

## Lecture 1 commands:

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**pwd** – shows absolute path of current directory

usage: **pwd**

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**cd** – change the current directory

usage: **cd** [PATH]

PATH – the path (absolute or relative) of a valid directory. If not specified then current directory is set to homedir.

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**ls** – list content of directory

usage: **ls** [OPTIONS] [FILE1 ...]

FILE – specification of directories / files to list. If a file is specified, shows the file. If a directory is specified, then lists content of that directory. If nothing is specified lists content of current directory.

Common options:

- -F – shows file type (directory (/), executable (\*))
  - -l – lists all information for each file (size, permissions, owner, etc.)
  - -a – shows all files (including hidden files – names starting with '.')
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**chmod** – change file mode bits (permissions)

usage: **chmod** [OPTIONS] [MODE/OCT-MODE] FILE1 [FILE2 ...]

MODE is an alphabetic modification string in the format [ugoa][+][rwx]

OCTAL-MODE is a 3-digit octal number indicating the new permissions

Common options:

- -R – recursive (changes permissions to all files and directories within the specified directory, recursively)
  - -reference=[FILE] – copies the permissions of the specified file to all other files
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**cp** – copy a file (or list of files)

usage: **cp** [OPTIONS] SOURCE1 [SOURCE2 ...] DEST

SOURCE – list of files to copy

DEST – destination path. If DEST is an existing directory, then SOURCE is copied/moved into that directory with its original name. Otherwise, DEST should have a path to an existing directory with name of file that does not exist (otherwise overwrite notice is given)

Common options:

- -R or -r – recursive copy. The SOURCE can be a directory, and then all its contents are copied (and subdirectories copied recursively)
  - -i – interactive mode. Prompts when overwriting existing files
  - -n – do not overwrite an existing file
  - -a – preserves attributes of original files (owner, date modified, etc.)
  - -u – update mode. Copy only when the SOURCE file is newer than the DEST file or when the DEST file is missing
  - -v – verbose mode. Report every operation being done
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**mv** – move a file (or list of files)

usage: **mv** [OPTIONS] SOURCE1 [SOURCE2 ...] DEST

same as **cp**, but source file is removed. Can be used to rename a file. See above for details.

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**rm** – removes a file (or list of files)

usage: **rm** [OPTIONS] FILE1 [FILE2 ...]

Common options:

- -R or -r – recursive deletion of a directory
  - -i – interactive mode. Prompts before every removal
  - -f – forced mode. Do not prompt at all – for non-existing files, for wrong options, for write-protected files
  - -v – verbose mode. Report every operation being done
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**mkdir** – creates a new directory

usage: **mkdir** [OPTIONS] PATH1 [PATH2 ...]

Creates a new directory at specified path (absolute or relative).

Common options:

- -p – creates parent directories if those do not exist
  - -m MODE – sets permission mode of the new directory. Otherwise the default is used.
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**rm**dir – deletes a directory

usage: **rm**dir [OPTIONS] PATH1 [PATH2 ...]

Deletes a directory only if it is empty (safer than rm -r).

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**echo** – prints the specified string / expression / variable to screen (standard output)

usage: **echo** [OPTIONS]... [STRING]

STRING – a string / expression / variable. If not specified, then prints nothing (followed by newline)

Common options:

- -n – does not print newline at the end of string
  - -e – interprets escape characters (e.g., \n for newline, \t for <tab>)
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**touch** – create / update file

usage: **touch** [OPTIONS]... FILE...

if file exists, updates 'last time updated', otherwise creates empty file

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**man** – displays manual for linux command

usage: man [COMMAND]

navigation is done using commands as in VIM (other than edit commands):

- f – pgdown
- b – pageup
- q – quit
- /<word> - search for <word> in help
- n – repeat search