

Part 0 (Set up)

Objective

- overview
- c++ command line interface basics
- c++ environment setup (compiler and text editor)
- c++ hello world program (how to compile and run code)

Goal

- Know what, programming, source code, text editor, compiler, c++ is
- get comfortable on the terminal, capable of CRUDing folders and files
- download, install and set up a c++ compiler
- compile and execute the first program in c++

Overview

This is a book that introduces programming concepts, using c++.
There are projects after every Part.
Read more on what c++ is from [\[cpp, wikipedia\]\[wiki-cpp\]](#).

C++ Command Line Interface Basics

We will make use of the command more often, thus better to make acquaintance.

pwd, current working directory

ls, list the content of the pwd

ls -a, including hidden files

mkdir dir_name(s), create/make directories where the dir_name(s) is (are) the name(s) of the directory(ies)

cd dir_name, change into another directory that is in the pwd

cd path_to_dir, change in another that may not necessarily be in the pwd

cd .., moves up the directory (to the parent directory of the pwd)

ls path_to_dir, list the content of the directory at path_to_dir

ls -a path_to_dir, list the content of the directory at path_to_dir, including hidden files

clear, clears the screen of the terminal

mv dir1 dir2, renames a directory called dir1 to dir2 in the pwd

mv dir dir_path/, moves a directory called dir1 to another path but does not rename it

cp -r dir another_dir_name, copies the content of dir into another_dir_name

cp -r dir dir_path/, duplicate dir into another path

rmdir dir(s), removes empty dir(s)

rm -r dir(s), removes dirs and their contents

touch file(s), creates files

editor_name file, opens file in editor

cat > file, create a file and overwrites its content. opens the file for writing

cat >> file, opens file for writing but appending

echo data > file, just like cat, write data in file

echo data >> file, appends data to file

cp file1 file2, duplicates file1 as file2

cp file another_path, duplicates file to path, name remains the same

mv file1 file2, renames file1 to file2

mv file dir_path/, moves file from pwd to path

rm file(s), removes files(s)

C++ Environment Setup (Compiler And Text Editor)

Download Gnu c++ compiler (add to env path) and vscode or any other text editor

Resources

[wiki-cpp]:<https://en.wikipedia.org/wiki/C%2B%2B>

[unix-workbench]:<https://seankross.com/the-unix-workbench/>

[mingw-web]:<https://osdn.net/projects/mingw/downloads/68260/mingw-get-setup.exe/>

[vscode-web]:<https://code.visualstudio.com/download>

[atom-web]:<https://atom.io/>

[sublim-web]:<https://www.sublimetext.com/3>

[bracket-web]:<http://brackets.io/>

[path-web]:[https://docs.microsoft.com/en-us/previous-versions/office/developer/](https://docs.microsoft.com/en-us/previous-versions/office/developer/sharepoint-2010/ee537574(v=office.14)?redirectedfrom=MSDN)

[sharepoint-2010/ee537574\(v=office.14\)?redirectedfrom=MSDN](https://docs.microsoft.com/en-us/previous-versions/office/developer/sharepoint-2010/ee537574(v=office.14)?redirectedfrom=MSDN)

[xcode-web]:<https://developer.apple.com/download/>

C++ Hello World Program (How To Compile And Run Code)

In the current *pwd*, *mkdir helloworldproject*

```
cd helloworldproject
touch helloworld.cpp
editor helloworld.cpp or (open helloworld.cpp)
add the snippet below
```

```
// helloworld.cpp - project

#include <iostream>

using namespace std;

int main() {

    cout << "Hello world!!" << endl;

    return 0;

}
```

```
save the file.
on the terminal compile helloworld.cpp,
c++ helloworld.cpp
./a.out
```

The end.