Command Line Primer

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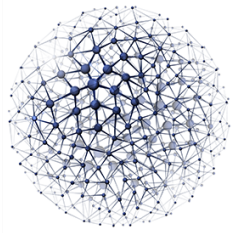

Directory Content and Navigation

Directory content

- List content of current directory

```
ls
```

- Also list hidden files

```
ls -a
```

- Show content as a list

```
ls -l
```

- Options can be combined

```
ls -la
```

- List a different directory

```
ls -la path
```

Directory navigation

- Change directory/go to *dir*

```
cd dir
```

- Go multiple levels

```
cd dir1/dir2/dir3
```

- Go up one layer

```
cd ..
```

- Go to home directory

```
cd ~
```

- Go to recently visited directory

```
cd -
```

Note: italicized words are placeholders

Manipulating Files and Directories

Files

- Create empty file

  `touch file`

- Copy file

  `cp src dest`

- Remove/delete file

  `rm file`

- Move/rename file

  `mv src dest`

Directories

- Create empty directory

  `mkdir directory`

- Copy directory

  `cp -r src dest`

- Remove/delete directory

  `rm -r directory`

- Move/rename directory

  `mv src dest`

Warning: removing files/directories with rm is permanent – there is no recycle bin!

Outputs and Redirects

Outputs

- Output file to screen

```
cat file
```

- Output multiple files

```
cat file1 file2
```

- Output all files (careful!)

```
cat *
```

- Output a string to screen

```
echo "Hello world!"
```

Redirects

- Redirect to another program (pipe)

```
cat file | tac
```

- Alternative:

```
tac < file
```

- Redirect to file (overwrites *file2*)

```
cat file1 > file2
```

- Concatenate files

```
cat f1 f2 > f3
```

- Append to new file instead

```
cat file1 >> file2
```

*** is a so-called “wild card” and will match everything – especially dangerous with rm.**

Redirects also work with “echo”

Other Useful Features/Hints

- Autocomplete
  - Hitting the `tab` key autocompletes input as much as possible
  - Examples:
    - A directory contains the directories `lorem` and `ipsum`. Typing `cd l` and hitting `tab` autocompletes to `cd lorem`
    - A directory contains the directories `dir1`, `dir2`, and `lorem`. Typing `cd d` and hitting `tab` autocompletes to `cd dir`. Hitting `tab` repeatedly will show `dir1` and `dir2` as possible options.
- Arrow keys:
  - `Left` and `right`: move the cursor to edit a command
  - `Up` and `down`: cycles through previous commands
- Canceling a process or input: `Crtl + C`
- Copying/pasting:
  - Highlighting copies to the clipboard
  - Pasting: depends on the terminal, typically middle mouse button or right click

Exercises

1. Create a new directory called `exercise` and navigate into the directory.
2. Copy the file `lorem.txt` from `dir1` into the directory.
3. Concatenate the contents of the file `lorem.txt` and `sit.txt` from `dir1` into a new file.
4. Append the contents of `sit.txt` from `dir1` to the new file.
5. Hide the file.