

Extra Assignment

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Outline

- Deadline
- No Plagiarism
- Leave Comments
- Scoring
- Problem: Artist
- Submission
- Questions

Deadline

- Monday, December 15th 23:59 (LearnUs server time)
- No late submissions at all

No Plagiarism

- No Mercy.
- The punishment will be made to both
 - the person who copied the code, and the person who shared the code.
- Simply changing variable names and the order of code will not help you evade plagiarism detection.

Leave Comments

- Leave comments in your file for TAs to understand your code.
- If no comments in the file, there may be a reduction of points.

Scoring

- Do not modify the given skeleton code
 - You cannot change the headers in */include* and *main.cpp*
- You can only write the code in */lib* directory
- Write you code, compile, run! (We will unzip your submission and ‘*make run*’)
If you pass all `assert()`, you will get extra credit 😊

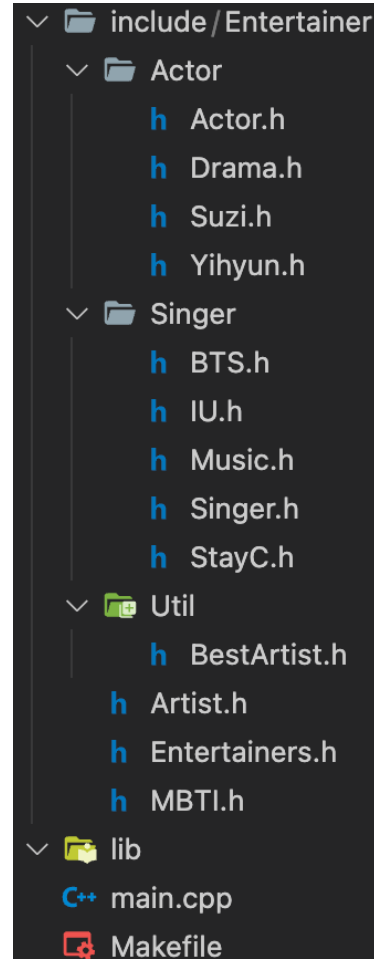
What to do

Header files are given in /include/Entertainer directory, which are not allowed to modify.

Main.cpp is provided and this is for testing.

What to do:

1. Implement the class member functions of the given header files in /lib directory. Absolutely, feel free to architect the directory structure within /lib in any way that suits your needs best.
2. Make your Makefile. Makefile is used for the repetitive compilation of multiple files. (http://korea.gnu.org/manual/4check/make-3.77/ko/make_2.html)
 1. make all, make run, and make clean have to be included.
 2. Make all : compile all the files and make a binary
 3. Make run : run the binary
 4. Make clean : remove the objects and the binary



Supplementary

1. Makefile

<https://makefiletutorial.com>

<https://github.com/topics/makefile-template>

2. Singleton

https://en.wikipedia.org/wiki/Singleton_pattern

3. Std::is_same<T, U>::value

If T and U name the same type (taking into account const/volatile qualifications), provides the member constant value equal to true. Otherwise value is false.

```
std::cout << std::is_same<int, int>::value << ' '; // ~ true
std::cout << std::is_same<int, double>::value << ' '; // ~ false
std::cout << std::is_same<int, const int>::value << '\\n'; // ~ false

std::cout << std::is_same<int, std::int32_t>::value << ' '; // ~ true
std::cout << std::is_same<int, std::int64_t>::value << '\\n'; // ~ false
```

4. Std::vector

You can think of it as an array that grows dynamically.

<https://en.cppreference.com/w/cpp/container/vector>

5. (Dynamic) polymorphism

<https://www.geeksforgeeks.org/cpp-polymorphism>

Makefile Example

Build process goes through:

```
~/Desktop/Grad/TA/2023-02 00P/Assignment4/Code
> make
```

```
~/Desktop/Grad/TA/2023-02_00P/Assignment4/Code
> make run
./out
>>>>>>>>> CHECK <<<<<<<<<<
===== Test Actor Initialization
===== Test Actor Initialization --- OK
===== Test Singer Initialization
===== Test Singer Initialization --- OK
===== Test Singleton
===== Test Singleton --- OK
===== Test BestArtist Template Function
===== Test BestArtist Template Function --- OK
```

```
~/Desktop/Grad/TA/2023-02 OOP/Assignment4/Code
> make clean
rm -f out
rm -f *.o
```

1. **Make**
Output: The objects and the binary
2. **Make run**
Output: The output of cout in main.cpp
3. **Make clean**
Output: Remove all the files made by the make command.

Submission

- Zip the folder by following steps correctly
- You have to run make clean before zipping.

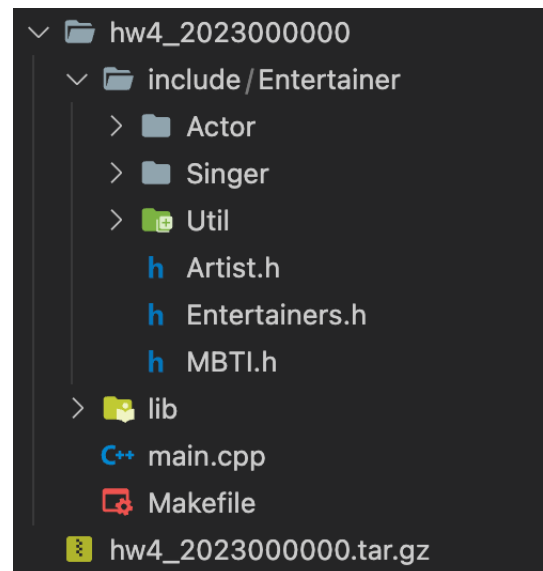
- hw4_studentId.tar.gz
 - Ex) hw4_2016025314.tar.gz

```
~/Desktop/Grad/TA/2023-02 00P/Assignment4/Assignment4/hw4_2023000000
> make clean
rm -f out
rm -f *.o
~/Desktop/Grad/TA/2023-02 00P/Assignment4/Assignment4/hw4_2023000000
> cd ..
~/Desktop/Grad/TA/2023-02 00P/Assignment4/Assignment4 .....
> tar -zcvf hw4_2023000000.tar.gz hw4_2023000000/
```

- There is no point if not following the folder hierarchy as well
- If unzipped your submission .tar.gz file should follow the folder hierarchy below

Current directory

- hw3_studentId.tar.gz
- hw3_studentId
 - /include
 - /lib
 - main.cpp
 - Makefile



Questions

- Recommendation: Classsum in LearnUs
- You can also ask to TA: kiung@yonsei.ac.kr
- We are not going to answer
 - Questions not making sense
 - Questions related to the algorithm for solving the question
 - Ex) Why does my code not work?
 - Questions you can infer the answer if read this file thoroughly
 - Questions you can simply solve by googling
 - Ex) how do I make a folder on ubuntu? Why compile error?

Appendix

- Zipping and unzipping the folder by tar command
 - <https://linuxize.com/post/how-to-extract-unzip-tar-gz-file/>
 - <https://www.cyberciti.biz/faq/how-do-i-compress-a-whole-linux-or-unix-directory/>