



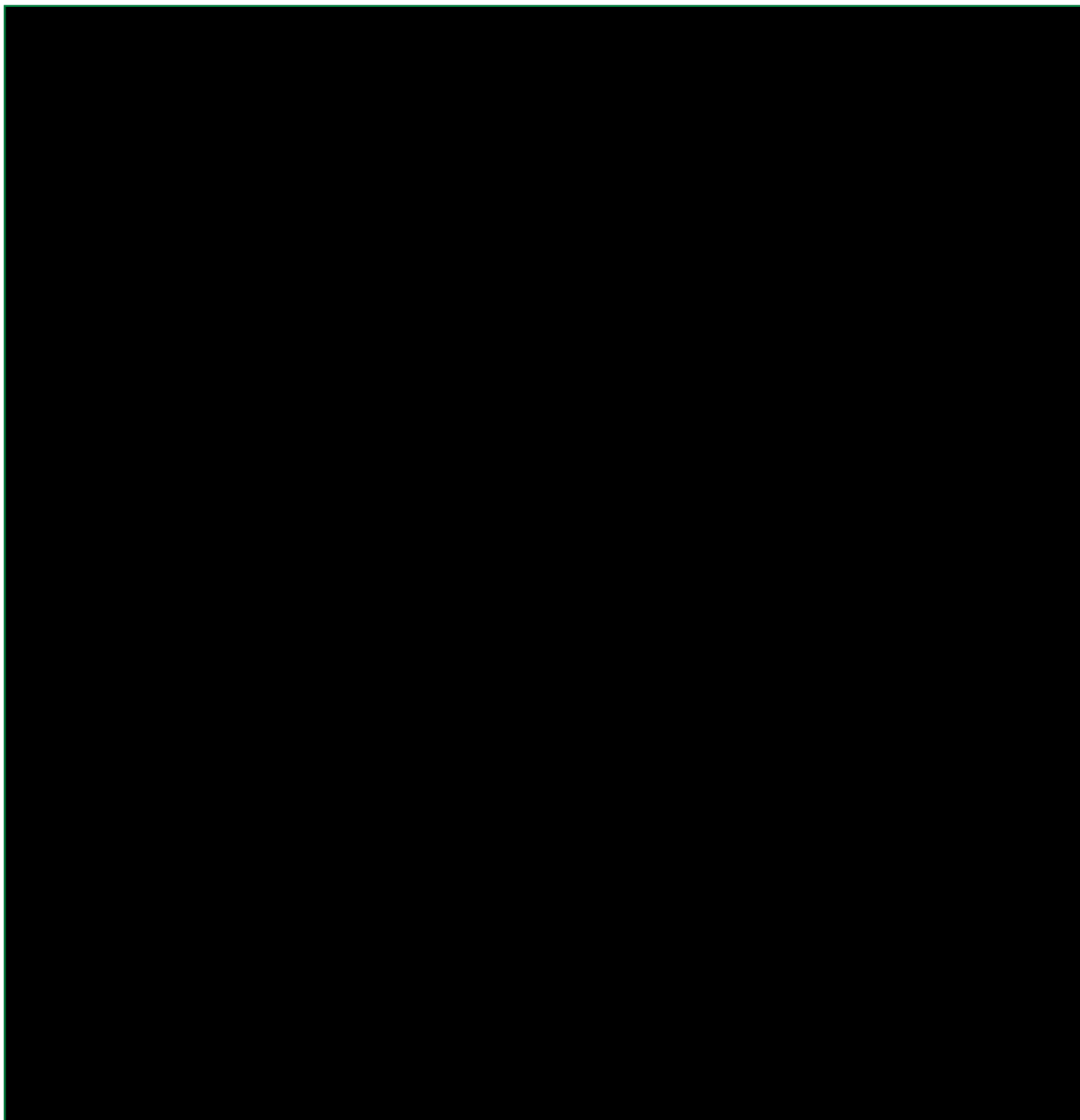
B1- Unix and C Lab Seminar

B-CPE-100

Day 01

Unix Environments

v2.2





Linux

Discovering your environment

First, take `~/day01/task03/midLS` working environment (keywords, commands,...)
Then learn how to lock your workstation, it might prove very useful.

Task 01

Create a Delivery Directory

`within day01 directory` create another one named `task01`, which will contain:

- an empty file named `test01` with the default permissions,
- a file named `test02` containing "**Yer a wizard Harry.**". Everyone must have the rights to read and execute this file, but only you can write in it,
- a symbolic link (**symlink**) named `test03`, which is a reference to `test02`.



