

Homework 3

Assigned: Tuesday, Jun 24, 2008

Due: 10:59PM, Thursday, Jun 26, 2008

Points: 100

[Instruction]

- To add the Header with pledge, follow the instructions in the web page: <http://www.cs.unc.edu/~zlj/comp110/assignments.html>
- This is a programming assignment. You need to turn in your program using Blackboard by 10:59PM, this Thursday. You also need to demonstrate the program to the instructor. There are two timing slots for demonstration:
 - This Thursday 1PM-3PM (before due time, but you can get feedback on your assignment before the quiz)
 - This Friday 11:00AM-11:30AM (after quiz)

On what day of the week will be Jun 24, 2058?

Write a program that takes a date as input and prints the day of the week that date falls on. For example, on what day of the week will be 24 Jun 2058 (fifty year later)?

- Prompts the user to input three integers for the month (using 1 for January, 2 for February and so forth), day (1-31) and year (0-10000)
- Calculate the day of the week
- For output print 0 for Sunday, 1 for Monday, 2 for Tuesday, and so forth
- Test your program extensively (Jun 24, 2008 is 2 (Tuesday); George Washington was born on April 30, 1789 and it was Thursday).

Using the following rule the day on which a particular date falls (for the Gregorian calendar we are following)

$$\begin{aligned}a &= \frac{14 - \text{month}}{12} \\y &= \text{year} - a \\m &= \text{month} + 12a - 2\end{aligned}$$

For Gregorian calendar: $d = \left(\text{day} + y + \frac{y}{4} - \frac{y}{100} + \frac{y}{400} + \frac{31m}{12} \right) \bmod 7$

The value of d is 0 for a Sunday, 1 for a Monday, 2 for a Tuesday, etc.

