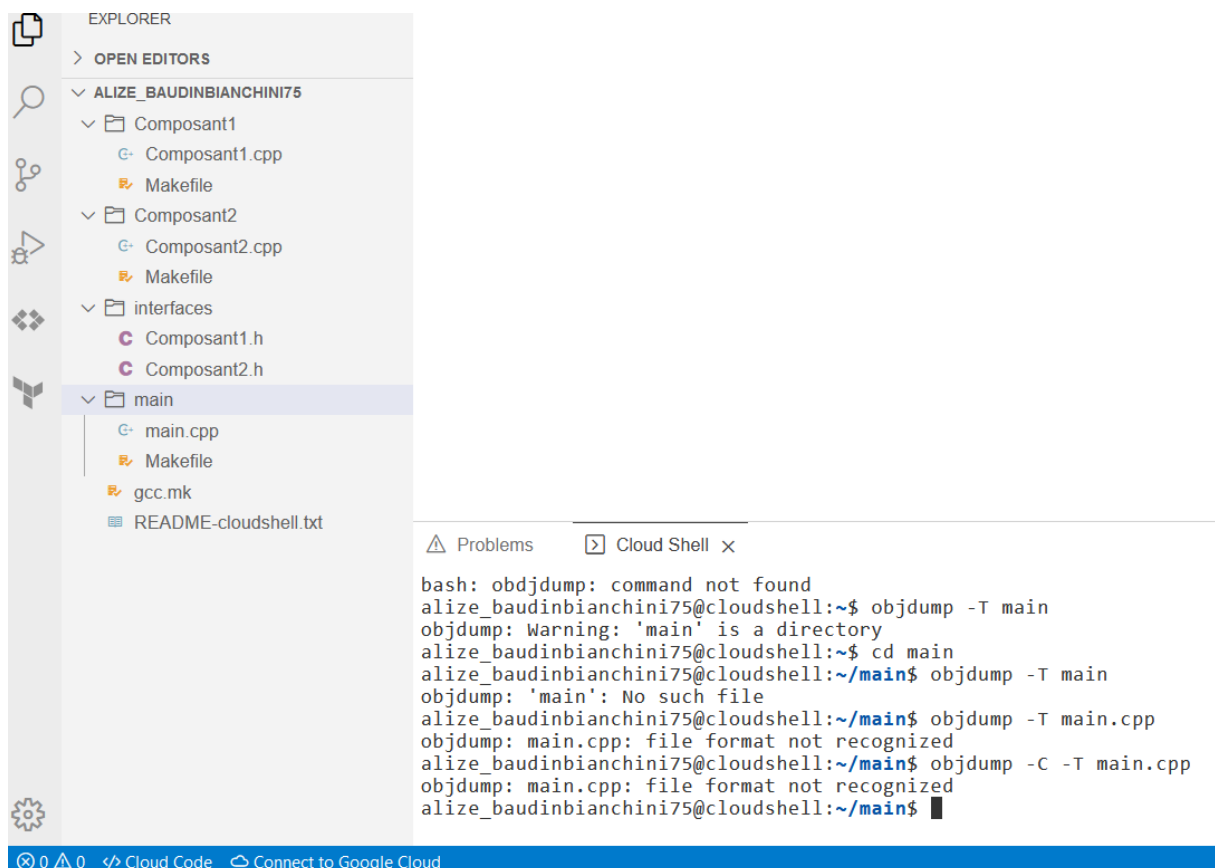


```
alize_baudinbianchini75@cloudshell:~/Composant1$ sudo apt install python3-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3-dev is already the newest version (3.9.2-3).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
alize_baudinbianchini75@cloudshell:~/Composant1$ objdump -T Composant1.cpp
objdump: Composant1.cpp: file format not recognized
alize_baudinbianchini75@cloudshell:~/Composant1$ objdump -T main
objdump: 'main': No such file
alize_baudinbianchini75@cloudshell:~/Composant1$
```



```
bash: obddump: command not found
alize_baudinbianchini75@cloudshell:~$ objdump -T main
objdump: Warning: 'main' is a directory
alize_baudinbianchini75@cloudshell:~$ cd main
alize_baudinbianchini75@cloudshell:~/main$ objdump -T main
objdump: 'main': No such file
alize_baudinbianchini75@cloudshell:~/main$ objdump -T main.cpp
objdump: main.cpp: file format not recognized
alize_baudinbianchini75@cloudshell:~/main$ objdump -C -T main.cpp
objdump: main.cpp: file format not recognized
alize_baudinbianchini75@cloudshell:~/main$
```

Je n'ai pas réussi à faire l'exercice voulu, malgré le fait d'avoir installé les bon modules avec succès :

```

alize_baudinbianchini75@cloudshell:~/Composant1$ sudo apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.30.2-1+deb11u2).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
alize_baudinbianchini75@cloudshell:~/Composant1$ sudo apt install build-essential
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
build-essential is already the newest version (12.9).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.
alize_baudinbianchini75@cloudshell:~/Composant1$ sudo apt install python3-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
python3-dev is already the newest version (3.9.2-3).
0 upgraded, 0 newly installed, 0 to remove and 7 not upgraded.

