

# Notes 1: Bash Shell

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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\nLine2"`
  - 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\tLine 2"`
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## date

Definition

Print or set the system date and time

Usage

`data + option`

Examples

- Display current date
    - `date`
  - Display current date in rfc 5322 format
    - `date -R`
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## 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`
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## uname

### Definition

Print system information

### Usage

`usage + option`

### Examples

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

### Definition

Shows command line history

### Usage

`history + option`

### Examples

- Display session history
    - `history`
  - Clear session history
    - `history -c`
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## man

## Definition

An interface to the system reference manual

## Usage

`man + option + command`

## Examples

- Open the man page of echo command
    - `man echo`
  - Open a specific man page
    - `man 5 passwd`
  - Show all available man pages
    - `man -f passwd`
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# 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 update && 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`
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# 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`
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## 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`