

## Exercises – Day 2

1. Use `wget` to download the file `books.tar.gz` from <http://umuzi.gitlab.io/linux-slides/files/books.tar.gz> and the file `mysteryfiles.tar.gz` from <http://umuzi.gitlab.io/linux-slides/files/mysteryfiles.tar.gz> into a directory of your choice.
2. Run the **file** command on the files you just downloaded. What file type does file report that they are? Extract `mysteryfiles.tar.gz` into a directory of your choice. Use `file` to find out what type of file each of the mystery files is.
4. Extract the content of `books.tar.gz` into a directory of your choice. Sort the texts by file size. Which text is the largest and which is the smallest in terms of file size? What are the titles of the books contained in these two files?
5. Use `grep` to find out which of these files contains:
  - A Tale of Two Cities
  - Peter Pan
  - Little WomenDoes the word “apprehensive” occur in any of the almost 100 texts? How many occurrences can you find? What about “discombobulate”? “South Africa”?
6. `25717-0.txt` contains Edward Gibbon’s “History Of The Decline And Fall Of The Roman Empire”. How many lines of text are there in this file? How many words? What is its file size in bytes?
7. Use `ssh` and log in to `umuzi1.bjart.li`, `umuzi2.bjart.li`, `umuzi3.bjart.li`, `umuzi4.bjart.li`, `umuzi5.bjart.li` with username `umuzi` and password `umuzi`.
  - Find out which operating system these servers are running. Which of these servers is not a Linux system?
  - Find out which package manager that the systems are running. Open its man page and find out how to update and upgrade the system, how to install packages, and how to delete them.
8. On `umuzi1.bjart.li`
  - Create a new user for yourself using the **useradd** command. Read the man pages for this command. You will want to create a home directory (`-m`) and set the shell (`-s /bin/bash`). Set the user’s password using the **passwd** command.
  - Add yourself to the “umuzi” group using **usermod**
  - Make sure that you can log in using your user by editing the configuration file in `/etc/ssh` appropriately. (If many people are editing this file at once, make sure not to overwrite other people’s edits. If something fails, make sure that someone hasn’t accidentally overwritten your changes.)
  - Log in as your user using **su**
  - Check the permissions on `/tmp/umuzi`. Who owns the directory? Who is allowed to create files there? Is the sticky bit set? Write a short file as a greeting to others and save it there. Read some of the files that other people have left behind.
  - Compress `/tmp/umuzi` using **tar**, copy the tar file into your home directory
  - Use **sftp** (on your local computer) to download the tar file to your local computer