

UNIX and its derivatives exist for a very long time. There are many applications and traditions associated with them. For all the course related work, we will try to give you information about the questions. Therefore it is useful to get used to reading the documentation either in the questions or in the operating systems.

Each command in the operating system comes with the documentation, or their manuals. These manuals are accesible using the **man** command. For solving the following questions, you may need to refer to these manuals. For any command, like **cd**, you can read the manual with the following command:

### **man cd**

This will load a page in your terminal. You can quit the documentation with the **q** key. You can search the documentation with hitting **/** and entering the phrase you are looking for. Like, **/directory** followed by **return** key, will skip to the first directory appearance. If you want to move to the next, just hit **/** followed by **return** again.

### **Exercises:**

1. Write a script that recursively lists all files in the working directory.
2. Write a back-up script that compresses a directory of your choice with the current date. Use **tar** command to compress the directory. The filename should be in the following format: **2011.10.10\_ikorkmaz\_backup.tar.gz** (date followed by user name)
3. Many applications downloaded from internet come with the README file. However you usually open those files with a text editor to read. Find or create a README file, then find a way to make it displayed on the terminal window when it is run. So, **./README** command will display the contents of the file.
4. The job of an installer is to copy related files to specific directories in the operating system, along with altering other system files (or registries). Assume that you have written a program and will include an installer with it. You want it to be installed under the **applications** directory that already exists in the user's **home** directory. Your application directory has the application (**myapp**), installer script that you will write now (**installer**) and two subfolders (**icons** and **doc**) that have more files in them.  
**Hint:** Each user's home directory is shortlinked with the tilde (~) symbol.
5. Since UNIX is user friendly and is very old, it has many applications that do not require a graphical user interface. There are many applications that use the **ncurses** library, which gives the command line interface features like drop down menus, right-clicking, etc. as in a graphical user interface.  
Google for command line applications that will let you surf the web, listen to music, send and receive emails, instant message and download files. Report only their names and their web pages (These applications do not need to use the **ncurses** library, they just need to run from the command line interface).
6. Considering the system calls used by the shell, briefly describe the relation between a parent shell process and its child shell process.