

CSCE 240 - Programming Assignment Four

Due: 11:59pm on Monday, March 20

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.cc* source file. If you place all of the attached files in the same directory, you can run the initial tests with the command **make checktimeofday**. You are encouraged to create more rigorous tests.

Create an *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.cc* source file. If you place all of the attached files in the same directory, you can run the initial tests with the 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 all of the public member functions, in the attached *timeofday.cc* 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 all of the public member functions, in the attached *timeinterval.cc* source file.
- You will submit a zip file (only a zip file will be accepted) containing *timeofday.h*, *timeofday.cc*, *timeinterval.h* and *timeinterval.cc* to the assignment in Blackboard.
- Source files must compile and run on a computer of the instructor's choosing in the Linux lab (see your course syllabus for additional details).

Grade Breakdown

Style *timeofday.h*: 0.25 point

Style *timeofday.cc*: 0.25 point

Style *timeinterval.h*: 0.25 point

Style *timeinterval.cc*: 0.25 point

Documentation: 1 point

Clean compilation of *timeofday.cc*: 0.25 point

Clean compilation of *timeinterval.cc*: 0.25 point

Clean compile/link with *testtimeofday.cc*: 0.25 point

Clean compile/link with *testtimeinterval.cc*: 0.25 point

TimeOfDay class passes instructor's modified *testtimeofday.cc* tests: 4 points

TimeInterval class passes instructor's modified *testtimeinterval.cc* tests: 3 points

The penalty for late program submissions is 10% per day, with no submission accepted after 3 days.