A summary on the most important UNIX commands

File system functions

- **mkdir <dirname>** makes the directory
- **rmdir <dirname>** removes the directory
- **cd <dirname>** enters the directory
- **ls <dirname>** lists the contents of a directory. The ls -l command presents the user with a more detailed list.
  Special directories:
  - **.** actual directory;
  - **..** parent directory;
  - / root;
  - ~ $(HOME) directory - the working directory of the user.

  To avoid executing more **cd** commands in a row the user can use the following syntax **cd <dirname>/<dirname>/[etc]**.

- **cp <source> <dest>** copies file(s)
- **rm <filename>** deletes a file
- **mv <source> <dest>** moves a file
- **cat <filename>** displays the contents of a file

Permissions

In UNIX file permissions can be set on three levels with three values. The levels are:

- owner – the user who owns the file (**u**);
- group – the group that owns the file (**g**);
- other – everyone else outside the group (**o**).

The values are (directory related rights in brackets):

- **r**ead – right to read the file (list the directory);
- **w**rite – write or edit the file;
- e**x**ecute – execute the file as a program (enter the directory).

The owner and the group can be set using the following command: **chown <owner>.<group> <filename>**. Permissions can be set using the **chmod <level(s)>(+|-)<value(s)> <filename>** command. For example granting read rights to everyone outside the group for file foo.php looks like this: *chmod o+r foo.php*

File manager

- **mc** – Midnight Commander. Very similar to the nc/FAR under DOS/Windows. Supports ftp transfer and the (de)compression of directories.

Text editors

- **vi** – An ancient screen-oriented text editor. Not recommended for beginners.
- **pico** – Great for text editing, but not so great for source codes since all lines end with a line-break automatically.
- **joe** – Good for source code editing since automatic line-break can be turned off. However, one has get used to ^K+H style commands, meaning that only after pressing [CTRL]+[K] comes pressing [H] which results in this example to execute the Help command.
- **mcedit** – Text editor of **mc**. Provides Ncurses based syntax highlighting.

Graphical text editors

- **emacs** – Most users like it for its extended capabilities.
- **nedit** – Has less features than **emacs**, but it is easier to learn for beginners.

Other useful commands

- **gzip, gunzip** commands compress (**gzip**) or expand (**gunzip**) compressed files. Handles one file at a time, therefore when zipping multiple files the user has to wrap (**tar**) them first.
- **tar** command is used to create tape archives and add or extract files. Create a tar in the source directory: *-cvf <tarfile> <source>*, uncompress the tar file in the destination directory: *-xvf <tarfile> <dest>*.
- Wrapping and compression in one: *tar -zcvf <tgzfile> <sources>*, backwards: *tar -zxvf <tgzfile> <dest>*.
- **ssh** (Secure Shell) is a secure protocol for remote logins. E.g.: *ssh -X xy123@ural2.hszk.bme.hu*
- **scp <source> <dest>** command runs a remote file secure copy program. E.g.: *scp xy123@rapid.eik.bme.hu:php.tgz ./*
- **ping <host>** sends ICMP ECHO_REQUEST packets to network hosts to see if they are available.

More information on UNIX commands can be obtained by entering **man <command>**.