

# CS150-01 Assignment 5

## Calendar

**Date Assigned:** Wednesday, October 19, 2005

**Date Due:** Monday, October 31, 2005

**Points:** 65

### 1 Problem statement

In assignment #2 you learned how to find the corresponding day of the week for a given date input of the form mm/dd/yyyy. This assignment requires you to take the information learned from assignment #2 to help solve the following problem.

You are to write a C++ program that will interactively ask the user to enter a particular year. Your program is to print a calendar for each month of the given year inputted by the user. Your program is to output each complete month centered on the screen one month at a time. Wait for the user to enter the return key before proceeding to output the next month. Clear the screen before outputting each month. Here is how your program is to work:

[SCREEN #1]

```
*****  
*                               Calendar Generator                               *  
*****
```

Enter the year of interest: **1991**

[SCREEN #2]

```
1991  
  
January  
  
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
```

[SCREEN #3]

Each subsequent screen is to be the next month until the entire year has been displayed on the screen.

**Note1:** Clear the screen each time before displaying a month.

**Note2:** The data for each month is to be centered on the screen as close as possible.

## 2 You need to do the following for this assignment

You need to do the following for this assignment

(a) **Problem Analysis:** Identify the input to your program, the output from your program, and any internal data in your program. You should also identify the data type and indicate whether it should be a variable or a constant.

(b) **Algorithm:** Write out the steps that you'll need to do complete the program. Be as detailed as possible. It will help you write the program. When writing the steps of the algorithm, don't write any C++ code.

(c) **Test Results:** These are solutions to the problem using some method other than your computer program. They are often done by hand, but could include experimental or other results. These results should be explicitly compared to those from the program to demonstrate that the program works. The number of specific cases done should be sufficient to prove beyond a reasonable doubt that the program works.

(d) **Program Implementation:**

- (1) Write the C++ code then build and run it in Visual Studio .NET. Name your project .05CalendarPUNetId, e.g. .05Calendarykhoj0332.
- (2) Build and debug your program in small incremental steps.
- (3) Make sure to follow the coding standards to the letter.
- (4) Test the code as much as you can for different values to make sure it works.
- (5) Remember, code that does not build or run loses 70% of the points.

## 3 What to turn in

1. Turn in a hard copy of your code on the instructor's desk by the time class starts on the day in which the assignment is due. You must make sure that your code follows the coding standards in order for you to receive full credit.
2. Place your completed project folder in the CS150-01 Drop folder by 1pm on Monday, October 31. Make sure you review the late policy. Your project **MUST** be created in Visual Studio .NET, and you **MUST** submit the complete Visual Studio .NET project folder otherwise you will receive a zero on this assignment.

Start early!!!!