

# Notes 3: 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"`
- 

## 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"`
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## 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 passwd"`
  - Show all available man pages
    - `"man -f passwd"`
- 

# 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"`
- 

## 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
  - `"flatbak remove org.videolan.VLC"`
- Update packages
  - `"flatpak update"`