

Lab 2 – Make utility

1) We add **#include <cmath>** at the top of our Lab1.app to correct an error during the production of the executable using G++.

2) To compile program in Cygwin, do :

- If you have several disk, do the command : **cd /cygdrive/c**
- Go to our cpp files
- Do the command : **g++ -o Main.exe Main.cpp Calculator2.cpp**
- Add the 3 librairies (cyggcc_s-seh-1.dll, cygstdc++-6.dll, cygwin1.dll) in our Lab folder with the cpp.

3) To create a makefile in Cygwin, do :

- Do the command : **touch makefile**
- Fill the created makefile with the corresponding macros (see the attached makefile to understand each line)
- Save the makefile

To get an executable file from the make key in Cygwin, do :

- Do the command : **make**
- Launch the application from the executable file

4) To add other targets to the makefile in Cygwin, do :

- Fill the makefile with the all, clean, install macros (see the attached makefile to understand each line)
- Save the makefile
- To remove all object and executables, do the command : **make clean**
- To do all compilation and linking : **make all**
- To copy the executable to your /usr/local/bin directory : **make install**
- To run the program in the terminal : **make run**

5) Appendix :

A. Question n°3 photo :

```
Nicolas@DESKTOP-KURJJ0V /cygdrive/c/Users/N
$ make
g++ -c -o Main.o Main.cpp
g++ -c -o Calculator2.o Calculator2.cpp
g++ -o Main ./Main.o ./Calculator2.o
```

B. Question n°4 photo n°1 :

```
Nicolas@DESKTOP-KURJJ0V /cygdrive
$ make clean
rm -f ./Main.o ./Calculator2.o
rm -f Main
```

C. Question n°4 photo n°2 :

```
Nicolas@DESKTOP-KURJJ0V /cygdrive/c/Users/N
$ make all
g++ -c -o Main.o Main.cpp
g++ -c -o Calculator2.o Calculator2.cpp
g++ -o Main ./Main.o ./Calculator2.o
```

D. Question n°4 photo n°3 :

```
Nicolas@DESKTOP-KURJJ0V /cygdrive/c/Users/Nicolas/Documents/EFREI/Cours/M1/Cours/Advanced C++
/Lab1/Lab1/Lab1
$ make install
cp -r "C:/Users/Nicolas/Documents/EFREI/Cours/M1/Cours/Advanced C++/Lab1/Lab1/Lab1/Main.exe"
"C:/cygwin64/usr/local/bin"
```

E. Question n°4 photo n°4 :

```
Nicolas@DESKTOP-KURJJ0V /cygdrive/c
$ make run
./Main
Enter your operation: 4+4=
8
```