

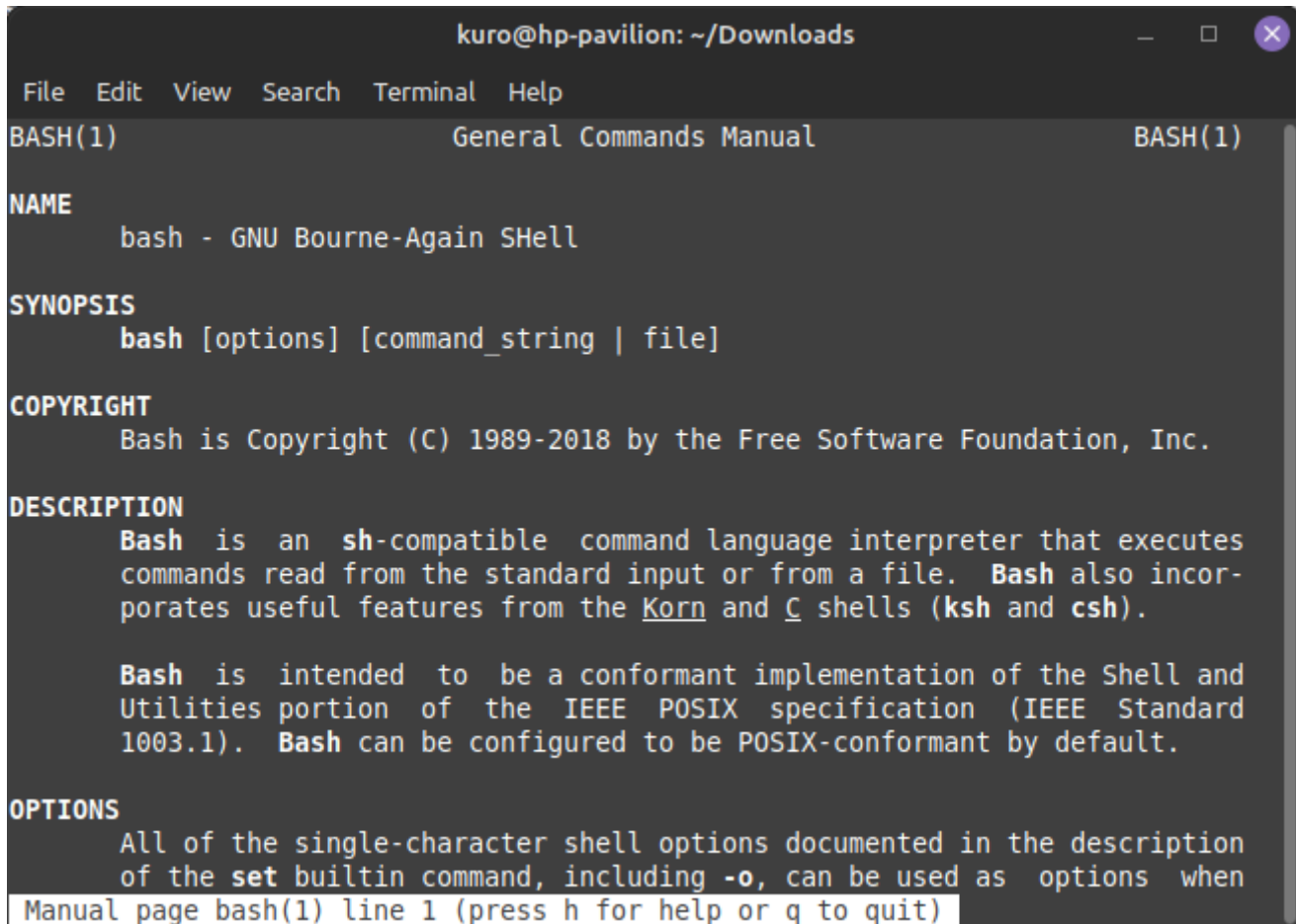
System and Network Administration - Lab 1 - Introduction to Linux

