

Umeå University
Department of Applied Physics and Electronics

Linux as Development Environment 7.5 ECTS
5EL142 HT-16

Assignment 7 - Various Tools: groff, diff, patch, Awk, sed

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1 Introduciton

Short report with a reflection about the work. What went well what was difficult. Name some limitations of the chosen solution and/or propose some improvements to the provided scripts.

2 Timetrack

Timetracker was implemented using the `case` statement. The tracker information is stored in a file called `time.log`. The script handles the cases when there is either a tracker running or not for all three arguments. The command `date +%s` is used to obtain the seconds since 1970-01-01 00:00:00 UTC. Then `typeset -l` is used to convert and store the value as an integer variable for later arithmetics.

3 Checkuser

Checkuser is a script that checks if a specific user is logged into the system. The user name is given either as command line argument or is queried interactively. `read` is used to obtain the user input. `awk` is used to extract usernames of all logged in users from the output of command `who`. The whole process of `who`, `awk` and `test` is lined up with pipe commands.

4 Check5D

Check5D is a script that checks the `make` build script of exercise 5D. The script tests five different operations:

- `make all` executes without errors
- executables are created
- executable execute and return correct result
- `make install` works
- `make uninstall` works
- `make clean` works

5 Test Suite for Electronics Applicaiton

Below for a short pseudo code on how the test suite was implemented.

```
checkUsage()
createTempFile
run electrotest as background process and divert output into tempfile
get PID from background process
sleep for a short time
if backprocess still runs
    outOfTime or doesNotCatchException
```

2(2)

```
        kill background process
else
    wait PID
    store exit status
    check exit status
fi
```