Read the **ln** manual carefully!

Task 02

Z

Create a file, `~/day01/task02/z` which displays the character 'Z' followed by a carriage return (`\n`) when the binary `cat` is used to read it:

```
Terminal
~/B-CPE-100> cat z
Z
~/B-CPE-100>
```



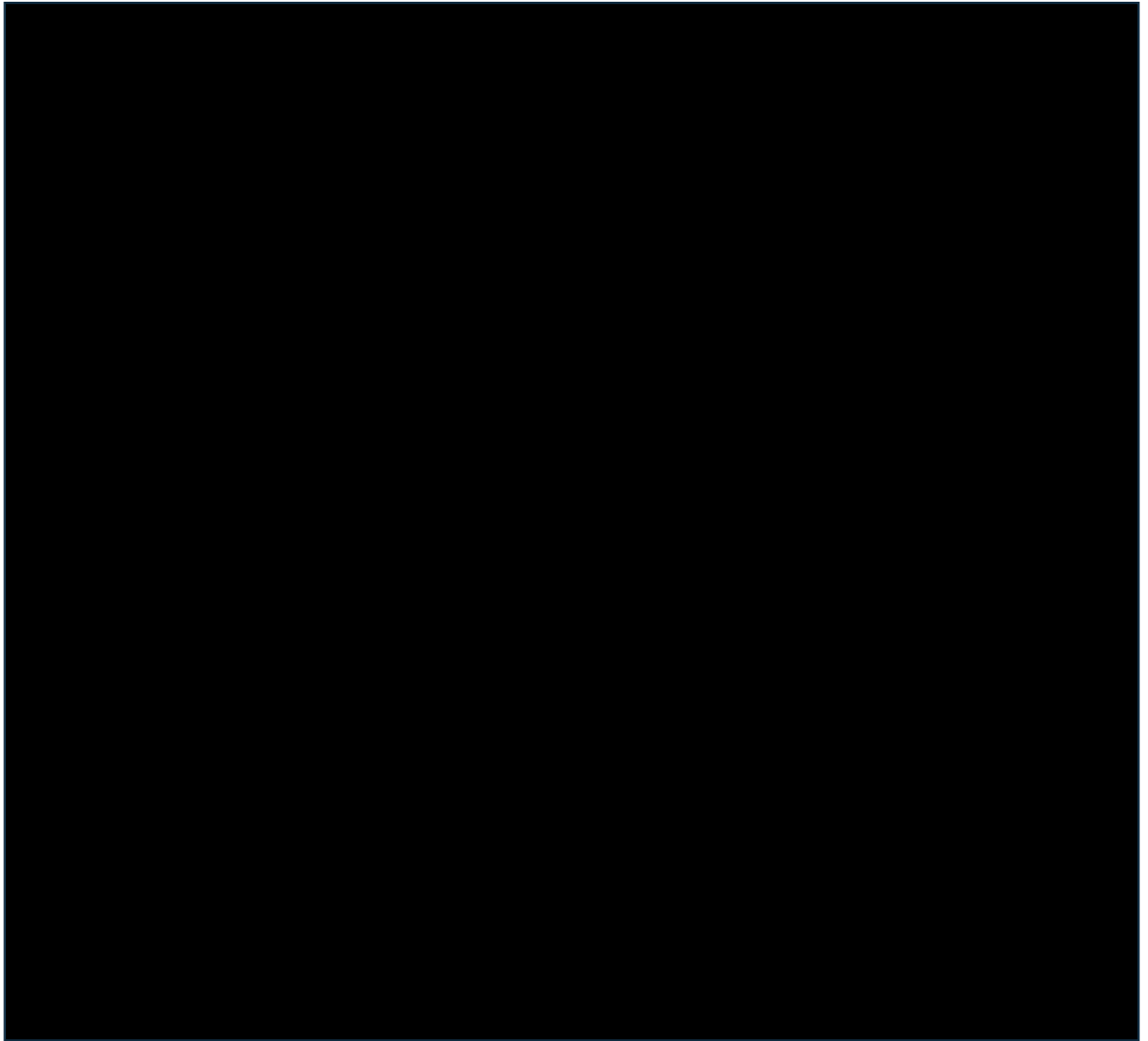
Task 03

midLS

Write in `~/day01/task03/midLS` a command that lists the current repository's files and repositories (without hidden files, ellipses, or files starting with a dot) sorted alphabetically.
Files and directories should be separated by commas and directories must end with a slash.



