First steps with the shell - literate programming

CSC 420 Operating Systems Lyon College Spring 2024

1. Put your name at the top on the `#+author` line and write "pledged" next to it.
2. There are three terminal programs available in Emacs, too - open them:
    1. the regular shell (open with `M-x shell`). Exit it with `exit`.
    2. the `eshell`, which is a shell emulator written in Emacs Lisp (open with `M-x eshell`). Exit it with `exit`.
    3. the terminal, which is a proper terminal inside Emacs (open with `M-x term RET`). Exit it by killing the current buffer (`C-x k`).
3. Try some of the earlier commands in each of these shells:
    - find out who you are
    - find out where your computer is on the network
    - show date and time
    - show available disk space in human-readable format
    - show amount of free memory
    - see all running processes
4. Remember (and try it): the shell, `M-n/p` moves around the command history buffer.
5. Below, create a new code block with `<s TAB` for each task and add the header argument `sh`

6. Find out who you are:

```
whoami
```

7. find out where your computer is on the network:

```
hostname -I
```

8. show the date and time:

```
date
```

9. show available disk space in a format suitable for humans (only show the first five lines):

```
df -H | head -n 5
```

10. show the amount of free memory:

```
free
```

11. see all running process (refreshed every 5 seconds):

```
top
```

This will not work because Emacs cannot emulate dynamically changing output (like an animation). Jupyter notebooks are capable of displaying animation (in Python via `matplotlib`, in R via `gganimate` and others.)

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[Validate](#)