

# Notes 1: Bash Shell

---

Commands cover in lecture:

## Echo

Definition:

Display a line of text

Usage

`echo + option + string`

## Examples

- Display a line of text without the new line
    - `echo -n "hello world:"`
  - Display a line of text that includes a horizontal tab
    - `echo -e "\thello world"`
  - Display 2 lines of text in a single echo command
    - `echo -e "Line 1\nLine 2"`
  - Display 2 lines of text in a single echo command, with the second line starting with a tab
    - `echo -e "Line 1\n\tLine 2"`
  - Display 2 lines of text in a single echo command that starts with a tab
    - `echo -e "\tLine 1\nLine 2"`
- 

## date

Definition

Print or set the system date and time

Usage

`date + option`

## Examples

- Display current date
  - `date`

- Display current date in rfc 5322 format

- `date -R`

---

##free

## Definition

Display amount of free and used memory in the system

usage

- `free + option`

## Examples

- Display memory utilization
    - `free`
    - Display memory utilization in human readable format
    - `free -h`
- 

## uname

### Definition

Print system information

Usage

`uname + option`

## Examples

- Print all information
    - `uname -a`
  - Print kernel information
    - `uname -s`
  - Print node name
    - `uname -n`
- 

## history

### Definition

Shows command line history

Usage

`history + option`

## Examples

- Display session history

- `history`

- Clear session history

- `history -c`

---

## man

### Definition

An interface to the system reference manuals

### Usage

`man + option + command`

### Examples

- Open the man page of echo command

- `man echo`

- Open a specific man page

- `man 5 psswd`

- Show all available man pages

- `man -f psswd`

---

## apt

### Definition

A set of tools for managing debian packages

### Usage

`sudo (if required) + apt + apt action + package name`

### Examples

- Update and upgrade

- `sudo apt u[date] && sudo apt upgrade -y`

- Install a program

- `sudo apt install firefox`

- Remove a program

- `sudo apt remove firefox`

- Search for a program

- `apt search "Web Browser"`

- List all installed programs

- `apt list --installed`
- 

## Snap

### Definition

Snaps are app packages for desktop, cloud and IoT that are easy to install, cross platform and dependency free

### Usage

`sudo` (if needed) + `snap` + `action` + `package name`

### Examples

- Find a snap
    - `snap search "video player"`
  - Install a snap
  - `sudo snap install vlc`
  - Remove a snap
  - `sudo snap remove vlc`
  - Update snaps
    - `sudo snap refresh`
- 

## Flatpak

### Definition

Flatpak is a next generation technology for packaging, distributing, and managing software in Linux

### Usage

`sudo` (if needed) + `flatpak` + `action` + `package id`

### Examples

- Search for package
- `flatpak search "video player"`
- Install package
  - `flatpak install org.videolan.VLC`
- Remove flatpak
  - `flatpak remove org.videolan.VLC`
- Update packages
  - `flatpak update`