EE231002 Introduction to Programming

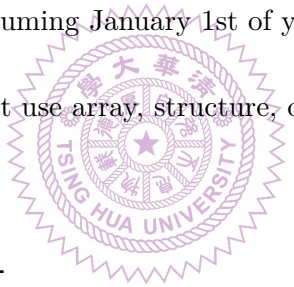
Lab03. Day of Year and Day of Week

Due: Oct. 1, 2019

The most popular calendar of the world currently is the Gregorian Calendar. In this calendar, today is 2019/9/30, the thirtieth day of September of the year 2019. In Gregorian calendar, common years have 365 days but leap years have 366 days. The extra day is February 29. The leap year happens usually every 4 years, except when the year is a multiple of 100. In this case, it is a leap year only if it is also divisible by 400; otherwise it is a common year. For example, year 2000 is a leap year, but year 1900 is not.

In this lab, please write a program to prompt for the Gregorian calendar day, then calculate the following

- the total number of days from January 1st, year 1 to this day,
- the total number of days from January 1st of the year to the day, and
- the day of the week of this day (assuming January 1st of year 1 is a Monday).



In writing the program please do not use array, structure, or other data types we have not covered in the class.

Example of Program execution:

```
$ ./a.out
Enter a date (y/m/d): 2019/09/30
Total Gregorian Calendar days: xxxxxx
Day of year: xxx
Day of week: Monday
```

`xxxxxx` should be an integer for you to find out. Day of week should print out the names such as `Sunday`, `Monday`, etc. You should also try out more cases to ensure your program is function correctly. For example, your can find out the day of week of your birthday.

Notes.

1. Create a directory `lab03` and use it as the working director.
2. Name your program source file as `lab03.c`.

3. The first few lines of your program should be comments as the following

```
// EE231002 Lab03. Day of the Year and Day of the week
//  ID, Name
//  Date:
```

4. After finishing editing your source file, you can execute the following command to compile it,

   ```
   $ gcc lab03.c
   ```

   If no compilation errors, the executable file, **a.out**, should be generated, and you can execute it by typing

   ```
   $ ./aout
   ```

5. After you finish verifying your program, you can submit your source code by

   ```
   $ ~ee2310/bin/submit lab03 lab03.c
   ```

   If you see a "submitted" message, the you are done. In case you want to check which file and at what time you submitted your labs, you can type in the following command:

   ```
   $ ~ee2310/bin/subrec lab03
   ```

   It will show the last few submission records.