

Assembly and Machine Language

Final Project

Your task is to make your code in **homework 4** cross-platform, so it can get compiled and run both under Linux and Windows (Mac is optional). The tool you need to use for this purpose is the cross-platform build environment **CMake**.

The major difference between your codes under Linux and Windows is that assembly symbols (labels) called from C have a leading underscore in Windows.

As a first step, you may try to compile and run homework 4 under Windows. Download and install NASM for Windows. You can also download and install MinGW or CygWin to use the GCC compile (the latter provides a Linux-like platform) or use Microsoft Visual C++. Make changes to your code so it runs on Windows.

Learn CMake. There is a huge number of tutorials on the web. Just google **CMake tutorial**, or **simple cmake example**, etc. For example look here:

- <https://tuannghuyen68.gitbooks.io/learning-cmake-a-beginner-s-guide/content/chap1/chap1.html>
- <https://www.jetbrains.com/help/clion/quick-cmake-tutorial.html>
- <http://derekmolloy.ie/hello-world-introductions-to-cmake/>
- Also look at the CMake webpage (<https://cmake.org>) and tutorials therein.
- Search the web for better tutorials.

Download and install CMake for Windows. You may easily install CMake in Linux using **apt** or **yum**:

```
$ sudo apt install cmake
```

Here is how you can check your platform (OS/Compiler/...) in CMake.

- <https://gitlab.kitware.com/cmake/community/wikis/doc/cmake/Checking-Platform>
- You need to provide a single package for both Linux and Windows. You cannot have two different versions of your source code. Also, the CMake config file must be the same for Windows and Linux. You will give us a single package and it must compile and run under both the platforms. **GOOD LUCK!**