```

Si vous le permettez je reviendrais sur l'exercice demain soir, ou vers vous mercredi matin

```

Welcome to Cloud Shell! Type "help" to get started.
To set your Cloud Platform project in this session use "gcloud config set project [PROJECT_ID]"
alize_baudinbianchini75@cloudshell:~$ git clone https://github.com/AlizeBaudin/lib_partageable_2023
Cloning into 'lib_partageable_2023'...
remote: Enumerating objects: 60, done.
remote: Total 60 (delta 0), reused 0 (delta 0), pack-reused 60
Receiving objects: 100% (60/60), 205.13 KiB | 8.92 MiB/s, done.
Resolving deltas: 100% (19/19), done.
alize_baudinbianchini75@cloudshell:~$ objdump -T main
Usage: objdump <option(s)> <file(s)>

```

```

alize_baudinbianchini75@cloudshell:~$ cd lib_partageable_2023/
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023$ sudo apt install tree
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  tree
0 upgraded, 1 newly installed, 0 to remove and 7 not upgraded.
Need to get 49.6 kB of archives.
After this operation, 118 kB of additional disk space will be used.
Get:1 https://deb.debian.org/debian bullseye/main amd64 tree amd64 1.8.0-1+b1 [49.6 kB]
Fetched 49.6 kB in 0s (610 kB/s)
debconf: delaying package configuration, since apt-utils is not installed
Selecting previously unselected package tree.
(Reading database ... 142009 files and directories currently installed.)
Preparing to unpack .../tree_1.8.0-1+b1_amd64.deb ...
Unpacking tree (1.8.0-1+b1) ...
Setting up tree (1.8.0-1+b1) ...
Processing triggers for man-db (2.9.4-2) ...

```

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023$ tree
```

```
.
├── Composant1
│   ├── Composant1.cpp
│   ├── Composant1Version.h
│   └── Makefile
├── Composant2
│   ├── Composant2.cpp
│   └── Makefile
├── gcc.mk
├── interfaces
│   ├── Composant1.h
│   └── Composant2.h
├── main
│   ├── main.cpp
│   └── Makefile
└── Makefile
```

```
4 directories, 11 files
```

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023$ cd main
```

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023/main$ objdump -T main
```

```
objdump: 'main': No such file
```

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023/main$ objdump -T main.cpp
```

```
objdump: main.cpp: file format not recognized
```

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023$ make
```

```
cd main && make install
```

```
make[1]: Entering directory '/home/alize_baudinbianchini75/lib_partageable_2023/main'
```

```
mkdir ../bin
```

```
for component in Composant1 Composant2; do \
```

```
    cd ../$component; \
```

```
    make install; \
```

```
done
```

```
make[2]: Entering directory '/home/alize_baudinbianchini75/lib_partageable_2023/Composant1'
```

```
mkdir -p ../lib
```

```
g++ -fPIC -I../interfaces -c Composant1.cpp -o Composant1.o
```

```
gcc -o libComposant1.so -shared Composant1.o
```

```
cp libComposant1.so ../lib/libComposant1.so
```

```
make[2]: Leaving directory '/home/alize_baudinbianchini75/lib_partageable_2023/Composant1'
```

```
make[2]: Entering directory '/home/alize_baudinbianchini75/lib_partageable_2023/Composant2'
```

```
g++ -fPIC -I../interfaces -c Composant2.cpp -o Composant2.o
```

```
gcc -o libComposant2.so -shared Composant2.o
```

```
cp libComposant2.so ../lib/libComposant2.so
```

```
make[2]: Leaving directory '/home/alize_baudinbianchini75/lib_partageable_2023/Composant2'
```

```
g++ -fPIC -I../interfaces -c main.cpp -o main.o
```

```
g++ main.o -L ../lib -lComposant1 -lComposant2 -o main
```

```
cp main ../bin; \
```

```
cp ../lib/libComposant1.so ../lib/libComposant2.so ../bin
```

```
make[1]: Leaving directory '/home/alize_baudinbianchini75/lib_partageable_2023/main'
```

