

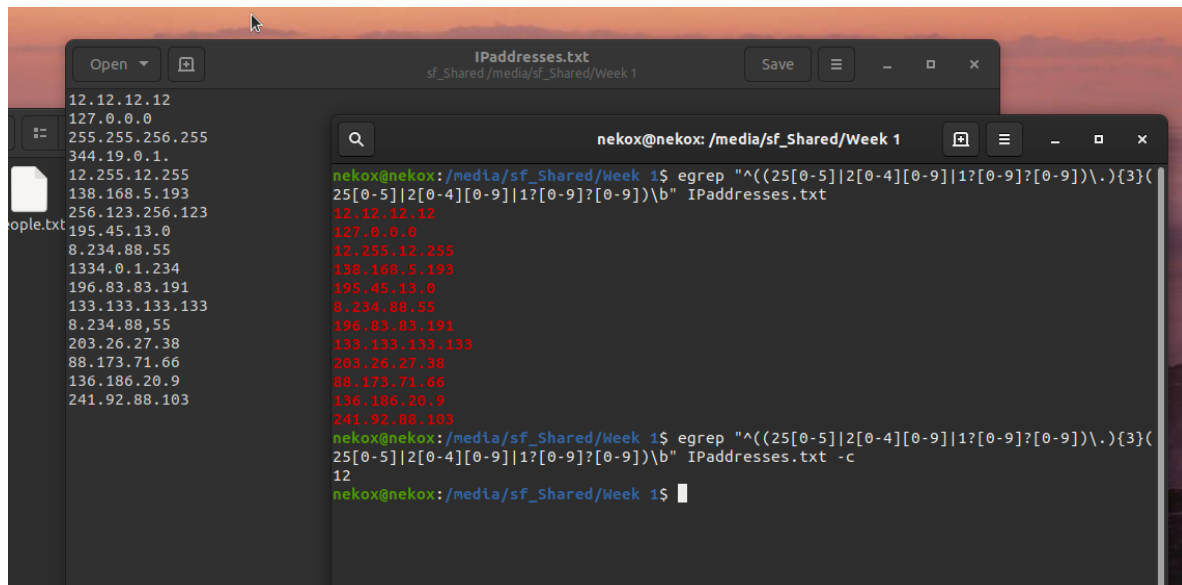
Fundamentals of Data Management

– 2019HS2 | 101624964 | Jimmy Trac

Credit Task 1.2.1

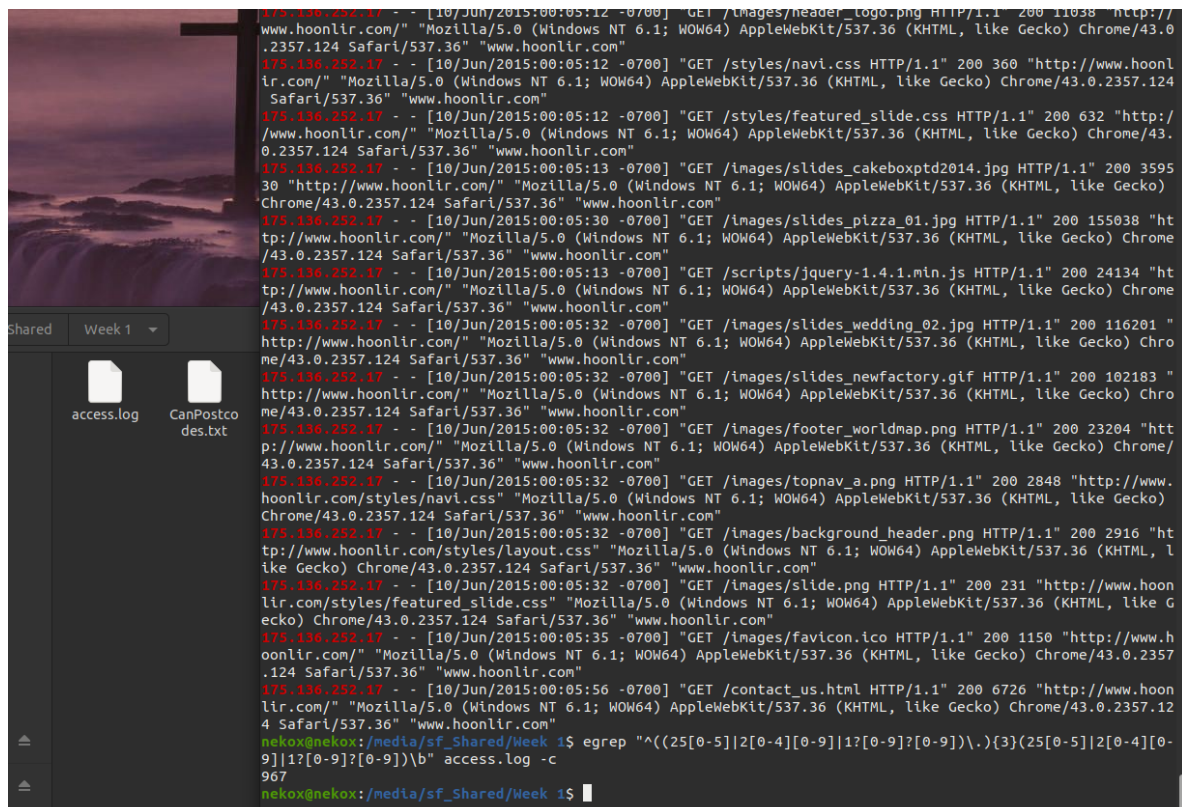
Submission 2: Added search to Access.log, returns 967 results

Below is a screenshot of the `grep` command used on `IPaddresses.txt`



The screenshot shows a terminal window with a file explorer on the left displaying `IPaddresses.txt`. The terminal window has the title `nekoX@nekoX: /media/sf_Shared/Week 1`. It shows the command `grep "^((25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\b" IPaddresses.txt` and its output, which lists various IP addresses from the file.

Running `grep` on `access.log` returns 967 results:



The screenshot shows a terminal window with a file explorer on the left displaying `access.log`. The terminal window has the title `nekoX@nekoX: /media/sf_Shared/Week 1`. It shows the command `grep "^((25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\b" access.log -c` and its output, which shows the count of lines for each IP address found in the access log.

The command used is `grep "^((25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\.){3}(25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\b"`

Breaking it down:

- `^` implies that the search must start at a new line (and therefore a new entry)
- `(25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])\.` breaks down into:
 - `250-255 OR 200-249 OR 0-199` and then a full-stop `.`
- `{3}` implies that the above should be run three times exactly, as IP addresses are 0-255.0-255.0-255.0-255
- `(25[0-5]|2[0-4][0-9]|1?[0-9]?[0-9])` repeats such that the full-stop is **not** captured
- `\b` ensures that there is a word break and therefore, there are no additional characters.