Ni ska skapa en applikation, en **textbaserad systemhanterare** som underlättar för **användare som inte är så duktiga på Linux**. Användarna av applikationen ska via ett interaktivt textbaserat användargränssnitt kunna hantera olika funktioner i Linux utan att behöva ha koll på och hantera Linuxkommandon, se Figur *1*.

The general criteria for the application are:

You must use a main menu and possibly submenus for the various functions, see Figure 1.

The application should "spin in a loop", after a selection is made the main menu should appear again (the application should not be restarted after each selection made).

All menus and printouts must have well-thought-out formatting, i.e. make sure it looks "nice", is legible and has clear boundaries.

Communication to the user is important. It should appear when a choice is made (for example "user created" and "group removed").

Make sure, in the script, to check for any error messages from commands and handle it in a good way.

The application (script) must be written entirely in BASH and must work on a freshly installed Ubuntu machine, just use commands that are standard in Ubuntu.

The code must be indented.

The application should only be run with "sudo" (root rights), check at the beginning of the script that the script is run by the root user (uid=0).

Intended users of the application (script) are users who are not very good at Linux. It is therefore important that you, for all functions, think about and facilitate the user. An example is when you manage rights for folders (directories). Just printing, for example, rwxrwSrwT is not comprehensible to an above user. You have to find another way to tell what rights the different groups have (owner, group, other), that sticky bit is on/off, setgid on/off, and so on.

The application must handle the following parts

Network information

Show the following information well structured, see Figure 2

The name of the computer

Name of all network interfaces (not loopback)

IP address

MAC address

Gateway (Default Route)

Status (up/down)

User

Create user

List all "login users" (users who can login, not system users)

Show all attributes for a user, see Figure 3

All attributes included in /etc/passwd and

which groups the user belongs to

Change attributes of a user

All attributes included in /etc/passwd

Change password for a user

Delete a user (don't forget to delete the user's home directory)

Groups

Create new group

List all groups of the system (groups belonging to login users and groups created by users, not system groups)

List which users belong to a specific group (also users who have the group as primary group should be printed)

Add a user to a group

Remove a user from a group

Delete a group (user-created groups only, not system groups)

Folders

Create folders

List contents of folders

List and change attributes of folders throughout the file system

Owner (owner)

group

Rights (permissions)

Sticky bit

Set guide

Last modified (last modified)

Delete a folder

It is fine to use the terminal "as usual" and print text from the script to the terminal, see Figure 1-3.

Those of you who want to try something new can instead use the Dialog tool, which is a TUI (Text-based User Interface). With Dialog you get a GUI-like interface that can be run in the terminal, see Figure 4. Using Dialog can be a little more difficult to begin with, but at the same time it makes it easier to get good printouts, etc. If you use Dialog, you must do it fully, that is, all selections, inputs and printing must be done via dialog boxes. Install dialog with apt and search for information online "Linux dialog" and the manual for dialog.