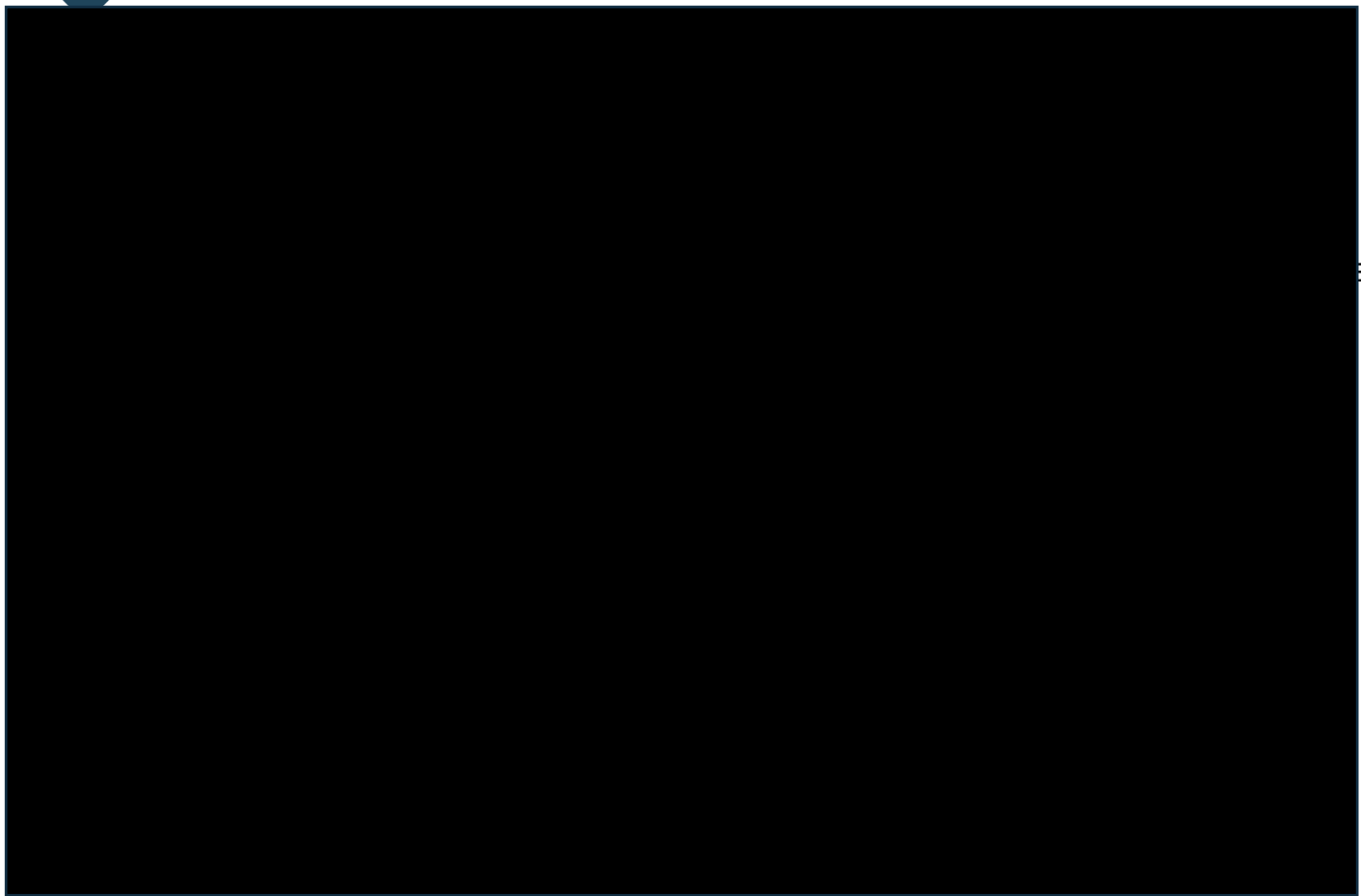
Add execution permission to everyone



Do a delivery

 push your work

Push your work to the git repository using the "git" commands
Google is your friend :)



EAR)



Task 04

mr_clean

Write a file named **mr_clean** - stored at the root of the repository of the day - a command to find and delete every file from the current directory and all subdirectories which end by ~ or which start and end by #. Give execution rights to the owner of the file.



Only one command is allowed (no “;”, neither “&&” or anything...)



