

De TABBAKH Mohamed Amine MIAGE-IF Rendu 1

Make :

```
aminetabbakh20@instance-1:~/lib_partageable_2023$ make
cd main && make install
make[1]: Entering directory '/home/aminetabbakh20/lib_partageable_2023/main'
mkdir ../bin
for component in Composant1 Composant2; do \
    cd ../$component; \
    make install; \
done
make[2]: Entering directory '/home/aminetabbakh20/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/aminetabbakh20/lib_partageable_2023/Composant1'
make[2]: Entering directory '/home/aminetabbakh20/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/aminetabbakh20/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/aminetabbakh20/lib_partageable_2023/main'
cd bin; \
LD_LIBRARY_PATH=. ./main
Composant 1 version 1.2.2.0
valeur 1 :8 valeur 2 :15
```

objdump -T main :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/main$ objdump -C -T 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::o
stream&))
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
```

objdump -T libComposant1.so :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/Composant1$ objdump -T 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__
00000000000001138      g  DF .text 000000000000000d      Z20getComposant1Versionv
00000000000001124      g  DF .text 0000000000000014      Z16addition_interneii
00000000000001105      g  DF .text 000000000000001f      Z10composant1ii
```

objdump -C -T main :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/main$ objdump -C -T 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::o
stream&))
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
```

objdump -C -T libComposant1.so :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/Composant1$ objdump -C -T 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__
00000000000001138      g  DF .text 0000000000000000d getComposant1Version()
00000000000001124      g  DF .text 00000000000000014 addition_interne(int, int)
00000000000001105      g  DF .text 0000000000000001f composant1(int, int)
```

Après avoir décommenter les lignes extern "C" :

```
1  #ifndef COMPOSANT1_H
2  #define COMPOSANT1_H
3
4  extern "C"
5  int composant1(int p1, int p2);
6
7  const char * getComposant1Version(void);
8
9  #endif
```

objdump -T main :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/main$ objdump -T main

main:          file format elf64-x86-64

DYNAMIC SYMBOL TABLE:
0000000000000000      DF *UND* 0000000000000000      GLIBCXX_3.4 _ZSt4endlIcSt11char_traitsIcEERSt13basic_ostreamI
T_T0_ES6_
0000000000000000      DF *UND* 0000000000000000                        _Zl0composant2ii
0000000000000000      DF *UND* 0000000000000000                        _Zl0composant1ii
0000000000000000      DF *UND* 0000000000000000                        _Z20getComposant1Versionv
0000000000000000      DF *UND* 0000000000000000      GLIBC_2.2.5 __cxa_atexit
0000000000000000      DF *UND* 0000000000000000      GLIBCXX_3.4 _ZSt1sISt11char_traitsIcEERSt13basic_ostreamIcT_E
S5_Pkc
0000000000000000      DF *UND* 0000000000000000      GLIBCXX_3.4 _ZNSt8ios_base4InitC1Ev
0000000000000000      DO *UND* 0000000000000000      GLIBCXX_3.4 _ZSt4cout
0000000000000000      DF *UND* 0000000000000000      GLIBCXX_3.4 _ZNSt8ios_base4InitD1Ev
0000000000000000      DF *UND* 0000000000000000      GLIBCXX_3.4 _ZNSt8ios_base4InitD1Ev
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
```

objdump -T libComposant1.so :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/Composant1$ objdump -T 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 0000000000000000d _Z20getComposant1Versionv
0000000000001124 g DF .text 00000000000000014 _Z16addition_interneii
0000000000001105 g DF .text 0000000000000001f _Z10composant1lii
```

objdump -C -T main :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/main$ objdump -C -T 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::o
stream&))
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
```

objdump -C -T libComposant1.so :

```
aminetabbakh20@instance-1:~/lib_partageable_2023/Composant1$ objdump -C -T 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 0000000000000000d getComposant1Version()
0000000000001124 g DF .text 00000000000000014 addition_interne(int, int)
0000000000001105 g DF .text 0000000000000001f composant1(int, int)
```