CS 150 – 01
Programming Assignment #3
Days Remaining in a Month

Date Assigned: Wednesday, October 1, 2008
Design Documents: Monday, October 6, 2008 9:15 am (5 points)
Date Due: Friday, October 10, 2008 9:15am (25 points)
Total Points: 30 pts

For this assignment you are to determine how many days there are remaining in a given month. You will ask the user to input a date as the day, month, and year. As output, you will print the number of days remaining in that given month.

In this program you will need to take into account whether the year is a leap year or not. A year is a leap year if it is divisible by 4 except any year that is divisible by 100 is a leap year only if is divisible by 400.

Your output should look exactly like the following:

Sample input and output

```
**************************************
|     Days Remaining in the Month     |
**************************************

Enter a date: 10/1/2008
The number of days remaining in October is 30
```

```
**************************************
|     Days Remaining in the Month     |
**************************************

Enter a date: 1/13/2009
The number of days remaining in January is 18
```

Submit an electronic copy of your design document

Before you start you need to think about the data in your program and the calculations you will need to perform. Answer the following questions in a GoogleDoc (named 03ProgramDesignPUNetID) and share it with the instructor (profchadd@gmail.com). Be sure to answer the questions in complete sentences where appropriate. This design document is due on **Monday at 9:15 am.**

Design Questions:

1. What data will you need to store for this program, and what are their data types?
2. What logical and/or relational expressions will you need to use in your program?
3. What decision statements (if, if/else) will you need to use in your program?

To complete this assignment you must

1. Create a new C++ project in Visual Studio. Name your project **03Daysxxxxxxxx**, where xxxxxxxx should be replaced by your PUNetID. As an example, my project would be called "03Dayskhoj0332". It is vital that you name your project correctly!
2. Type the solution (**fully documented/commented**) to the problem into your project.
3. You must follow the coding standards that I have handed to you.
4. Remember to enter in your name as the author of the program.
5. Make sure that your program compiles and runs correctly. If you get any errors, double check that you typed everything correctly. Be aware that C++ is case-sensitive.
6. Once you are sure that the program works correctly it is time to submit your program. You do this by logging on to Turing and placing your complete project folder in the **CS150-02 Drop** folder. Make sure that you copy your program folder and don't move it. If you move it, then you will not have your own copy!

Notes:

1. You must take leap years into account. Make sure to test your inputs on many different dates in many different years.
2. You must use if-statements.

Submitting this project:

To receive full credit for this assignment, your project must be in the drop box by 9:15 am on the day that it is due. Anything received after that will be considered late. Further, you must bring a **hard copy** of your program to class and place it on the instructor's desk by 9:15 am You must print out the program in color and staple it if necessary. You also must also submit the **design document by Monday at 9:15 am**.

Do not wait until the last minute to print your program!

Remember, this is an individual assignment.

Good luck! And remember, if you have any problems, come and see me straight away.

Also, refer to the syllabus for assignment policies.

START EARLY!!

Good Luck! ☺