```
cd bin; \
```

```
LD_LIBRARY_PATH=. ./main
```

```
Composant 1 version 1.2.2.0
```

```
valeur 1 :8 valeur 2 :15
```

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023$ tree
```

```
.
├── bin
│   ├── libComposant1.so
│   ├── libComposant2.so
│   └── main
├── Composant1
│   ├── Composant1.cpp
│   ├── Composant1.o
│   ├── Composant1Version.h
│   ├── libComposant1.so
│   └── Makefile
├── Composant2
│   ├── Composant2.cpp
│   ├── Composant2.o
│   ├── libComposant2.so
│   └── Makefile
├── gcc.mk
├── interfaces
│   ├── Composant1.h
│   └── Composant2.h
├── lib
│   ├── libComposant1.so
│   └── libComposant2.so
├── main
│   ├── main
│   ├── main.cpp
│   ├── main.o
│   └── Makefile
└── Makefile
```

6 directories, 22 files

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023/main$ objdump -T main
```

main: file format elf64-x86-64

DYNAMIC SYMBOL TABLE:

0000000000000000	DF *UND*	0000000000000000	GLIBCXX_3.4	_ZSt4endl1cSt11char_traitsIcEERSt13basic_ostreamIT_T0_ES6_
0000000000000000	DF *UND*	0000000000000000		_Z10composant2ii
0000000000000000	DF *UND*	0000000000000000		_Z10composant1ii
0000000000000000	DF *UND*	0000000000000000		_Z20getComposant1Versionv
0000000000000000	DF *UND*	0000000000000000	GLIBC_2.2.5	__cxa_atexit
0000000000000000	DF *UND*	0000000000000000	GLIBCXX_3.4	_ZStlsISt11char_traitsIcEERSt13basic_ostreamIT_T0_ES6_Pkc
0000000000000000	DF *UND*	0000000000000000	GLIBCXX_3.4	_ZNSt8ios_base4InitC1Ev
0000000000000000	DO *UND*	0000000000000000	GLIBCXX_3.4	_ZNSt8ios_base4InitC1Ev
0000000000000000	DF *UND*	0000000000000000	GLIBCXX_3.4	_ZNSt8ios_base4InitC1Ev
0000000000000000	DF *UND*	0000000000000000	GLIBCXX_3.4	_ZNSt8ios_base4InitC1Ev
0000000000000000	w D *UND*	0000000000000000		_ITM_deregisterTMCloneTable
0000000000000000	DF *UND*	0000000000000000	GLIBC_2.2.5	__libc_start_main
0000000000000000	w D *UND*	0000000000000000		_gmon_start__
0000000000000000	w D *UND*	0000000000000000		_ITM_registerTMCloneTable
0000000000000000	DF *UND*	0000000000000000	GLIBCXX_3.4	_ZNSt8ios_base4InitD1Ev
0000000000000000	w DF *UND*	0000000000000000	GLIBC_2.2.5	__cxa_finalize

```
alize_baudinbianchini75@cloudshell:~/lib_partageable_2023/main$ objdump -TlibComposant1.so
```

BFD header file version (GNU Binutils for Debian) 2.35.2

elf64-x86-64

(header little endian, data little endian)

i386

elf32-i386

(header little endian, data little endian)

i386

elf32-iamcu

(header little endian, data little endian)

iamcu

elf32-x86-64

(header little endian, data little endian)

i386

pei-i386

(header little endian, data little endian)

i386

pei-x86-64

(header little endian, data little endian)

i386

elf64-l1om

(header little endian, data little endian)

l1om

elf64-k1om

(header little endian, data little endian)

k1om

elf64-little

(header little endian, data little endian)

i386

l1om

k1om

iamcu

elf64-big

(header big endian, data big endian)

i386

l1om

k1om

iamcu

elf32-little

(header little endian, data little endian)

i386

l1om

k1om

iamcu

elf32-big

(header big endian, data big endian)

i386

l1om

k1om

iamcu

pe-x86-64

(header little endian, data little endian)

i386

pe-bigobj-x86-64

(header little endian, data little endian)

i386

pe-i386

(header little endian, data little endian)

i386

srec

(header endianness unknown, data endianness unknown)

i386

l1om

k1om

iamcu

symbolsrec

(header endianness unknown, data endianness unknown)

i386

l10m

k10m

iamcu

verilog

(header endianness unknown, data endianness unknown)

i386

l10m

k10m

iamcu

tekhex

(header endianness unknown, data endianness unknown)

i386

l10m

k10m

iamcu

binary

(header endianness unknown, data endianness unknown)

i386

l10m

k10m

iamcu

ihex

(header endianness unknown, data endianness unknown)

i386

l10m

k10m

iamcu

plugin

(header little endian, data little endian)

elf64-x86-64 elf32-i386 elf32-iamcu elf32-x86-64 pei-i386 pei-x86-64

i386 elf64-x86-64 elf32-i386 ----- elf32-x86-64 pei-i386 pei-x86-64

l1om -----

k1om -----

iamcu ----- elf32-iamcu -----

elf64-l1om elf64-k1om elf64-little elf64-big elf32-little elf32-big

i386 ----- elf64-little elf64-big elf32-little elf32-big

l1om elf64-l1om ----- elf64-little elf64-big elf32-little elf32-big

k1om ----- elf64-k1om elf64-little elf64-big elf32-little elf32-big

iamcu ----- elf64-little elf64-big elf32-little elf32-big

pe-x86-64 pe-bigobj-x86-64 pe-i386 srec symbolsrec verilog tekhex

i386 pe-x86-64 pe-bigobj-x86-64 pe-i386 srec symbolsrec verilog tekhex

l1om ----- srec symbolsrec verilog tekhex

k1om ----- srec symbolsrec verilog tekhex

iamcu ----- srec symbolsrec verilog tekhex

binary ihex plugin

i386 binary ihex -----

l1om binary ihex -----

k1om binary ihex -----

iamcu binary ihex -----