Read carefully the manual of find

Task 05

prepare_my_repo.sh

To help you prepare future repositories, write a shell script (using bash as shell) named `prepare_my_repo.sh` at the root of your repository, which, as its name suggests, does the following:

- create the repository with the name given as an argument,
- add checkout permission,
- display the proper repository's ACL.

```
Terminal
~/B-CPE-100> ./prepare_my_repo.sh Corewar
Repository Corewar created
ACL correctly applied
ramassage-tek:r
```



Having trouble figuring out how to retrieve parameters? **man bash**



When you're writing a script don't forget the **shebang**!



For all shell scripts, be sure to give the execution right!



The automated test is almighty and its copy of **blih** wouldn't dare to ask it to enter a password

Task 06

push_that.sh

Write a script, named `push_that.sh`, that adds all of the current folder's files and push them to the repository.

The script must take a commit message as parameter and should be able to handle simple problems and still push your files.



Don't use this script if you share this repository with other people

Task 07

Tree

Reproduce the folders structure displayed below.



```
Terminal
~/B-CPE-100> tree -FQ task07 | head -n 32
"task07"
|- "1910s"/
|   |- "1911" -> "../Solvay Conferences on Physics/The theory of radiation and quanta"/
|   '- "1913" -> "../Solvay Conferences on Physics/The structure of matter"/
|- "1920s"/
|   |- "1921" -> "../Solvay Conferences on Physics/Atoms and electrons"/
|   |- "1924" -> "../Solvay Conferences on Physics/Electric conductivity of metals and
related problems"/
|   '- "1927" -> "../Solvay Conferences on Physics/Electrons and photons"/
|- "1930s"/
|   |- "1930" -> "../Solvay Conferences on Physics/Magnetism"/
|   |- "1931" -> "../Solvay Conferences on Chemistry/Constitution and Configuration of
Organic Molecules"/
|   |- "1934" -> "../Solvay Conferences on Chemistry/Oxygen, and its chemical and biological
reactions"/
|   '- "1937" -> "../Solvay Conferences on Chemistry/Vitamins and Hormones"/
|- "1940s"/
|   '- "1947" -> "../Solvay Conferences on Chemistry/Isotopes"/
|- "1950s"/
|- "Professors"/
|   |- "Frederic Swarts"
|   |- "Hendrik Lorentz"
|   |- "Paul Karrer"
|   |- "Paul Langevin"
|   '- "William Jackson Pope"
|- "Solvay Conferences on Chemistry"/
|   |- "Constitution and Configuration of Organic Molecules"/
|   |   '- "chair" -> "../../Professors/William Jackson Pope"
|   |- "Isotopes"/
|   |   |- "chair" -> "../../Professors/Paul Karrer"
|   |   '- "participants"/
|   |- "Oxygen, and its chemical and biological reactions"/
|   |   '- "chair" -> "../../Professors/William Jackson Pope"
|   '- "Vitamins and Hormones"/
|       '- "chair" -> "../../Professors/Frederic Swarts"
```



```
Terminal
~/B-CPE-100> tree -FQ task07 | tail -n 24
'- "Solvay Conferences on Physics"/
?  |- "Atoms and electrons"/
?  |   '- "chair" -> "../..../Professors/Hendrik Lorentz"
?  |- "Electric conductivity of metals and related problems"/
?  |   '- "chair" -> "../..../Professors/Hendrik Lorentz"
?  |- "Electrons and photons"/
?  |   |- "chair" -> "../..../Professors/Hendrik Lorentz"
?  |   '- "participants"/
?  |       |- "A. Einstein"
?  |       |- "E. Schrodinger"
?  |       |- "H.A. Lorentz"
?  |       |- "M. Planck"
?  |       |- "M. Sklodowska-Curie"
?  |       |- "N. Bohr"
?  |       |- "W. Heisenberg"
?  |       '- "W.L. Bragg"
?  |- "Magnetism"/
?  |   '- "chair" -> "../..../Professors/Paul Langevin"
?  |- "The structure of matter"/
?  |   '- "chair" -> "../..../Professors/Hendrik Lorentz"
?  '- "The theory of radiation and quanta"/
?      '- "chair" -> "../..../Professors/Hendrik Lorentz"

30 directories, 23 files
```

(Please do not take in consideration the character "?", it is currently used to keep the alignment on the subject)



Git handles empty directories differently.

Task 08

Tar

Create a compressed (with Gzip) tarball of the content of the previous task's directory.

Delivery: `day01/task08/task07.tgz`



man tar