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Fall Semester 2021-2022

ECE5030 - Scripting Languages for VLSI Design Automation

M.Tech VLSI Design

School of Electronics Engineering

Vellore Institute of Technology

Name: Shreyas S Bagi

Register Number: 21MVD0086

Slot: L3+L4

Date:20/9/2021

Lab Task 01

Linux Basics

Aim: Analyze the Basic Linux command in Terminal.

Program/ Code:

Commands can be run by themselves, or you can pass in additional arguments to make them do different things. Typical command syntax can look something like this:

command [-argument] [-argument] [--argument] [file]

The following Code commands are executed in Terminal window.

$pwd

$cd

$mkdir dirxyz

$mkdir dir1 dir2 dir3

$rmdir

$history

$history 5

$history 10

$cat >Filename

$cat Filename

$cp Source_file Destination_path

$rm Filename

$mv Filename Destination_path

$ls

$ls -l

$ls -lt

$ls -R

$ls -ltR

The detailed explanation of commands as follows :

1. **$pwd**
   pwd stands for Print Working Directory. The command displays the path of present working directory or shows the current location in the directory tree.
   In the Figure 1.1 we observe $pwd returns the path of present working directory.

2. **$mkdir**
   mkdir stands for make directory. The command creates new directory.
   $mkdir Scripting ----- Creates Directory called Scripting.
   $mkdir ABC EFG XYZ ----- Creates multiple Directory at once.
   In the Figure 1.1 we observe the directories Scripting, PERL, Python, TCL and Ruby created by using $mkdir command.

3. **$cd**
   cd stands for change directory. The command helps user to move from current directory to a new one.
   In the Figure 1.1 we observe use of Absolute path and Relative path.

4. **$rmdir**
   rmdir stands for remove directory. The command removes the specific directory.
   In the Figure 1.1 we observe $rmdir Ruby command removes Ruby directory.

5. **$ls**
   The command lists the contents of the directory. In the Figure 1.1,1.2,1.3 and 1.4 we observe usage of this command.
   (i) $ ls -R This command used to list contents of all directories.
   (ii) $ ls -lR This command used to list contents of all the directories in long format.
   (iii) $ ls -ltR This command used to list contents of all the directories in long format sorted with the modification time.
   (iv) $ls -l This command used to list of all the directories in long format and also tells us total files present .

6. **$history**
   List of all the commands used.
   In the Figure 1.1 we observe $history 5 shows recent 5 commands used.
   In the Figure 1.3 we observe $history 10 shows recent 10 commands used.

7. **$cat**
   The $cat command used to show the content of a file.
   In the Figure 1.2 we observe $cat LAB01 shows the contents stored in LAB01 file.

8. **$cp**
   The $cp command copies a file from one location to another.
   In the Figure 1.2 we observe the command $cp LAB01 ./PERL/ results in copying the LAB01 file from Scripting directory to PERL directory.

9. **$mv**
   The $mv command moves a file to a new location or renames it.
   In the Figure 1.3 we observe the command $mv LAB01 ./TCL/ results in moving LAB01 file from Scripting to TCL directory. The LAB01 file gets deleted in Scripting directory.

10. **$rm**
    The $rm command Delete a file.

Output Screenshots:

