The directory tree

Files and directories are organized in a hierarchical structure, referred to as the directory tree (Fig. 1). The computers in our work group are set up such that most parts of the directory tree, and in particular the home directories of the individual users are shared among all computers and are provided by a central file server. Thus, your data is almost never stored physically on the computer you are working on. This has the advantage that you can access your data from basically every computer in the network. Moreover, it allows to easily share information and data among people working on the same project.
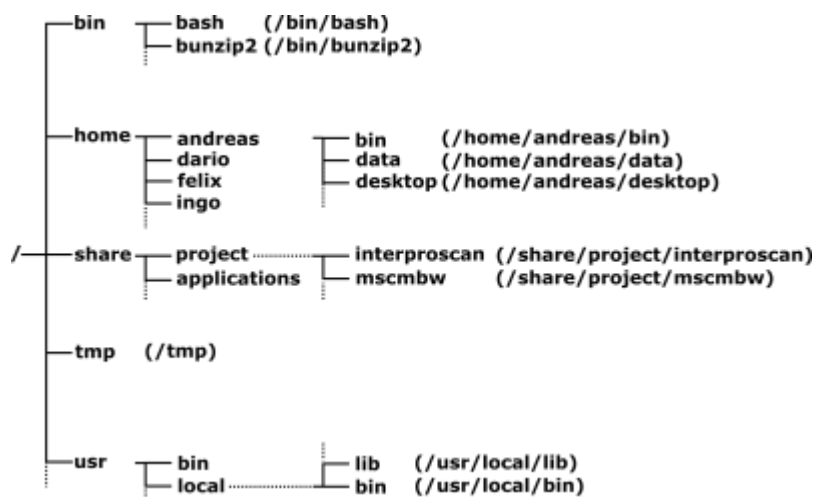

Figure 1: The directory tree in a linux system. The '/' to the left indictates the root directory. You can reach each directory or file from each place in the tree by specifying the absolute path starting from the root, or by specifying the relative path starting from the directory you are currently located in. The absolute path for individual locations are given in parentheses.

The home directory

Every user has a home directory on a central server where you automatically end up when you log in into your computer[1]. In a shell this is typically identified by the something like the following prompt

```
yourusername@computeryouaresittingon:~$
```

This is a good place for programs, scripts and smaller recourses that are used often. Typically only you are allowed to write into your home directory, but you can set permissions such that other users are allowed to read files in your home, or to execute programs and scripts that are located in your home directory.

The project directory of this course

For large datasets, we recommend to not to store them in your home as the disc space there is rather limited. Such data should be stored in the **shared disc space**. It has significantly more space than the home directory and can also be accessed by all users, making it especially suited for projects involving multiple people and you don't have to open your home directory for reading and writing to other people. However, these directories are typically not backed up, so once you delete something, it is lost forever. You can access these directories via the path

```
/share/projects/
```

For each course, we have a different subdirectory, e.g. `/share/project/course`. Just ask your tutor which subdirectory to use. You can create a new folder there. As this space can be accessed by anyone in the course, it is best to name the folder after yourself. It is then easy to see who created it and who is maintaining its contents.

- Computer Environment

[1)]
In our system, you can log in on any computer, and you will always end up in your personal home directory

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