

## Rapport Programmation par composants - Rendu 21/05/2023 :

### Exercice 1 : python :

```
anamshaikhyunus@instance-2:~$ ls
lib_partageable_2023
anamshaikhyunus@instance-2:~$ git clone https://github.com/AnamNasar/python_cpp_2023.git
Cloning into 'python_cpp_2023'...
remote: Enumerating objects: 42, done.
remote: Counting objects: 100% (42/42), done.
remote: Compressing objects: 100% (25/25), done.
remote: Total 42 (delta 15), reused 42 (delta 15), pack-reused 0
Receiving objects: 100% (42/42), 5.21 KiB | 5.21 MiB/s, done.
Resolving deltas: 100% (15/15), done.
anamshaikhyunus@instance-2:~$ ls
lib_partageable_2023  python_cpp_2023
anamshaikhyunus@instance-2:~$ cd python_cpp_2023/
anamshaikhyunus@instance-2:~/python_cpp_2023$ git submodule init
Submodule 'pybind11' (https://github.com/pybind/pybind11) registered for path 'pybind11'
anamshaikhyunus@instance-2:~/python_cpp_2023$ git submodule update
Cloning into '/home/anamshaikhyunus/python_cpp_2023/pybind11'...
Submodule path 'pybind11': checked out '8de7772cc72daca8e947b79b83fea46214931604'
anamshaikhyunus@instance-2:~/python_cpp_2023$ cd hello
anamshaikhyunus@instance-2:~/python_cpp_2023/hello$
```

```
anamshaikhyunus@instance-2:~/python_cpp_2023/hello$ make
g++ -fPIC `python3-config --includes` -I ../pybind11/include -c hello_component.cpp -o hello_component.o
g++ -o hello_component.so -shared hello_component.o `python3-config --ldflags`
echo "execution du test"
execution du test
python3 test.py
version: 1.0
message du composant: hello, world
```

```
anamshaikhyunus@instance-2:~/python_cpp_2023/hello$ make
g++ -fPIC `python3-config --includes` -I ../pybind11/include -c hello_component.cpp -o hello_component.o
g++ -o hello_component.so -shared hello_component.o `python3-config --ldflags`
echo "execution du test"
execution du test
python3 test.py
version: 1.0
message du composant: hello, world
anamshaikhyunus@instance-2:~/python_cpp_2023/hello$ python3
Python 3.9.2 (default, Feb 28 2021, 17:03:44)
[GCC 10.2.1 20210110] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import hello_component
>>> hello_component.greet()
'hello, world'
>>> hello_component.getVersion()
'1.0'
>>>
```

### Exercice 2 :

```
anamshaikhyunus@instance-2:~/python_cle_publique_2023/composant_cle$ python3
Python 3.9.2 (default, Feb 28 2021, 17:03:44)
[GCC 10.2.1 20210110] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import cle_component
>>> macle = cle_component.Cle()
>>> macle.initialize("4b8e29b9b0ddddd58a709edba7d6df6c07ebdaf5653e325114bc5318c238f87f0")
>>> macle.getPrivateKey()
'4b8e29b9b0ddddd58a709edba7d6df6c07ebdaf5653e325114bc5318c238f87f0'
>>> macle.getPublicKey()
'F2CE1E40BEFBEBAF4045F1A6D126B7B949E7D5ADEA33F84A09A904093456F4FD504B1F70755BE4CEF27625B1E6B893E05FFEB361F2971F
DA1D6BE5E730A74303'
```

