# Homework M3: Editors. Files. Streams

These tasks can be executed either in an installation with or without desktop environment

Make sure you are working with a regular user (for example, the **lsauser** created during the initial installation)

Tasks should be executed in the order they are listed

The following tasks must be performed *(All files should be in the* ***home folder of the user*** *in use. For example, if the user is* ***lsauser****, then the working folder should be* ***/home/lsauser****)*:

1. Make a local copy of the **/etc/services** file with the same name
2. Using command line tools, create a variant of the local **services** file containing only the **comment lines** (lines starting with **#** symbol) and save it under the name **services\_comments.txt**. For example:

# Comment line

# Comment line

ssh 22/tcp # ssh tcp port

ssh 22/udp # ssh udp port

1. Using command line tools, create another variant of the local **services** file containing everything but the comment lines *(empty lines could be either present or absent in the resulting file)* and save it under the name **services\_wo\_comments.txt**

ssh 22/tcp # ssh tcp port

ssh 22/udp # ssh udp port

# Comment line

ssh 22/tcp # ssh tcp port

ssh 22/udp # ssh udp port

1. Using command line tools, create third variant of the local **services** file without comment lines and containing only information about **udp** services and save it under the name **services\_udp.txt**

# Comment line

ssh 22/tcp # ssh tcp port

ssh 22/udp # ssh udp port

ssh 22/udp # ssh udp port

1. Open the file **services\_wo\_comments.txt** in **vi** editor
2. Find the line about **blackjack** service for ***CentOS*** and ***openSUSE***, or **socks** for ***Ubuntu***
3. Delete **everything** from **this line to the end of the file**
4. Save the result as **new file** under the name **well-known-ports.txt**
5. Quit **vi** without saving the changes to the original file
6. Using command line tools, substitute the symbol **/** with **-** symbol for the **first 100 lines** in the **well-known-ports.txt** file and store the result as **100-well-known-ports.txt**
7. Create *(either using an editor or heredoc)* a document named **doc1.txt** with the following content:

**10-IT-HQ**

**20-Accounting-HQ**

**30-Help Desk-Remote**

**40-Sales-HQ**

1. Create *(either using an editor or heredoc)* second document named **doc2.txt** with the following content:

**10-B.Thomas**

**20-J.Foster**

**30-G.Smith**

**40-F.Hudson**

1. Join the **doc1.txt** and **doc2.txt** files in a resulting file named **doc3.txt** *(it should contain the* ***combined information*** *from the other two – in fact it will show* ***who is working where****)*
2. Enter set of commands to extract the **unique values** from the **third** field of **doc3.txt** file and store them in **locations.txt** file
3. **Extend** the **previous** command in order to **count the unique values** and **store** the result to the **locations-count.txt** file
4. Find **all** files in **/etc** and its **sub-directories** with **size less than 200 bytes** and store their **sorted** **list** *(containing just the path to the file and its name)* in **small-etc-files.txt** file

## Proof

After you are done with the tasks, you can check how well you did them

In a terminal session execute one of the following commands (depending on which executable you have)

* Option 1 (**wget** installed, usually for **Debian**-based distributions)

**wget -q https://courses.zahariev.pro/m3.sh -O - | sudo bash**

* Option 2 (**curl** installed, most of the distributions)

**curl -s https://courses.zahariev.pro/m3.sh | sudo bash**

Repeat the procedure until you get as much **PASS** marks as possible. This may include adjustments on what you did or even start from the beginning

Once, satisfied by what you accomplished, use the homework template document (available in the section for the module – ***Домашно – M3 - Шаблон за решение***) and paste the link you received as a result

Include the commands you used for every step. Also include the output if you like (either as pictures or as text)