Rendu programmation par composant

Walid ANWAR – M2 IF APP

Lien GitHub : https://github.com/Walid-Anwar

Après avoir forker, cloner, et compiler.

```
walidanwar999@tp-1:~/lib_partageable_2023/main$ ls
Makefile  main  main.cpp  main.o
walidanwar999@tp-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_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_ostreamIcT_ES
5_PKc
0000000000000000      DF *UND*  0000000000000000  GLIBCXX_3.4 _ZNSolsEPFRSoS_E
0000000000000000      DO *UND*  0000000000000000  GLIBCXX_3.4 _ZSt4cout
0000000000000000      DF *UND*  0000000000000000  GLIBCXX_3.4 _ZNSt8ios_base4InitC1Ev
0000000000000000      DF *UND*  0000000000000000  GLIBCXX_3.4 _ZNSolsEi
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
```

```
walidanwar999@tp-1:~/lib_partageable_2023/Composant1$ ls
Composant1.cpp  Composant1.o  Composant1Version.h  Makefile  libComposant1.so
walidanwar999@tp-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  000000000000000d _Z20getComposant1Versionv
0000000000001124  g   DF .text  0000000000000014 _Z16addition_interneii
0000000000001105  g   DF .text  000000000000001f _Z10composant1ii
```

```
walidanwar999@tp-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::os
tream&))
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
```

Accès aux headers dans interfaces avec VIM

Décommenter « extern « C » »

Enregistrer et fermer

```
walidanwar999@tp-1:~/lib_partageable_2023/interfaces$ vim Composant1.h
walidanwar999@tp-1:~/lib_partageable_2023/interfaces$ cat
^C
walidanwar999@tp-1:~/lib_partageable_2023/interfaces$ cat Composant1.h
#ifndef COMPOSANT1_H
#define COMPOSANT1_H

extern "C"
int composant1(int p1, int p2);

const char * getComposant1Version(void);

#endif
walidanwar999@tp-1:~/lib_partageable_2023/interfaces$ vim Composant2.h
walidanwar999@tp-1:~/lib_partageable_2023/interfaces$ cat Composant2.h
#ifndef COMPOSANT2_H
#define COMPOSANT2_H

// interface du composant2


extern "C"
int composant2(int p1, int p2);
#endif
```

Puis compiler, et réexécuter les commandes.

```
walidanwar999@tp-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_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_ostreamIcT_ES5_PKc
0000000000000000      DF *UND*  0000000000000000  GLIBCXX_3.4 _ZNSolsEPFRSoS_E
0000000000000000      DO *UND*  0000000000000000  GLIBCXX_3.4 _ZSt4cout
0000000000000000      DF *UND*  0000000000000000  GLIBCXX_3.4 _ZNSt8ios_base4InitC1Ev
0000000000000000      DF *UND*  0000000000000000  GLIBCXX_3.4 _ZNSolsEi
0000000000000000  w   D  *UND*  0000000000000000              _ITM_deregisterTMCloneTable
0000000000000000      DF *UND*  0000000000000000  GLIBC_2.2.5 __libc_start_main
0000000000000000  w      *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

walidanwar999@tp-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::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      *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
```

```
walidanwar999@tp-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  000000000000000d _Z20getComposant1Versionv
0000000000001124  g   DF .text  0000000000000014 _Z16addition_interneii
0000000000001105  g   DF .text  000000000000001f _Z10composant1ii


walidanwar999@tp-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  000000000000000d getComposant1Version()
0000000000001124  g   DF .text  0000000000000014 addition_interne(int, int)
0000000000001105  g   DF .text  000000000000001f composant1(int, int)
```