# Homework. 1: Bash and Build System

Ignacio Vizzo, E-Mail ivizzo@uni-bonn.de

Handout : 20.04.2020
Handin: 08.05.2020 at 23:59:59 (CET)

To do this homework you will need to download the files from e-Campus. All the needed files are in the `homework_1.zip` file.

Once you have forked `https://gitlab.igg.uni-bonn.de/teaching/cpp-homeworks` and cloned your own repository extract the `homework_1.zip` archive into `cpp-homework/homework_1` folder:

```
$ git clone https://gitlab.igg.uni-bonn.de/<YOUR_USER_NAME>/cpp-homeworks
$ cd cpp-homeworks/homework_1
$ mv ~/Downloads/homework_1.zip . # or replace ~/Downloads with your path
$ unzip homework_1.zip && rm homework_1.zip
```

Once you successfuly extracted the files, your working directory should look like the following:

```
|-- homework_1
|   |-- task_1
|   |   `-- test_folder
|   `-- task_2
|       |-- include
|       |   `-- ipb_arithmetic
|       |-- results
|       |   |-- bin
|       |   `-- lib
|       `-- src
|-- homework_2
|-- ...
```

## A Using the terminal (4 points)

This exercise focuses on using the terminal efficiently.
Every question in this exercise must be answered with a command on a single line. You should save each of these lines into the file `homework_1/task_1/commands.sh`.

Make sure all commands run from within `homework_1/task_1/` folder correctly.

1. **(1 points)** Count how many lines are there in "`data.dat`".
2. **(1 points)** Count how many lines of those contain "`dolor`" or "`dalor`"?
3. **(1 points)** Count how many words are there in "`data.dat`"?
4. **(1 points)** Count how many of those start with "`mol`"?

*Hint:* you might want to use `wc` command.

## B Build System (6 points)

All the documentation for this exercise is in the `cpp-homeworks/homework_1/task_2/README.md` file. You should `cd` into the task directory, open a text editor, and start working.
Basically the output of your exercise should be:

5. **(2 points)** A build script, `build.sh`, that allows to build the library and the example program within the exercise directory. So, basically leave this script on `cpp-homeworks/homework_1/task_2/build.sh`
6. **(2 points)** The same holds true for the installaion script `install.sh`
7. **(2 points)** And the `CMakeLists.txt` files