

# Text of exercise #2

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## Laboratory #5 – System and device programming – A.Y. 2018-19

Compile the `chardev_SDP_lab` and the program `test_chardev.c`. This can be done as a user.

As superuser install the `chardev_SDP_lab` driver. After you have installed the module, look at the tail of the file `/var/log/kern.log`, or use the command `dmesg | tail`. The output will suggest you how to create the special file `/dev/chardev_SDP_lab`.

Execute as superuser `test_chardev /dev/chardev_SDP_lab`. Verify whether it works correctly or not.

Give the command `echo something > /dev/chardev_SDP_lab`. Try `cat /dev/chardev_SDP_lab`. What is its output? Why `test_chardev /dev/chardev_SDP_lab` gives the correct results, whereas `cat` does not behave as expected?

Correct your device driver to produce the expected results using both `test_chardev` and `cat`. In particular, verify that executing in sequence the commands:

```
echo something > /dev/chardev_SDP_lab
cat /dev/chardev_SDP_lab
echo xxx > /dev/chardev_SDP_lab
cat /dev/chardev_SDP_lab
```

You get the strings `something` and `xxx`, respectively, and nothing else.

Hints: use `printk` to follow the control and data flow, this should allow you to figure out what is the difference between `test_chardev` and `cat` and to change your driver code.

Post your code, a description of your solution, and examples of usage of your driver.