



**IARE**  
INSTITUTE OF  
AERONAUTICAL ENGINEERING  
(An Autonomous Institute affiliated to JNTUH, Hyderabad)  
Dundigal, Hyderabad - 500 043

## LONG LABORATORY

Name of the Student : Bibek behesa  
Class : CSE - A Semester : VI  
Course Code : ACSD41 Course Name : linux lab  
Name of the Course Faculty : B. sandeep kishore Faculty ID : 11142  
Exercise Number : 4, 5 Week Number : 4, 5 Date : .....

Roll Number							
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S. No.	Exercise Number	EXERCISE NAME	MARKS AWARDED						
			Aim/ Preparation	Algorithm / Procedure		Source Code	Program Execution	Viva - Voce	Total
				Performance in the Lab		Calculations and Graphs	Results and Error Analysis		
			4	4		4	4	4	20
1	4.1	Hard & Symbolic links	4	2	2	4	4	3	19
2	4.2	Network Utilities							
3	4.3	Tar archive & Zip							
4									
5	5.1	Displaying files.	4	2	2	4	4	4	20
6	5.2	Moving files							
7	5.3	Displaying logged in users after a							
8		a type specified time.							
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Bibek

Signature of the Student

B. Sandeep Kishore

Signature of the Faculty



## Exercise on Process, Text, Network and backup Utilities

### 4.1 Hard links and symbolic links.

A link is a special file that acts as a reference to another file or directory. It provides an alternative name to access the same content.

ex: /usr/bin/ti is a link to /etc/alternative/v

Symbolic links stores the path of another file or directory  
 ⇒ If original file is deleted, sym link becomes broken  
 Command to create symbolic link.

`ln -s <file/directory> <symlink-name>`

Identification:-

`ls -l`

### Hard link:-

A hard link points directly to files. node all hard links are equal file exists as long as at least one hard link exist

Command to create hard link.

`ln <existing-file> <hard link-name>`

Check node number:-

`ls -li`

Link Count

`ls -l`



## Comparison Commands

cmp → Byte-by-byte Comparison

cmp file1 file2

cmp -l file1 file2

diff → line by line

diff file1 file2

for:

translates (or) substitutes characters.

for [-cds] in-string out-string

## 4.2) Network utilities.

ftp:

Transfer files between hosts.

ftp hostname

o login

remove login to Unix system.

relogin [-l user] host name

exit using (ctrl + d)

ssh : executes remote command

telnet connects to any host with telnet

server telnet hostname [port]

arp manages Apc cache (IP → mac mapping)

arp -a

arp -d host

arp -n



4.3: Backup & compression utilities

tar → Archives multiple files.

tar czvf archive.gz files

tar xzvf archive.tar.gz

gzip/gunzip

gzip file.

gunzip file.

bzip2/bunzip2

bzip2 file

bunzip2 file.bzz