A crash course on the Unix command line

For readers coming from Windows or (to a lesser but still significant extent) macOS, the Unix command line may be unfamiliar. Luckily, if you are using the recommended cloud environment, you automatically have access to a Unix (Linux) command line running a standard shell command-line interface known as Bash.

The basic idea of the command line is simple: by issuing short commands, users can perform a large number of operations, such as creating directories (`mkdir`), moving and copying files (`mv` and `cp`), and navigating the filesystem by changing directories (`cd`). Although the command line may seem primitive to users mainly familiar with graphical user interfaces (GUIs), appearances are deceiving: the command line is one of the most powerful tools in the developer's toolbox. Indeed, you will rarely see the desktop of an experienced developer without several open terminal windows running command-line shells.

The general subject is deep, but for the purposes of this tutorial we will need only a few of the most common Unix command-line commands, as summarized in Table 1.1. For a more thorough introduction to the Unix command line, see the first of the Learn Enough tutorials,*Learn Enough Command Line to Be Dangerous*.[10]

Description	Command	Example
list contents	`ls`	$ ls -l
make directory	`mkdir <dirname>`	$ mkdir workspace
change directory	`cd <dirname>`	$ cd workspace/
cd one directory up		$ cd ..
cd to home directory		$ cd ~ or just $ cd
cd to path incl. home dir		$ cd ~/workspace/
move file (rename)	`mv <source> <target>`	$ mv foo bar
copy file	`cp <source> <target>`	$ cp foo bar
remove file	`rm <file>`	$ rm foo
remove empty directory	`rmdir <directory>`	$ rmdir workspace/
remove nonempty directory	`rm -rf <directory>`	$ rm -rf tmp/
concatenate & display file contents	`cat <file>`	$ cat ~/.ssh/id_rsa.pub

Table 1.1: Some common Unix commands.