

Due: 11:59 pm on November 8 (Late submissions are *not* accepted.)

Program Purpose - Implement two classes

Create a `TimeOfDay` class that holds the hour, minute, and second of a time of day in private integer data members. The class will contain a constructor, a print function, and accessor and mutator functions for the private data members. Read the comments in the supplied `timeofday.h` header file for more detailed requirements. Initial tests for the functionality of the `TimeOfDay` class have been provided in the attached `testtimeofday.cpp` source file. If you place all of the attached files in the same directory, you can run the initial tests with command `make checktimeofday`. You are encouraged to create more rigorous tests.

Create a `TimeInterval` class that has a start `TimeOfDay` object and an end `TimeOfDay` object as private data members. The class will include three constructors, a print function, and accessor and mutator functions for the private data members. Read the comments in the supplied `timeinterval.h` header file for more detailed requirements. Initial tests for the functionality of the `TimeInterval` class have been provided in the attached `testtimeinterval.cpp` source file. If you place all of the attached files in the same directory, you can run the initial tests with command `make checktimeinterval`. You are strongly encouraged to create more rigorous tests.

Specifications

- Add all code for the definition of the `TimeOfDay` class to the attached `timeofday.h` header file.
- Include all of the necessary code for the `TimeOfDay` class, including the implementation of all of the public member functions, in the attached `timeofday.cpp` source file.
- Add all code for the definition of the `TimeInterval` class to the attached `timeinterval.h` header file.
- Include all of the necessary code for the `TimeInterval` class, including the implementation of all of the public member functions, in the attached `timeinterval.cpp` source file.
- You will submit a zip file (only a zip file will be accepted) containing `timeofday.h`, `timeofday.cpp`, `timeinterval.h` and `timeinterval.cpp` to the assignment in Blackboard.

Grade Breakdown

Style `timeofday.h`: 0.25 point

Style `timeofday.cpp`: 0.25 point

Style `timeinterval.h`: 0.25 point

Style `timeinterval.cpp`: 0.25 point

Documentation: 1 point

Clean compilation of `timeofday.cpp`: 0.25 point

Clean compilation of `timeinterval.cpp`: 0.25 point

Clean compile/link with `testtimeofday.cpp`: 0.25 point

Clean compile/link with `testtimeinterval.cpp`: 0.25 point

`TimeOfDay` class passes instructor's modified `testtimeofday.cpp` tests: 4 points

`TimeInterval` class passes instructor's modified `testtimeinterval.cpp` tests: 3 points