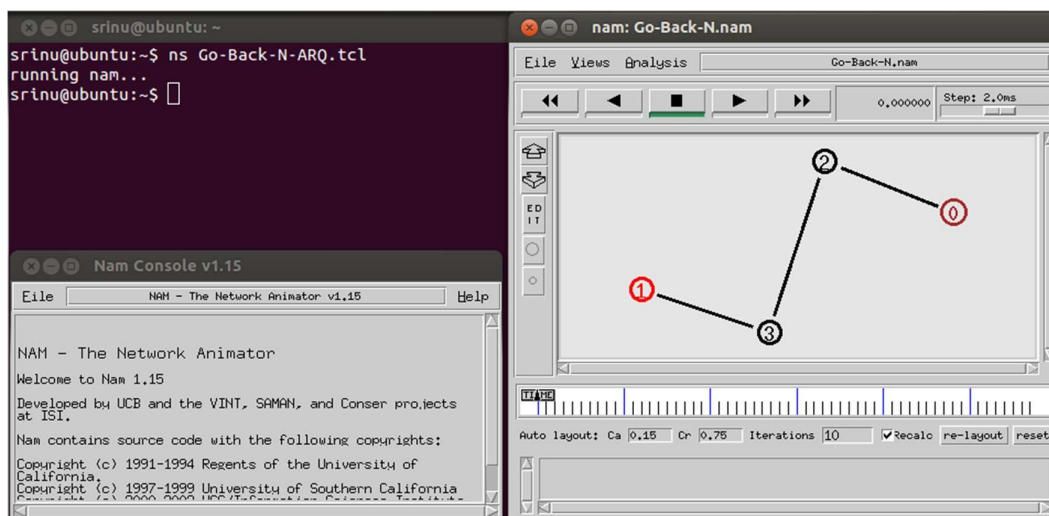
**AIM:** Implementation of Go-Back-N protocol and Selective Repeat protocol using NS2 Simulation Tool.

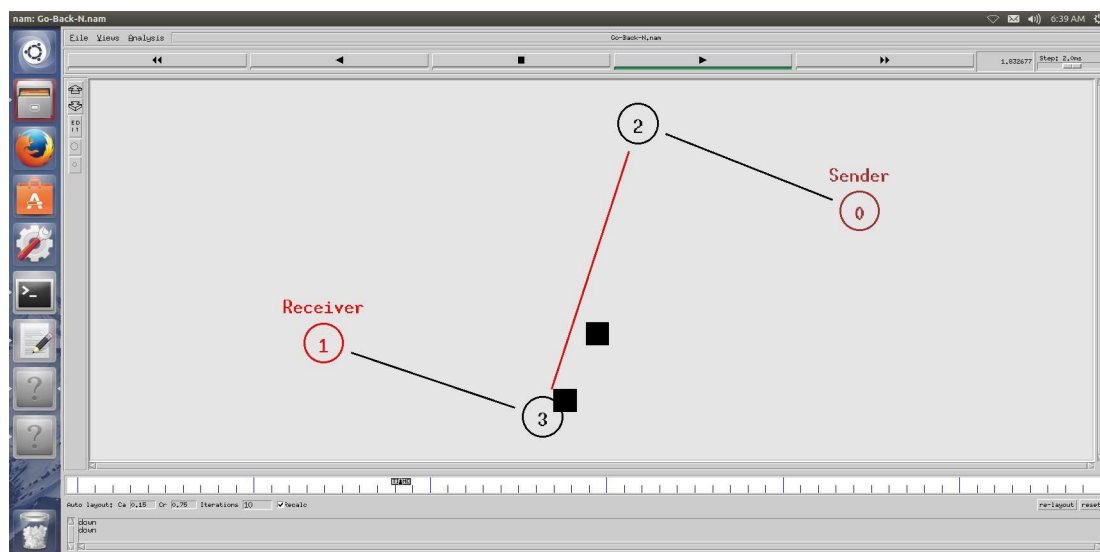
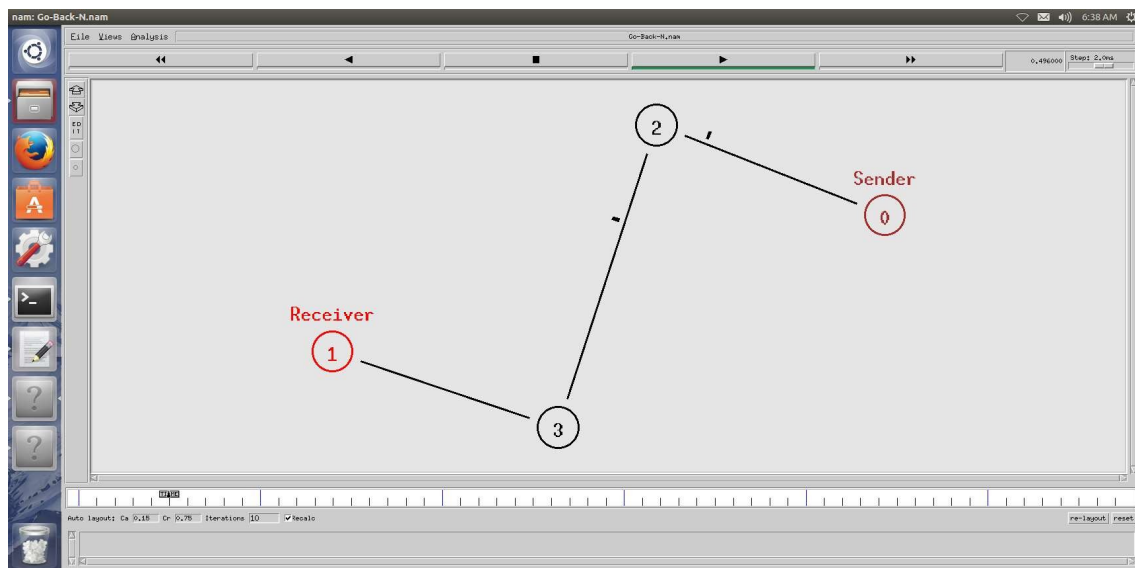
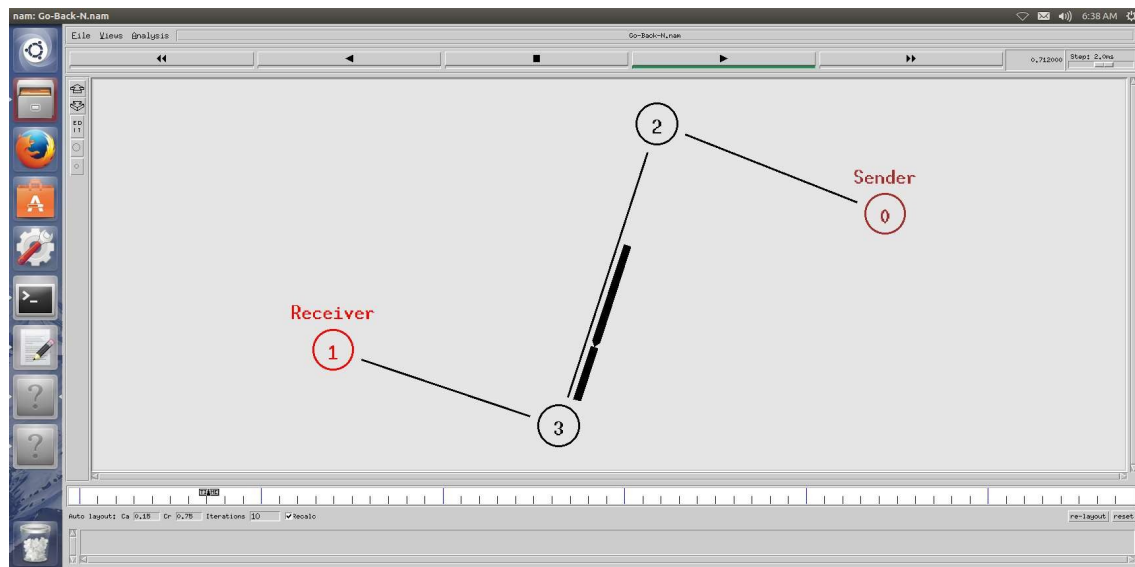
