

## 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)**

- Using the command `<du -a * | sort -r -n | head -3>` I've sorted the list of files by size. The 3 biggest files are listed below.

```
(base) rikkeuldbæk@MacBook-Air-tilhrende-Rikke HW % du -a * | sort -r -n | head -3
28832  9240_Overview_S.RW2
28776  9247_Overview_SW.RW2
28744  9237_Overview_W.RW2
(base) rikkeuldbæk@MacBook-Air-tilhrende-Rikke HW %
```

**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?**

- Finding all empty photo files with (0 kb size) using the command `<find . -name '*.JPG' -size 0>`

```
Last login: Thu Sep  1 16:10:07 on ttys000
(base) rikkeuldbæk@MacBook-Air-tilhrende-Rikke HW % find . -name '*.JPG' -size 0
```

- Appending the output of the command to a txt file in the directory called "small\_files" using the command `<find . -name '*.JPG' -size 0 >> small_files>`.
- To count all the small files I use the command `<wc -l small_files>`, which outputs 73 elements.

```
(base) rikkeuldbæk@MacBook-Air-tilhrende-Rikke HW % find . -name '*.JPG' -size 0 >> small_files
(base) rikkeuldbæk@MacBook-Air-tilhrende-Rikke HW % wc -l small_files
73 small_files
(base) rikkeuldbæk@MacBook-Air-tilhrende-Rikke HW %
```

**3) Optional/Advanced:** Imagine you have a directory [goodphotos/](#) (same password as above) with original non-zero-length files sitting at the same level as the current directory. How would you write a loop to replace the zero length files?