```
alire_baudinbianchini75@cloudshell:~/lib_partageable_2023/main$ objdump -T -C main
main:      file format elf64-x86-64

DYNAMIC SYMBOL TABLE:
0000000000000000  DF *UND* 0000000000000000 GLIBCXX_3.4 std::basic_ostream<char, std::char_traits<char> > > std::endl<char, std::char_traits<char> > (std::basic_ostream<char, std::char_traits<char> > >)
0000000000000000  DF *UND* 0000000000000000      composant2(int, int)
0000000000000000  DF *UND* 0000000000000000      composant1(int, int)
0000000000000000  DF *UND* 0000000000000000      getComposant1Version()
0000000000000000  DF *UND* 0000000000000000 GLIBC_2.2.5 __cxa_atexit
0000000000000000  DF *UND* 0000000000000000 GLIBCXX_3.4 std::basic_ostream<char, std::char_traits<char> > > std::operator<< <std::char_traits<char> > (std::basic_ostream<char, std::char_traits<char> > >, char const*)
0000000000000000  DF *UND* 0000000000000000 GLIBCXX_3.4 std::ostream::operator<< (std::ostream& (*) (std::ostream&))
0000000000000000  DO *UND* 0000000000000000 GLIBCXX_3.4 std::cout
0000000000000000  DF *UND* 0000000000000000 GLIBCXX_3.4 std::ios_base::Init::Init()
0000000000000000  DF *UND* 0000000000000000 GLIBCXX_3.4 std::ostream::operator<< (int)
0000000000000000  w D *UND* 0000000000000000      ITM_deregisterTMCloneTable
0000000000000000  DF *UND* 0000000000000000 GLIBC_2.2.5 __libc_start_main
0000000000000000  w D *UND* 0000000000000000      gmon_start__
0000000000000000  w D *UND* 0000000000000000      ITM_registerTMCloneTable
0000000000000000  DF *UND* 0000000000000000 GLIBCXX_3.4 std::ios_base::Init::~Init()
0000000000000000  w DF *UND* 0000000000000000 GLIBC_2.2.5 __cxa_finalize
```



```
|— lib
|   |— libComposant1.so
|   |— libComposant2.so
|— main
|   |— main
|   |— main.cpp
|   |— main.o
|   |— Makefile
|— Makefile
```

6 directories, 22 files

alize_baudinbianchini75@cloudshell:~/lib_partageable_2023\$ cd lib

alize_baudinbianchini75@cloudshell:~/lib_partageable_2023/lib\$ objdump -T -C libComposant1.so

libComposant1.so: file format elf64-x86-64

DYNAMIC SYMBOL TABLE:

0000000000000000	w	D	*UND*	0000000000000000	__cxa_finalize
0000000000000000	w	D	*UND*	0000000000000000	_ITM_registerTMCloneTable
0000000000000000	w	D	*UND*	0000000000000000	_ITM_deregisterTMCloneTable
0000000000000000	w	D	*UND*	0000000000000000	__gmon_start__
0000000000001138	g	DF	.text	000000000000000d	getComposant1Version()
0000000000001124	g	DF	.text	0000000000000014	addition_interne(int, int)
0000000000001105	g	DF	.text	000000000000001f	composant1(int, int)