Exercises

1. Find out which Linux distribution you are running, and which version of that Linux distribution. There are many ways of doing this. One of them is the **lsb_release** command which comes bundled with many distributions. Check the man pages to find out how to invoke it. (If you only get “No LSB modules available”, you have not invoked the command correctly.) If you do not have lsb_release, find out how to install it using the package manager.

2. Another way to find out which Linux distribution you are running is to look for release documentation files in the /etc directory. These are files named <something>-release. Use **ls** to list all files in /etc and see if you can find them. If there are too many files in the output, you can filter the search results using grep: **ls /etc | grep <search term>**. Note the pipe (|) character. This is an important Unix symbol: it designates redirecting output from the left side as input to the right side. Only files which contain the search term <search term> will be shown. When you have found a release file, you can use **cat** to display it in the terminal: **cat <filename>**.

3. Use your package manager to install: cowsay, fortune, figlet, lolcat, rig. You are going to need **sudo** for this. Check the man pages for each of these to find out what each of them does. Try various combinations using a pipe, e.g. **fortune | cowsay.** Find out how to get cowsay to show a cow in a Darth Vader helmet (check the man pages).

4. Make sure git is installed. If you do not have git, install it using your package manager. Create a new directory in your home folder using **mkdir <dirname>**. Give the directory any name of your choice. Enter the directory using **cd.** Run **git init** in the directory. Use **ls** to inspect the directory (get as much information as possible): what changes did git init make to the directory?

5. Inspect /dev on your local computer using ls. Which device nodes do you see? Do you have the directory /dev/input/by-id? If you do, which files are there, and which input devices on your computer do they seem to correspond to?

6. In the directory you just created (or a new one if you accidentally deleted it), use **touch <filename>** to create a new empty file with file name <filename>. Issue the right **chmod** commands so that ls -l reports that the file has permissions:

a) -rwxrwxrwx
b) ---x--x---
c) -rw-r—r--

Change the owner and group of the file to root. Then delete it.

Why do you think it can be dangerous to leave files with too open permissions on the system? When do you think it is appropriate to use chmod 600? 644? 777?