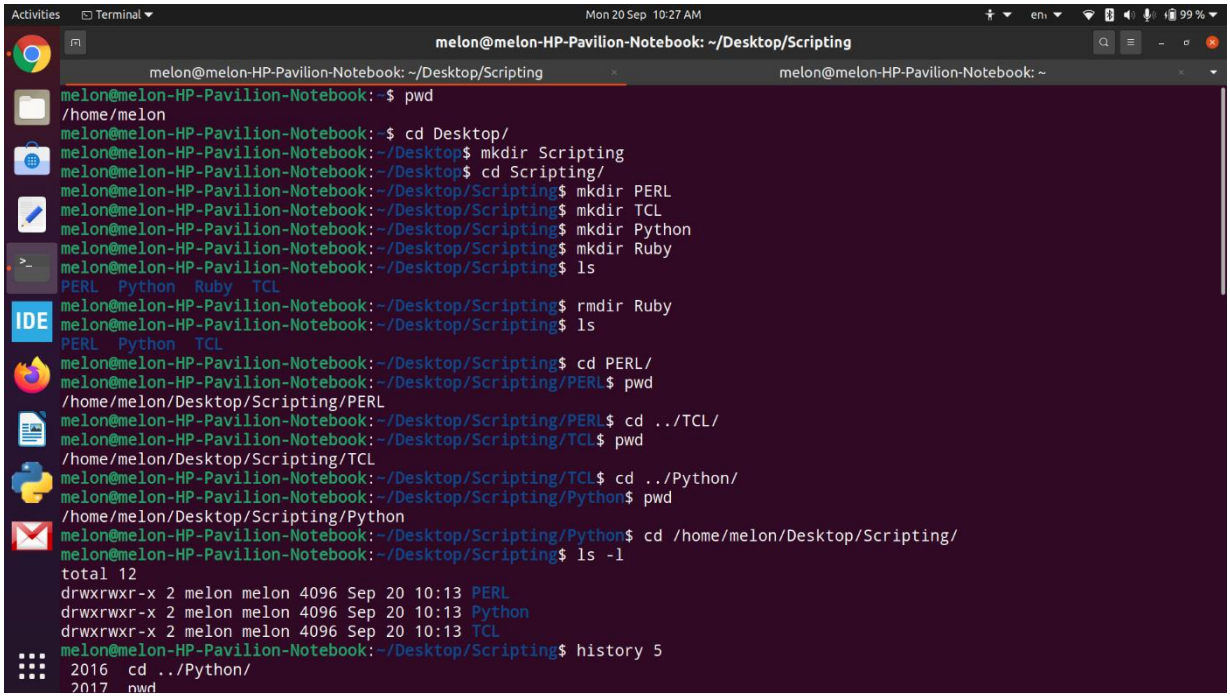

Figure 1.1 Screenshot of $pwd, $cd, $mkdir, $rmdir $history and $ls command usage.

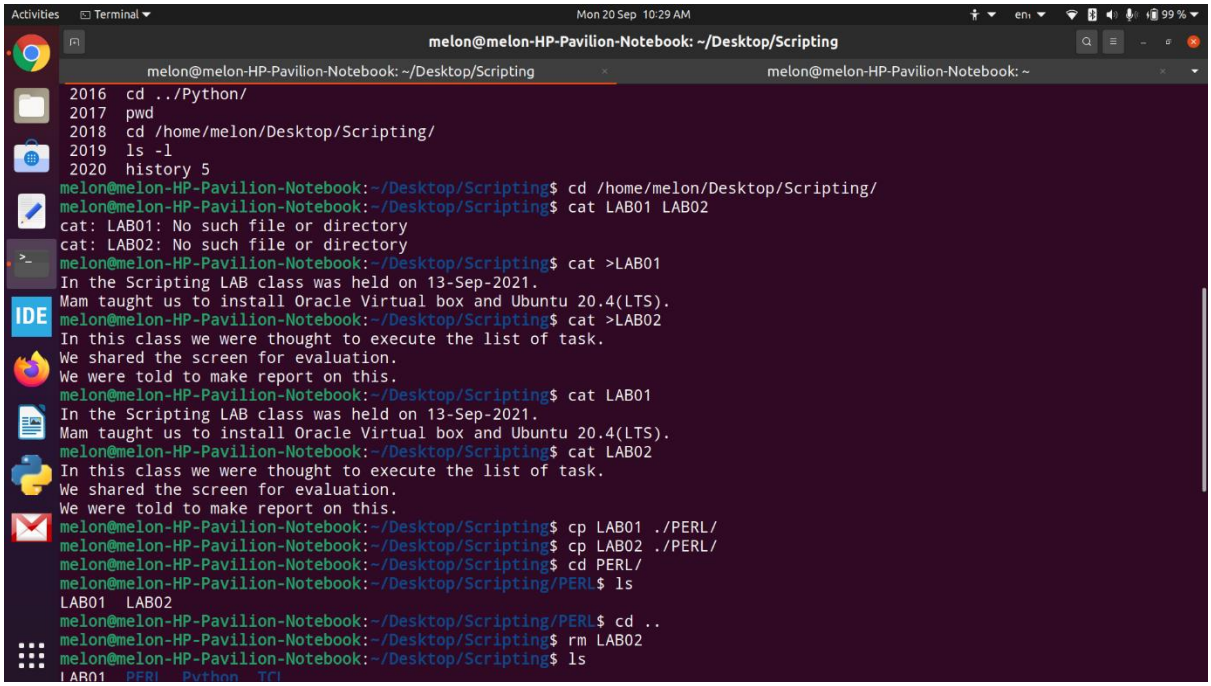

Figure 1.2 Screenshot of $cat, $cp and $rm command usage.