**PROGRAM:** Implementation of Go-Back-N protocol Using NS2 Simulation

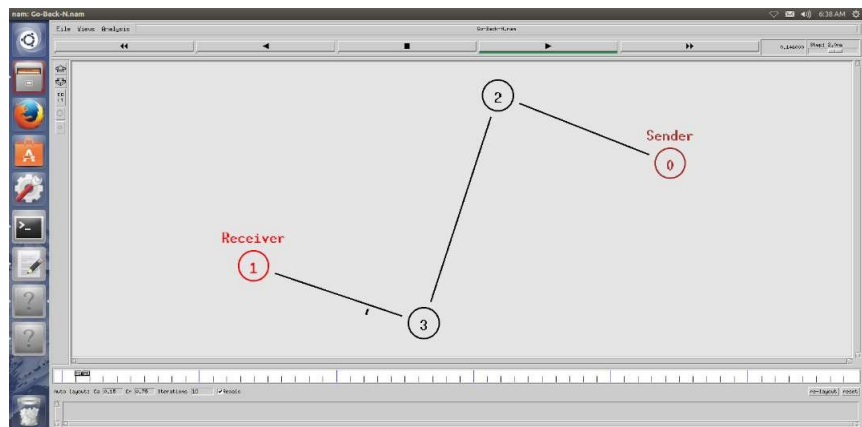
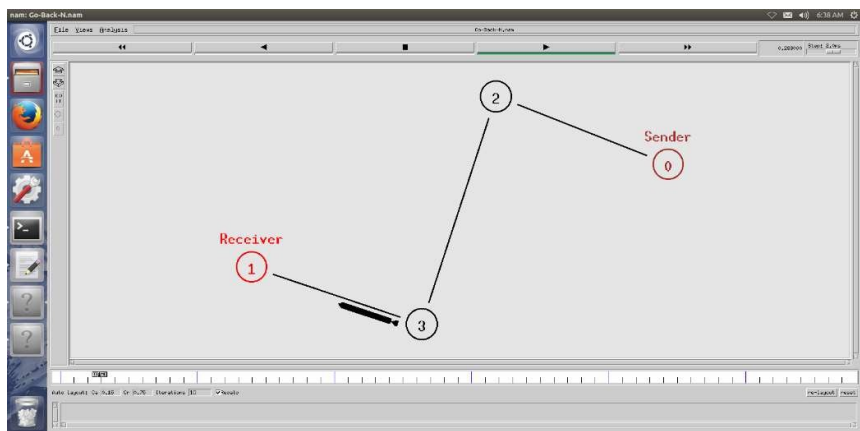
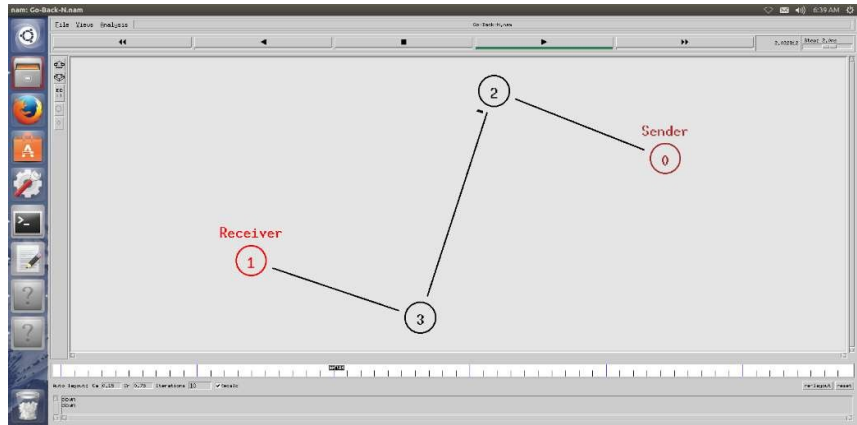
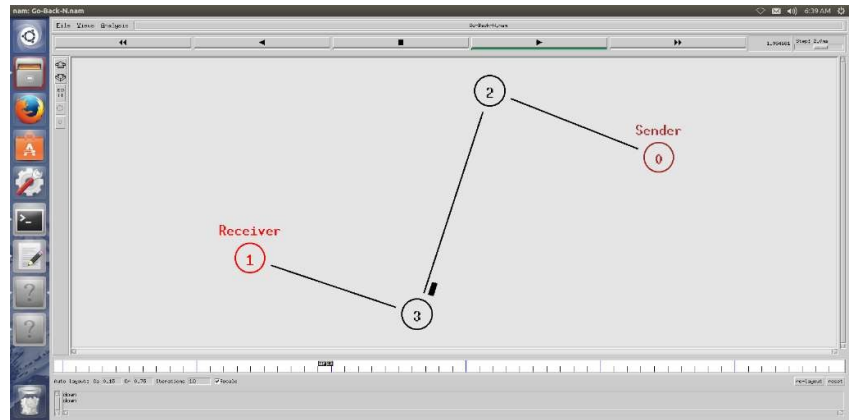


```
Go-Back-N-ARQ.tcl (~) - gedit
Go-Back-N-ARQ.tcl x
set ns [new Simulator]
set nf [open Go-Back-N.nam w]
$ns namtrace-all $nf
set f [open Go-Back-N.tr w]
$ns trace-all $f
proc finish {} {
    global ns
    $ns flush-trace
    puts "running nam..."
