**Report 5**
System and device programming
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# Laboratory 5

`/proc file system and character device driver.`

## Exercise 1

At first we run the command `make` that runs the `Makefile`.

```
all:
        make -C /lib/modules/$(shell uname -r)/build M=$(PWD) modules

clean:
        make -C /lib/modules/$(shell uname -r)/build M=$(PWD) clean
```

The first command, the default one, invoke the `make` with the following parameters

- `-C dir` Change to directory dir before reading the makefiles.
- `M=$(PWD)` Assign the present working directory to variable M. This will allow for make to return to your current directory after the execution.
- `$(shell uname -r)` is substituted with the current kernel build version

If we execute `make clean` simply we remove all the generated files. After the make procedure, is time to switch in `sudo` mode with the command `sudo su`. Finnally we run the command `insmod hello-5.ko mystring="something" myshort=123 myintArray=-1,3`

- **insmod** A program to insert a module into tghe Linux kernel.
- **hello-5.ko** my module, a kernel-object file.
- **mystring=”something” myshort=123 myintArray=-1,3** arguments for the module

After `insmod` we check with `lsmod`, `dmesg` or opening the kernel log file if the module was loaded properly. If we want to remove our module we can run `rmmodule hello-5`.