



## Terminal vs Shell

A **terminal** is the window where you type. A **shell** is the program that reads what you type and runs it (e.g., bash, zsh, fish).

You talk to the OS through the shell. This course uses a Bourne-style shell (bash/zsh).

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## Which shell am I using?

Print the value of the SHELL environment variable:

```
echo $SHELL
```

Typical outputs: /bin/bash, /bin/zsh.

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## **bash and zsh – at a glance**

- bash: ubiquitous default on many distros; great for scripts.
- zsh: interactive niceties (completion, prompts) while staying Bourne-compatible for most everyday commands.

You can learn one and be productive in both.

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## Prompt anatomy

A common prompt looks like this:

```
user@host:~$
```

- user – your account name
  - host – machine name
  - ~ – your home directory
  - \$ – normal user (# means root)
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## Command anatomy

Pattern you'll see everywhere:

```
command [options] [arguments]
```

Example:

```
echo Hello
```

`echo` is the command; `Hello` is an argument printed to the screen.

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## echo – printing text

Print simple text:

```
echo Hello
```

Preserve spaces by quoting:

```
echo "Multiple words stay together"
```

Show special characters literally by single-quoting:

```
echo 'Use $ and * literally'
```

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## type vs which – what will run?

Discover how the shell resolves a name.

`type` (shell builtin) tells if something is a builtin, alias, function, or an external program:

```
type echo
```

`which` searches your PATH and shows the path to an external program:

```
which echo
```

If `type` says “builtin”, `which` may print nothing for that name.

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## Getting help – quick options

Many programs support a short help message:

```
echo --help
```

Bash builtins have builtin help:

```
help echo
```

Use these when you just need a brief synopsis and flags.

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## Manual pages (`man`)

Read full documentation for a command:

```
man echo
```

Navigation keys inside `man`:

- Space / Page Down – next page
  - b / Page Up – previous page
  - /pattern – search forward
  - n / N – next / previous match
  - q – quit
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## man sections (concept)

Manuals are grouped into sections (1: user cmds, 5: file formats, 8: admin, etc.).

Open a specific section if names clash:

```
man 1 printf  
man 3 printf
```

(Only use if you encounter multiple entries.)

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## whatis and apropos

Show a one-line description for a command name:

```
whatis echo
```

Search across man page descriptions by keyword:

```
apropos print
```

Use `apropos` when you know the task but not the command name.

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## info pages

Some tools use the GNU Info system for their primary docs:

```
info coreutils
```

Navigation: Space → next, Backspace → previous, q → quit.

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## Session hygiene – history

List your recent commands with line numbers:

```
history
```

Press ↑ or ↓ to scroll through previous commands at the prompt. You can re-edit and re-run them quickly.

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## Session hygiene – clear & reset

Clear the visible screen contents:

```
clear
```

If your terminal display gets garbled (binary noise, weird characters), re-initialize it:

```
reset
```

`reset` is safe; it just redraws and resets modes.

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## Exit the shell

End the current shell session:

```
exit
```

Keyboard shortcut: **Ctrl+D** (sends End-Of-File to the shell).

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## Keyboard shortcuts (must-know)

Shortcut	What it does
Ctrl+C	Stop current running command
Ctrl+D	Exit shell or end input line
Ctrl+L	Clear screen (like <code>clear</code> )
↑ / ↓	Browse command history
Tab	Auto-complete names

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Thanks !



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