top Command Cheatsheet

A comprehensive guide to the `top` command, covering process monitoring, system resource usage, and interactive commands for Unix-like operating systems.

Basic Usage

Starting top

To start the `top` command, simply type `top` in your terminal.

```
top
```

The display updates periodically, showing a snapshot of the system's processes.

Understanding the Display

The `top` display is divided into two main sections:

1. **Summary Area:** Displays overall system statistics.
2. **Task Area:** Lists the processes being managed by the kernel.

Summary Area Fields

uptime	Shows how long the system has been running, the number of logged-in users, and the system load average.
Tasks	Displays the total number of tasks, along with their statuses (running, sleeping, stopped, zombie).
%Cpu(s)	Shows CPU usage statistics (user, system, idle, etc.).
KiB Mem	Displays memory usage (total, free, used, buffer/cache).
KiB Swap	Shows swap space usage.

Interactive Commands

Basic Commands

`h`	Displays the help menu.
`q`	Quits the `top` program.
`1`	Shows CPU usage per core (if supported).

Sorting Processes

`Shift + p`	Sorts processes by CPU usage (descending).
`Shift + m`	Sorts processes by memory usage (descending).
`Shift + n`	Sorts processes by PID (Process ID).
`Shift + r`	Reverses the sorting order.
`Shift + t`	Sorts processes by runtime.

Filtering Processes

`u`	Filters processes by username. Prompts for a username.
`o`	Adds a filter based on other fields. Prompts for a filter condition.
`=`	Clears all active filters.

Process Management

Killing Processes

`k`	Kills a process. Prompts for the PID of the process to kill and the signal to send (default is 15, SIGTERM).
Example	To kill a process with PID 1234 using the default SIGTERM signal:

1. Press `k`.
2. Enter `1234` when prompted for the PID.
3. Press Enter to accept the default signal (15).

Changing Priority (Renice)

`r`	Renices a process. Prompts for the PID of the process and the new nice value.
Note	Only root can increase the priority (lower the nice value) of a process.
Example	To renice a process with PID 5678 to a nice value of 10:

1. Press `r`.
2. Enter `5678` when prompted for the PID.
3. Enter `10` when prompted for the new nice value.

Advanced Features

Customizing Display Fields

`f`	Adds or removes fields from the task display. Allows you to customize which columns are shown.
`d` or `s`	Changes the delay time between screen updates in seconds. `d` prompts for the new delay, `s` toggles between preset delays. Default is 3 seconds.

Alternate Displays

`V`	Toggles forest view, showing parent-child relationships between processes.
`c`	Toggles the display of the full command path instead of just the command name.
`Shift + l`	Search for the string.

Command Line Options

`top -u <username>` : Starts top, displaying only processes owned by `<username>` .

Example:

```
top -u www-data
```

`top -p <pid>` : Starts top, displaying only the process with PID `<pid>` .

Example:

```
top -p 1234
```

`top -n <number>` : Exits after `<number>` iterations.

Example:

```
top -n 5
```

`top -b` : Batch mode operation