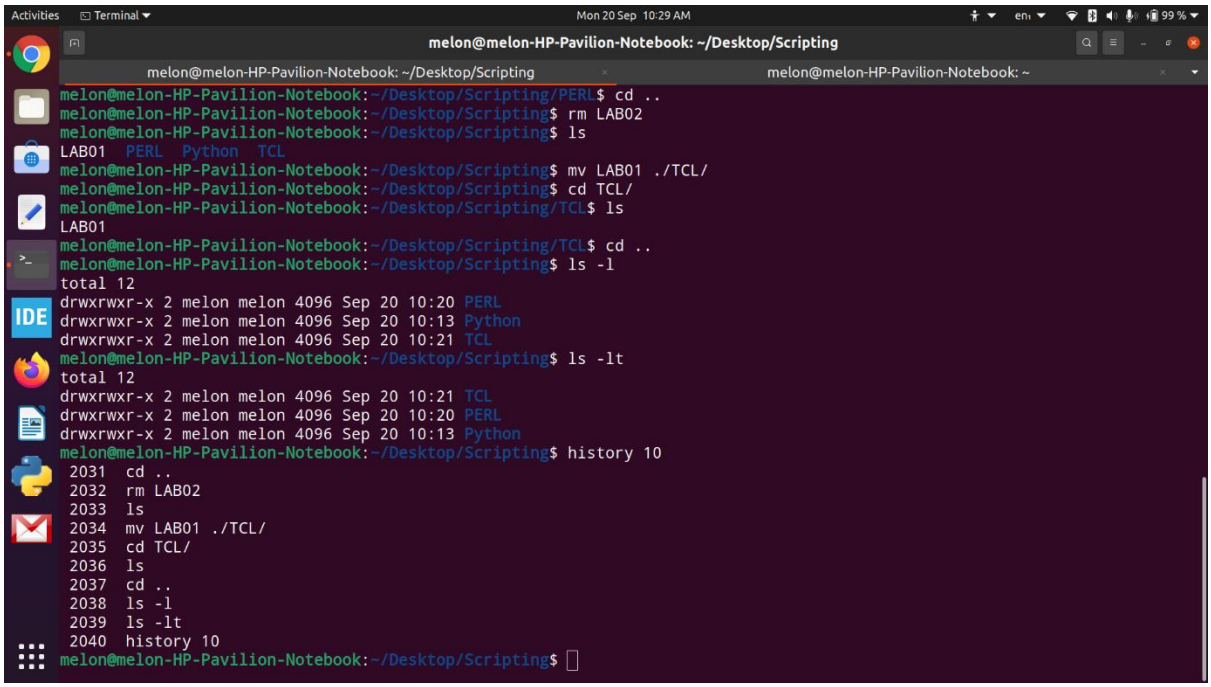

Figure 1.3 Screenshot of $mv, $rm, $ls -lt and history command usage.

