Object-Oriented Programming
Assignment 1 – Calendar

March 14, 2017

Objectives

Practice and get familiar with the basic syntax and styles of C++ language. In this assignment you will make use of the subject matters in Chaps 1 – 4, including flow of control, function basics, and parameters and overloading.

Problem Description

Given the year (1901–2099) and month, your program (calendar.cpp) must display the correct monthly calendar in the following form:

2017 March						
SUN	MON	TUE	WED	THU	FRI	SAT
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

1. Write a boolean function `inputYrMn` that uses two *reference* parameters for year and month.

   - returns *true* if input data are valid; otherwise, returns *false*.
   - Make your function robust: Check the correction of the input year and month.

2. Write a void function `get1stDayOfMonth` that uses two *value* parameters to provide year and month and two *reference* parameters for the first weekday and the number of days in the month.

   - Write driver programs for this function to test whether the preconditions and postconditions are properly implemented by the function.
   - Ref: http://en.wikipedia.org/wiki/Perpetual_calendar

3. Write a void function `showCalendar` with appropriate parameters to display the calendar.

4. Write the preconditions and postconditions.

Requirements

You MUST use

1. C++ style!

2. Console I/O

3. Flow of control

4. Comments for pre- and post-conditions

5. Call-by-value and call-by-reference parameters

6. Driver program and test functions

Evaluation

- Correctness: 80%

- Styling: 20%

Submission

- **2017.03.23 (degrade by 10 points for each day delay)**

- Source code (calendar.cpp, test1stday.cpp, etc.)

  - Show your information (Name, Student ID, Dept, Year) as comments in the beginning of your code.
  - Upload the file to eCourse.