Data Processing School :: Exercise cr0

Source directory	/data/lofarschool/data/Exercise-CR
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Context

This is “just” the setup for the following CR exercises.
At the same time this should serve as a first exposition to the configuration/build system used by the User Software Group – when expanding upon the existing code base, this will be the environment to work within.

Prerequisite

- Installed USG software (CR-Tools package)
- cmake in your PATH; if you are using `tcsh` as your shell, then

  ```
  source /app/scripts/doUSG
  ```

  will do the trick.

Description

Use a simple “build environment” with CMake to compile and build the exercise tools.

Files & Directories

```
/data/lofarschool/data/Exercise-CR
|-- build
|-- 2006.02.23.04:02:50.283.event
`-- src
    |-- CMakeLists.txt
    |-- Exercise-CR1.cc
    |-- Exercise-CR2.cc
    `-- Exercise-CR3.cc
```

In this `CMakeLists.txt` is the input file used by cmake to configure the project. The directory `src` holds the source code of everything we want to compile into an executable binary and will remain untouched. The build itself is performed out-of-source from within the directory `build`; the main advantage of this is, that the staging area non-identical to the area where all the source code is located – therefore in order to redo everything from scratch a complete removal of everything within `build` is possible, without affecting the original code.

Step-by-step instructions

1. Copy the `src` and `build` directories to your local directory:

```
cp /data/lofarschool/data/Exercise-CR/src .
cp /data/lofarschool/data/Exercise-CR/build .
```

2. Change into the `build` directory:

```
cd build
```

3. Run *CMake* in order to configure your project build:

```
cmake ../src
```

   That should end with the lines:

```
-- Configuring done
-- Generating done
-- Build files have been written to: ...
```

4. Run *make* to compile the executables:

```
make
```

   You should see something like this:

```
Scanning dependencies of target exercise_cr1
[ 33%] Building CXX object CMakeFiles/exercise_cr1.dir/Exercise-
CR1.cc.o
Linking CXX executable exercise_cr1
[ 33%] Built target exercise_cr1
Scanning dependencies of target exercise_cr2
[ 66%] Building CXX object CMakeFiles/exercise_cr2.dir/Exercise-
CR2.cc.o
Linking CXX executable exercise_cr2
[ 66%] Built target exercise_cr2
Scanning dependencies of target exercise_cr3
[100%] Building CXX object CMakeFiles/exercise_cr3.dir/Exercise-
CR3.cc.o
Linking CXX executable exercise_cr3
[100%] Built target exercise_cr3
Elapsed: 0:25.39 - CPU: 20.197u+2.924s = 91.0%
```

Example outputs

Nothing here

Bug Reports

- If you get the error message, that `cmake` is not found, then add `/usr/local/bin` to your PATH. (You are probably using bash...)

```
export PATH=$PATH:/usr/local/bin
```

If you are experiencing trouble getting the exercise to work, this is the place to leave a note about it.