Introduction to the command line

A course objective:

To get comfortable on the command line

But why?

Reasons to learn the command line

- Access to software that is only available on the command line
- Gain access to powerful capabilities:
 - o process N files as easily as one
 - run a sequence of programs as easily as one
 - redirect the output from one program to use as input to another
- High return on time invested
- Pre-req for productive programming

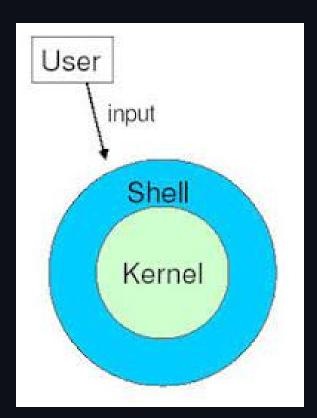
OK, what is the command line?

- Textual interface to the computer
- The user inputs commands via keyboard and receives text output
- "command line" and "terminal" are used interchangeably

```
benjaminlis@Benjamins-iMac aad % ls -l
total 136
-rw-r--r- 1 benjaminlis staff 1884 May 20 12:16 01-workshop-intro.md
-rw-r--r- 1 benjaminlis staff 1672 May 20 14:53 02-pdf-motivation.md
-rw-r--r- 1 benjaminlis staff 1782 May 20 17:50 03-pdf-history.md
-rw-r--r-- 1 benjaminlis staff 3603 May 20 19:10 04-pdfa.md
-rw-r--r- 1 benjaminlis staff 2450 May 21 08:59 05-command-line-intro.md
-rw-r--r-- 1 benjaminlis staff 1484 May 20 20:33 06-github.md
-rw-r--r 1 benjaminlis staff 6115 May 20 21:06 07-command-line-lab.md
-rw-r--r-- 1 benjaminlis staff 1105 May 16 13:37 07-pdf-pitfalls.md
-rw-r--r- 1 benjaminlis staff 1189 May 19 18:34 075-regex-grep.md
-rw-r--r-- 1 benjaminlis staff 1508 May 19 16:47 08-file-types-formats.md
-rw-r--r-- 1 benjaminlis staff 442 May 19 16:58 09-xml-et-al.md
-rw-r--r- 1 benjaminlis staff 766 May 19 18:08 10-doing-digital-history.md
-rw-r--r- 1 benjaminlis staff 109 May 19 18:37 11-text-processing.md
-rw-r--r-- 1 benjaminlis staff 1098 May 19 18:39 12-text-analytics.md
-rw-r--r-- 1 benjaminlis staff 2596 May 19 18:30 13-voyant.md
-rw-r--r- 1 benjaminlis staff 77 May 9 17:43 README.md
drwxr-xr-x 3 benjaminlis staff 96 May 20 11:22 static
benjaminlis@Benjamins-iMac aad %
```

Shell

- The program that provides the command line
- Interface between the user and operating system



Bash

- Many command line shell programs
- Most are very similar and provide a command (aka scripting) language
- We're using bash (Bourne Again SHell)
 - most popular shell
 - available on Windows/Mac/Linux

Your laptop and the command line

- You can access the command line on your laptop
- Differences (typically minor) across platforms and versions
- Different notebooks: different memory, disk space, SW versions
- Raise the chance of idiosyncratic issues arising
- Impairs the initial learning experience

GitHub Codespaces for the exercises

- Eliminates issues described on the previous slide
- Everybody gets an individual but identical environment
- You don't need to install SW on your laptop
- Get exposure to GitHub and cloud computing
- Gateway to further training with LinkedIn Learning
- Free for up to forty hours a month
- Friday, you'll get a chance to install the tools on your laptop

Tasks

- Sign up for a GitHub account here if you don't already have one
- (Optional) If you haven't already signed up for access to one of:
 - chatGPT
 - Google Gemini
 - Microsoft Edge Copilot