

# Running NuSMV in Computer Labs

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In this lab, you should use a model checker called *NuSMV*. NuSMV is a model checker for *bounded* and *unbounded* model checking of *finite state machines* against a logical formula expressed in *Linear Temporal Logic (LTL)*. In this lab we only use NuSMV for bounded model checking of LTL formulas.

To start using NuSMV in the computer labs, you need to login to a computer. The operating system of the computers in the computer labs is Ubuntu. If you are not familiar with Ubuntu, and you feel you need to learn more about it, you can read the helps included in Ubuntu's environment, by opening System ->Help and Support.

After logging in to one of the computers, you need to start a terminal. To do this from the Application Menu on the top right corner of your screen, open Accessories -> Terminal. In the terminal window you can type ordinary linux commands.

To run NuSMV you can just write

```
$> NuSMV
```

Press `ctrl+c` to quit.

To see the list of all options type

```
$> NuSMV --help
```

You will not need all these options for this lab.

Now you can download the file `bitshift.smv` from the DD2459 course homepage and save it in your Desktop. Then change your current directory to Desktop by typing

```
$> cd ~/Desktop/
```

To run NuSMV for bounded model checking the specification in the file type

```
$> NuSMV --bmc bitshift.smv
```

To edit the file or see what is in the file, you can simply use any text editor, e.g. Emacs, Vim, Gedit. For example, if you want to use Gedit, type:

```
$> gedit bitshift.smv &
```

