## Exercises

### Misc. file tools

## Which tool can be used to determine the type of a file?

## Use it on the following files/directories and compare the results:

## */usr/bin/tail*

## *~*

## */exercises/SRC\_HUMAN.fasta*

### Searching

## Which tool can be used to search for files or directories?

## Use it to find all directories in the */exercises* directory

## Search for the file date in the */bin* directory

## List those entries in the directory */bin* that are bigger than 400kBytes

### Misc. terminal

## Which two tools can be used to redraw/empty the screen?

### Permissions

## Create a directory called *testpermissions*

## Change your working directory to *testpermissions*

## Create a directory called *adir*.

## Use the command “*which date*” to find out where the date program is located.

## Copy this date program into the directory *adir*.

## Check the permissions of the copied program *date*

## Change the permissions on *date* to remove the executable permissions.

## Check the permissions of the program *date*

## Try running it as *./date* or *adir/date* (depending on your current working directory)

## Change the permissions back so that the file is executable.

## Try running it as *./date* or *adir/date* (depending on your current working directory)

## Copy a textfile from a previos exercise into *adir*, then change the permissions, so you are not allowed to write to it.

## Then change the permissions so you can't read/cat it either.

## Change your working directory to *testpermissions*, and then try changing the permissions on *adir*.

## What are the minimum permissions (on the directory) necessary for you to be able to execute *adir/date*?

### Remote access

## Login to machine sub-master.embl.de (using your own username)

## Use *exit* to quit the remote shell (Beware to not exit your local shell)

## Use *clear* to empty the screen after logout from the remote server

## Use the following commands locally as well as on the remote machine to get a feeling for the different machines:

## *hostname*

## *whoami*

## *cat /etc/hostname*

## *ls -la ~/*

## Copy the file */etc/motd* from machine sub-master.embl.de into your local home directory

## Determine the filetype and the permissions of the file that you just copied

## Login to your neighbor's machine (ask him for the hostname) using the username *teach01* and password *teach2007*

### IO and Redirections

## Use *date* in conjuction with the redirection to insert the current date into the (new) file *current\_date* (in your homedirectory).

## Inspect the file to make sure it contains (only a single line with) the date.

## Use *date* again to append the current date into the same file.

## Again, check that this file now contains two lines with dates.

## Use *grep* to filter out lines containing the term “TITLE” from all PDB files in the exercises directory and use redirection to insert them into a new file pdb\_titles.txt.

## (OPTIONAL) Upon inspection of the file *pdb\_titles.txt*, you see that it also contains the names of the files in which the term was found. Use either the *grep manpage* or *grep –help* to find out how you can suppress this behaviour. Redo the previous exercise such that the output file pdb\_titles.txt only contains lines starting with TITLE.

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