Assignment B2

- Title: Traffic monitoring for a given topology using NS2

- Requirements:
1) NS2 tool
2) OS (Windows/Linux)
3) i5+, 8GB+ RAM, HDD.

- Objectives:
1) To understand the use of NS2
2) To understand how to monitor traffic for a given network using NS2 tool.

- Outcomes:
Student should be able to use NS2 & monitor traffic for a given network using it.

- Theory:
For monitoring traffic for a given topology:-

1. Create a Simulator object
Syntax: set ns [new Simulator]

2. Tell Simulator to use dynamic routing
$ ns rtproto DV

3) Open name trace file

```
set nf [open out-man.tr w]
$ns namtrace -all $nf
```

4) Define a 'finish' procedure

```
proc finish() {
        global ns nf
        $ns flush-trace
        #close trace file
        close $nf
        # exec name on trace file
        exec nam atnam &
        exit 0
}

for (ret i 0)($i < 7){inc i}{
        $ns duplex-link $n($i)
        $n (expr [$i+1] = 7)
        1 Mb 10ms Drop
```

5) Create UDP agent & attach it to node n(0)

```
$ns attach-agent $n(0) $udp 0
```

6) Create a CBR traffic source & attach it to UDP 0

7) Create a null agent (traffic sync) & attach it to node (n3)

```
$ns attach agent
$n(3) $null
```

8) Connect the traffic source with the traffic sink.

```
$ns connect $udp 0 $null 0
```

9) Schedule events for CBR agent & network dynamics.

10) Run

```
$ns run
```

- Conclusion:

Thus the network topology was created & traffic was monitored successfully using NS2.