**G. H. RAISONI COLLEGE OF ENGG., NAGPUR**

**(An Autonomous Institute)**

**Department of Computer Science & Engg.**



**Date: 28-09-2021**

**Practical Subject: DCN Pr A2**

**Session: 2021-22**

**Student Details:**

| **Roll Number** | 01 |
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| **Name** | Anand Suralkar |
| **Semester** | 9th |
| **Section** | A |
| **Batch** | CSE |

**Practical Details: Practical Number-7;**

| Practical Aim | To Install, Configure and Analyze Network Simulator |
| --- | --- |
| Theory & Syntax | NS2 is an event driven simulator. It simulates the behavior of networks and investigates the performance of  network protocols.  Features of NS2:  Protocols: TCP, UDP, HTTP, Routing algorithms, MAC etc.  ● Traffic Models: CBR, VBR, Web etc  ● Error Models: Uniform, bursty etc  ● Misc: Radio propagation, Mobility models , Energy Models  ● Topology Generation tools  ● Visualization tools (NAM), Tracing  NS is an object oriented discrete event simulator  Simulator maintains list of events and executes one event after another.  Single thread of control: no locking or race conditions.  ● Back end is C++ event scheduler.  ● Front end is oTCL |
| Program | Installation of NS2 in Linux:  1. Install NS-2.34 on Linux-http://sourceforge.net/projects/nsnam/files/allinone/ns-allinone-2.34/  2. Type ./install on terminal to compile the source after extracting NS-2  3. Type gedit ~/.bashrc on terminal to set the environment variables.Append the following text to  opened file (Please note that the path contains the path in my system, replace &quot;usman&quot; in the path  with your username)  4. # .bashrc  5. export PATH=$PATH:/home/usman/ns-allinone-2.34/bin:/home/usman/ns-allinone-  2.34/tcl8.4.18/unix:/home/usman/ns-allinone-2.34/tk8.4.18/unix  6. export LD\_LIBRARY\_PATH=$LD\_LIBRARY\_PATH:/home/usman/ns-allinone-2.34/otcl-  1.13:/home/usman/ns-allinone-2.34/lib  7. export TCL\_LIBRARY=$TCL\_LIBRARY:/home/usman/ns-allinone-2.34/tcl8.4.18/library  8. # User specific aliases and functions  9. alias rm=&#39;rm -i&#39;  10. alias cp=&#39;cp -i&#39;  11. alias mv=&#39;mv -i&#39;  12. # Source global definitions  13. if [ -f /etc/bashrc ]; then  14. . /etc/bashrc |
| Output |  |
| Conclusion | Thus, we have install, configure and analyze Network Simulator. |