

EE2510 - Lab 3: Time to get to work

2 weeks total

Goals:

1. Creating and using classes and objects
2. Operator and function overloading

Assignment Description:

Overview:

Create a set of classes to manage time (h,m,s and d,m,y)

Note – the Sol class measures elapsed time, not dates e.g month = 3 means J/F/M have passed – not that it is currently March

Note – No leap years

Interface:

A main program is available on the website. Your classes must properly operate in this program.

Structural requirements:

You must use the UML described classes

Additional functions may be needed or desired

NO global variables

Grading:

Functionality	Structure
Comments – readability	Documentation
Cleanliness (beauty) of the code	On-time

Deliverables:

All code (except main)

Eclipse “project explorer” capture showing all files in the project

Screen capture of program run

Hardcopy – no need to put into a PowerPoint or pdf, just print/label/staple

Due: 5:00 pm 1st day after Week 6 lab – in the box outside my office

Introduction to Object Oriented Programming

Sol
- years : int - months : int - days : int
+ Sol() + Sol(y : int, m : int, d : int) (setters and getters for years/months/days) + setSol(y : int, m : int, d : int) : void + setSol(m : int, d : int) : void + setSol(d : int) : void + operator=(rhs: const Sol&) : Sol & + operator+(rhs: const Sol&) : Sol + operator-(rhs: const Sol&) : Sol + operator==(rhs: const Sol&) : bool + operator!=(rhs: const Sol&) : bool + operator<(rhs: const Sol&) : bool + operator>(rhs: const Sol&) : bool + toString(void) : string

Time
- hour : int - minute : int - second : int
+ Time() + Time(h : int, m : int, s : int) (setters and getters for hour/minute/second) + setTime(h : int, m : int, s : int) : void + setTime(m : int, s : int) : void + setTime(s : int) : void + operator=(rhs: const Time&) : Time & + operator+(rhs: const Time&) : Time + operator-(rhs: const Time&) : Time + operator==(rhs: const Time&) : bool + operator!=(rhs: const Time&) : bool + operator<(rhs: const Time&) : bool + operator>(rhs: const Time&) : bool + toString(void) : string

SolTime
- cur_sol : Sol - cur_time : Time
+ SolTime() + SolTime(csol : Sol, ctime : Time) + setCurSol (s : Sol) : void + setCurTime(t : Time) : void + getCurSol (void) : Sol + getCurTime(void) : Time + setSolTime(csol : Sol, ctime : Time) : void + operator=(rhs: const SolTime&) : SolTime & + operator+(rhs: const SolTime&) : SolTime + operator+(rhs: const Sol&) : SolTime + operator+(rhs: const Time&) : SolTime + operator-(rhs: const SolTime&) : SolTime + operator-(rhs: const Sol&) : SolTime + operator-(rhs: const Time&) : SolTime + operator==(rhs: const SolTime&) : bool + operator!=(rhs: const SolTime&) : bool + operator<(rhs: const SolTime&) : bool + operator>(rhs: const SolTime&) : bool + toString(void) : string