Build automation

The aim of this exercise is for the student to get to know what a build process is and how it can be automated.

This exercise serves as a foundation for the final project in this course.

1. Set up a Maven project with a "Hello world" program as given in the lecture on Thursday 24th of October
    - The source code from the lecture on Thursday can be found on github
    - Implement the `clean`, `compile` and `unit_test` scripts
    - Make sure you can execute the build on the GreenQloud host
2. Add scripts which perform `package` and `deploy`
    - Deployment for this "Hello world" console program is taking a packaged jar file, copying it to `/tmp` and running the program once
3. Add a dependency to Spark and change your "Hello world" program to run as a web server and serve up a "Hello world" response to a browser
4. Have the package script create a jar which includes all of the specified dependencies in the packaged jar
    - This can be implemented with the maven assembly plugin
5. Make sure that the build artifact is still deployable
6. Create a script called `build_and_test` which executes a sequence of scripts from the `bin` folder to accomplish a build in one easy step

It's best to commit often and small changes to the git repository, so that you can continously verify that your build still works on your GreenQloud host.

Optional steps

- Add a script to run code inspection on the source tree
- Add a script to measure code coverage while the tests are executed