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Exercise 1 - Finding your way around Linux:

```
kuro@hp-pavilion: ~  
File Edit View Search Terminal Help  
kuro@hp-pavilion:~$ lsb_release -a  
No LSB modules are available.  
Distributor ID: Linuxmint  
Description:    Linux Mint 20.3  
Release:        20.3  
Codename:       una  
kuro@hp-pavilion:~$  
  
kuro@hp-pavilion:~$ whoami  
kuro  
  
kuro@hp-pavilion:~$ users  
kuro  
kuro@hp-pavilion:~$  
  
kuro@hp-pavilion:~$ pwd  
/home/kuro  
  
kuro@hp-pavilion:~/zaker$ ls -la  
total 24  
drwxrwxrwx  6 kuro kuro 4096 Sep  4 20:19 .  
drwxr-xr-x 37 kuro kuro 4096 Sep  4 19:27 ..  
drwxrwxr-x  3 kuro kuro 4096 Aug 31 13:19 dnp  
drwxrwxr-x  3 kuro kuro 4096 Aug 30 11:34 ml  
drwxrwxr-x  3 kuro kuro 4096 Sep  4 20:19 pp  
drwxrwxr-x  3 kuro kuro 4096 Aug 29 14:10 sna  
kuro@hp-pavilion:~/zaker$  
  
kuro@hp-pavilion:~$ cd Downloads/  
kuro@hp-pavilion:~/Downloads$ pwd  
/home/kuro/Downloads  
kuro@hp-pavilion:~/Downloads$
```

```
kuro@hp-pavilion:~/Downloads$ echo "$SHELL"
/bin/bash
kuro@hp-pavilion:~/Downloads$
```



```
NAME
    bash - GNU Bourne-Again SHell

SYNOPSIS
    bash [options] [command_string | file]

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    Bash is Copyright (C) 1989-2018 by the Free Software Foundation, Inc.

DESCRIPTION
    Bash is an sh-compatible command language interpreter that executes
    commands read from the standard input or from a file. Bash also incor-
    porates useful features from the Korn and C shells (ksh and csh).

    Bash is intended to be a conformant implementation of the Shell and
    Utilities portion of the IEEE POSIX specification (IEEE Standard
    1003.1). Bash can be configured to be POSIX-conformant by default.

OPTIONS
    All of the single-character shell options documented in the description
    of the set builtin command, including -o, can be used as options when

Manual page bash(1) line 1 (press h for help or q to quit)
```

Questions to answer:

1. My personal machine's hostname is `hp-pavilion`. I checked it using the command `hostname`. Alternately, most shells display it by default as a prefix to any command in the form of `user@machine_hostname:.`
2. My Linux distro is Linux Mint v20.3. I checked it using `lsb_release -a`.
3. The root directory is `/`.
4. `Bash` is a superset of `sh` with a more elegant syntax and more functionality. It is safe to use a Bash shebang line in almost all cases. For a long time `/bin/sh` used to point to `/bin/bash`, however, that changed recently such as on modern Debian and Ubuntu systems, which symlink `sh` to `dash` by default.
5.
 - `-i` The shell is interactive.
 - `-v` Print shell input lines as they are read.
 - `-x` Print commands and their arguments as they are executed.
6.
 - `Garuda Linux` Supports games out of the box.
 - `Arch Linux` Torture.
 - `Pop!_OS` Simple.
 - `Manjaro Linux` A user-friendly arch-based distro.
 - `Kubuntu` Lightweight.

7. **POSIX** is a family of standards, specified by the **IEEE**, to clarify and make uniform the application programming interfaces (and ancillary issues, such as commandline shell utilities) provided by Unix-y operating systems.
8. When you write your programs to rely on **POSIX** standards, you can be pretty sure to be able to port them easily among a large family of Unix derivatives (including Linux, but not limited to it!); if and when you use some Linux API that's not standardized as part of Posix, you will have a harder time if and when you want to port that program or library to other Unix-y systems (e.g., MacOSX) in the future.
9. **Slackware** is very minimalistic with pretty much everything, most notably its package manager, especially compared to debian. It doesn't have many packages available by default, and it doesn't do dependency resolution.
10. the **uname** command prints system information. With the **-a** flag it prints the following information in order:
 - kernel name
 - network node hostname
 - kernel release
 - kernel version
 - machine hardware name
 - processor type
 - hardware platform
 - operating system

End of Exercises

Sources:

[Stackoverflow thread about POSIX](#)

[Stackoverflow thread about sh and bash](#)

[Reddit thread about the differences between Slackware and Debian](#)

[Google](#)