

# Morden Cpp note build environment

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5:25 PM

- Use VirtualBox to install Ubuntu.
- Make sure to install g++.
- There is a test.cpp file, can execute it as  
g++ test.cpp -std=c++14 -o a.out  
./a.out.

- Alternatively, we can also use cmake:

```
add_executable(test test.cpp)
include_directories(${CMAKE_CURRENT_DIR})
add_library(section0 test.cpp)
install(TARGETS section0 DESTINATION bin)
install(FILES test.cpp DESTINATION include)
```

add\_executable defines binary with all linked source files.

add\_library: cmake will build the library

install tells cmake to install our binary into the bin directory.

To start a build we create a new folder:

```
mkdir build
```

```
cd build
```

And call cmake with the path to the project's root

```
cmake ..
```

This will generate build scripts using the default generator, on Linux it should be Makefiles.

By default cmake will install into system directories. To define a custom install directory:

```
cmake .. -DCMAKE_INSTALL_PREFIX=../install.
```

To run the build script, you can use the Makefile:

```
make
```

```
make install
```

We can now run our binary from the install directory:

```
../install/bin/myapp
```

If we run

```
sudo make install
```

Using the CMakefile above, the output is:

Installing: /usr/local/bin/libsection0.a

Installing: /usr/local/include/test.cpp.