

# Productivity Tools for IC Design - EE2510, Autumn 2024-25.

## IIT Hyderabad

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### Commonly Used Unix Shell Commands

Each command can be specified with different options as well as with various arguments.

#### **Command:**

- cd - change directory
- ls - list files in the directory
- cp - copy a file or directory
- rm - remove a file or directory
- mv - move or rename a file or directory
- mkdir - create a directory
- pwd - present working directory
- cat - list file content
- tail -n - print last n lines of a file
- head -n - print first n lines of a file
- more - show output of a command, one screen at a time without scrolling the content
- less - similar to more, but more powerful
- grep - search for patterns in a file
- find - locate a file in a given directory path
- tar/zip/unzip - create or extract zip files
- history - see command history
- man - manual for a command
- ps - see process details
- top - see cpu and memory utilization
- kill - kill a process based on its PID
- chmod - change access permissions
- chown - change owner for a file
- echo - print a message to the terminal
- alias - create an alternative/short name for a frequently used command
- sort - to sort the output of a file or stream
- uniq - to print only unique lines from a file/stream
- diff - compare two files - this is the command line version. There is also tkdiff which is a GUI variant.
- bc - basic calculator (command line)

#### **Common Unix operators/variables:**

- . - refers to current directory
- .. - refers to the directory one level up
- ~ - refers to the user's home directory
- > - redirect the output to a file, overwrite existing content
- < - take input from a given file

- >> - redirect the output to a file and append below existing content
- | - redirect the output to the next command in the pipeline
- & - run a task in the background, keeping the shell free
- !num - run the command number num from the history
- !\$ - last argument from previous command
- !! - the entire previous command