

## 5:W35: Managing Files on Steroids with Shell

### DESCRIPTION

Your supervisor has shared a [folder of photos on Sciencedata.dk](#) with you (password is 2020CDS, folder is 500Mb and contains 189 images) and needs your help with a couple diagnostics:

- 1) Identify the names and format of the 3 biggest files. Can you come up with a command to generate a numerically ordered list of 3 biggest files? (hint: consider using **wc** to gauge image size)

#### 1.1 ANSWER

```
[(base) laura@Lauras-MacBook-Pro-3 HW % du -a * | sort -r -n | head -3
28832  9240_Overview_S.RW2
28776  9247_Overview_SW.RW2
28744  9237_Overview_W.RW2
```

By using the line: `du -a * | sort -r -n | head -3`

I found that the three files above are the biggest files. By manually inspection this appears to be true.

- 2) Some of the image files are empty, a sign of corruption. Can you **find** the empty photo files (0 kb size), count them, and generate a list of their filenames to make their later replacement easier?

#### 2.1 ANSWER

First, I find all the files that have size 0 by typing:

```
find . -name '*.JPG' -size 0
```

```
[(base) laura@Lauras-MacBook-Pro-3 HW % find . -name '*.JPG' -size 0
./9289_Overview_S.JPG
./9318_overview_W.JPG
./9292_Overview_SE.JPG
./9306_ovrview_N.JPG
./9322_overview1_S.JPG
./9265_Overview_W.JPG
./9302_overview_W.JPG
./9278_Overview_W.JPG
./9287_Overview_S.JPG
```

The outcome of the above command will then be appended to a new directory called **tinypics**, in order to make it easier to replace them later on.

```
[(base) laura@Lauras-MacBook-Pro-3 HW % find . -name '*.JPG' -size 0 >> tinypics
[(base) laura@Lauras-MacBook-Pro-3 HW % wc -l tinypics
73 tinypics
(base) laura@Lauras-MacBook-Pro-3 HW %
```

The length of the directory is then printed, and I find that 73 files has the size of 0 and are thus empty.