# Bash text and text files

Manipulating text in bash

# Brace expansion

Bash is pretty great at helping us do stuff, using a mechanism called expansion. Bash is able to “expand” expressions before using them. One such expansion is the brace expansion:

```
Pro Grammer@DESKTOP-OJSH4L4 ~/textfiles
$ echo "Public Service:" TV{1,2}
Public Service: TV1 TV2

Pro Grammer@DESKTOP-OJSH4L4 ~/textfiles
$ echo "Reklamkanaler: " TV{3..12}
Reklamkanaler:  TV3 TV4 TV5 TV6 TV7 TV8 TV9 TV10 TV11 TV12
```

# Opening an editor

We will be working in the command line throughout the course. There is no need to leave the command line, really. To open a text file using atom.cmd, simply type:

```
$ atom.cmd <path-to-file>
```

where <path-to-file> is, well, the path to a file.

If the file exists, atom will open it. If it doesn't, atom will create it.

Much easier than opening atom in windows and open the file using the menu!

# Looking at a text file

There is a great command in bash called cat which can display the contents of text files directly in the terminal. Sometimes, there is no need to open an editor just to read or inspect a text file. It is often quicker to use cat to print it to the terminal directly:

```
$ cat <path-to-text-file>
```

# Friends of cat

To print a text file with the lines in reverse order, you can use `tac` instead. If you only want to display the first lines of a text file, you may use `head`. If you want to display only the last lines, you may use `tail` instead.

If you are only interested in some lines of a text file (according to some search pattern) you can use the `grep` command:

```
$ grep ol flowers.txt
Violet
Gladiolus
Holly
```

(only display lines containing the pattern “ol” in the file with flowers)

# Sorting text

There is also a command for sorting text, the `sort` command. It can sort text in various ways. Do the exercises to learn some of the capabilitites of sort!

Sorting is done according to the ASCII table.

# You’re counting cards!

To get statistics of some text, you can use the `wc` command with various flags. It can show you the number of lines, words and characters.

Note that newlines are characters too! As are blanks, tabs etc.

# Creating archives and compressing files

Sometimes we will ask you to download and unzip an archive of directories and files in the form of a “zip file”.

You don’t have to use windows to unzip such a zip file. Simply use unzip (for cygwin users, it is located in the “archive” package):

```
$ unzip big-archive-with-many-files-and-dirs.zip
```

Or create your own archive:

```
$ zip -r my_archive.zip my_directory_with_lots_of_stuff/
```

# Do you have to learn all this sh*t?

We will give you instructions in the exercise text, when you need to use bash. But you will get a lot faster and more efficient if you learn bash and some bash commands!