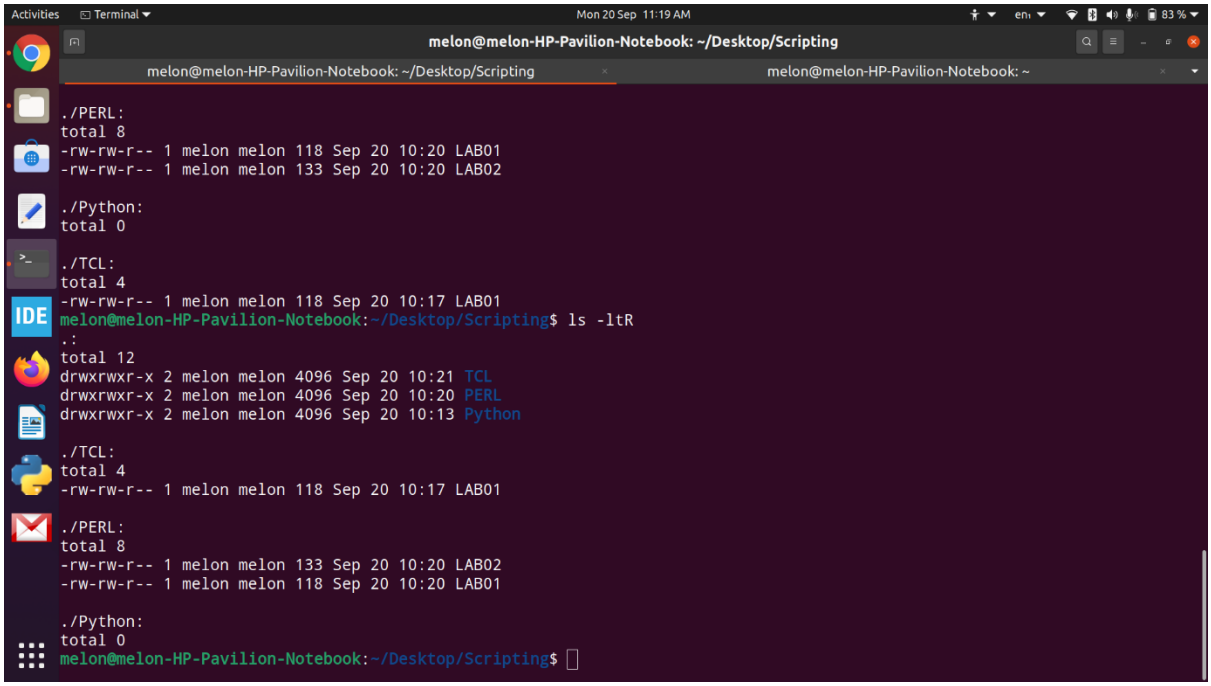

Figure 1.4 Screenshot of Recursive listing ($ ls -ltR) command usage.

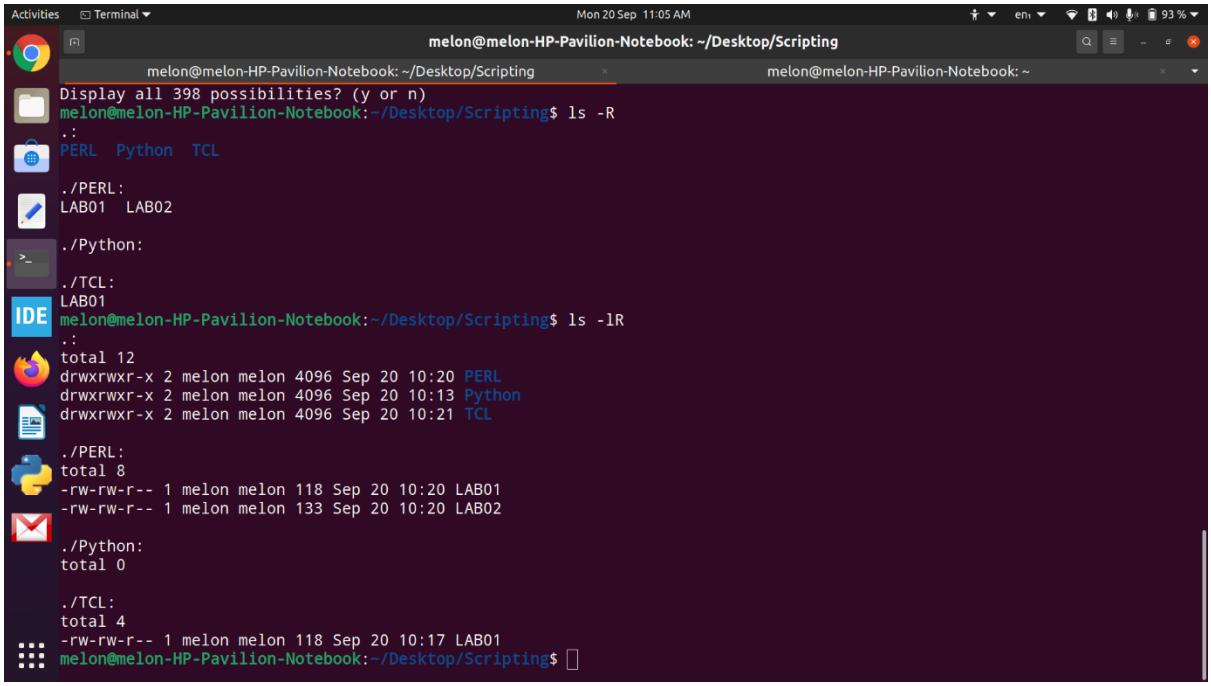

Figure 1.5 Screenshot of Recursive listing ($ ls -R and $ls -lR) command usage.

Inference:

1. Working in LINUX environment.
2. File Management becomes easy using commands in Terminal window.
3. Handle files, directories and manage processes using CLI (command line interface).