1 Use basic linux commands to extract data from a website

The Domesday Book is the greatest medieval census. It lists the manors (private properties) in every place of every county in England in the years 1066 and 1086, before and after the Norman conquest. OpenDomesday presents it in a modern-human-readable website, as well as an *application programming interface* (API).

We will use this API to extract some data from our command-line shell.

The Internet is your friend, do not hesitate to ask his help to find a better command.

1.1 Exercise 1: curl

Check the data on https://opendomesday.org/api/, for instance

- https://opendomesday.org/api/1.0/county/
- https://opendomesday.org/api/1.0/place/2346/
- https://opendomesday.org/api/1.0/manor/181/

Can you find other interesting URLs?

1.2 Exercise 2: curl and grep

Let's try to get the ids for all the places in Derbyshire!

1.3 Exercise 3: curl, grep and for

Now that we have ids for all the places in Derbyshire, we can load all their details...

And from their details, we can list all the details of their manors.

Go grep the data!

You may write the raw data into a file to avoid downloading it everytime.

1.4 Exercise 4: curl, grep, for and sed

Now that we have a heap of raw data, we will extract the interesting parts. In our case we want to count the geld paid by each manor and compare it to the number of ploughs it owns.

- Can you find the corresponding json fields?
- Then you can list these numbers for each manor in Derbyshire.
- And format this in a proper *comma-separated values* (CSV) file.

1.5 Exercise 5: discover new commands

The CSV file you created could be loaded in Excel. But do you have one?

Use your search skills to find a way to sum values in a column and provide the final result.

1.6 Bonus exercise 1

Install gnuplot, and generate a pretty graph from your CSV file.

1.7 Bonus exercise 2

Use Vim to write a single bash script that does all of these actions.