    exec nam Go-Back-N.nam &
    exit 0
}
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
$ns at 0.0 "$n0 label Sender"
$ns at 0.0 "$n1 label Receiver"
$n0 color brown
$n1 color red
$ns duplex-link $n0 $n2 1Mb 20ms DropTail
$ns duplex-link $n2 $n3 1Mb 20ms DropTail
$ns duplex-link $n3 $n1 1Mb 20ms DropTail
Agent/TCP set nam_tracevar_ true
set tcp [new Agent/TCP]
$tcp set windowInit_ 2
$tcp set maxcwnd_ 2
$ns attach-agent $n0 $tcp
set sink [new Agent/TCPSink]
$ns attach-agent $n1 $sink
$ns connect $tcp $sink
$ns rtmodel-at 1.80 down $n2 $n3
$ns rtmodel-at 1.91 up $n2 $n3
set ftp [new Application/FTP]
$ftp attach-agent $tcp
$ns at 0.1 "$ftp start"
$ns at 5.68 "$ftp stop"
$ns at 6.8 "$ns detach-agent $n0 $tcp ; $ns detach-agent $n1 $sink"
$ns at 7.0 "finish"
$ns run
```

**Output and Simulation of packets :**







## PROGRAM : Implementation of Selective-Repeat-N protocol Using NS2 Simulation

```
Selective-Repeat-ARQ.tcl (~) - gedit
set ns [new Simulator]
set nf [open Go-Back-N.nam w]
$ns namtrace-all $nf
proc finish {} {
    global ns
    $ns flush-trace
    close $nf
    puts "running nam..."
    exec nam Go-Back-N.nam &
    exit 0
}
set n0 [$ns node]
set n1 [$ns node]
set n2 [$ns node]
set n3 [$ns node]
$ns at 0.0 "$n0 label Sender"
$ns at 0.0 "$n1 label Receiver"
$n0 color brown
$n1 color green
$ns duplex-link $n0 $n2 1Mb 20ms DropTail
$ns duplex-link $n2 $n3 1Mb 20ms DropTail
$ns duplex-link $n3 $n1 1Mb 20ms DropTail
Agent/TCP set nam_tracevar_ true
set tcp [new Agent/TCP]
$tcp set windowInit_ 10
$tcp set maxcwnd_ 10
$ns attach-agent $n0 $tcp
set sink [new Agent/TCPSink]
$ns attach-agent $n1 $sink
$ns connect $tcp $sink
$ns rtmodel-at 1.80 down $n2 $n3
$ns rtmodel-at 1.91 up $n2 $n3
set ftp [new Application/FTP]
$ftp attach-agent $tcp
$ns at 0.1 "$ftp start"
$ns at 5.68 "$ftp stop"
$ns at 6.8 "$ns detach-agent $n0 $tcp ; $ns detach-agent $n1 $sink"
$ns at 7.0 "finish"
$ns run
```

## Output and Simulation of packets :

