Assignment 4

Write a program that performs the following tasks:
1) Read in a month and determine the number of days in the month. If the month is February, prompt the user for a year and determine if the year is a leap year to output the correct number of days. (A leap year is divisible by four, except for years with are multiples of 100, which are only leap years if they are also divisible by 400). Your program should accept the month as a 1 or 2 digit number, a three letter abbreviation for the month, or a full month.

2) Given someone's brithday in the form mm/dd, m/dd, mm/d or m/d generates their sign and random advice (from atleast four possibilities).

3) Write a compatibility test for an online dating service.
   a. Have the two people enter their names.
   b. Calculate points as follows:
      i. If the two names are the same, they get -1 points and you do not have to check anymore

      ii. If the names of the same length add 2 points
          if the length of one name is 1 more than the other add one point

      iii. If the first letters are the same add 1 point

      iv. If the last letters are the same add 1 point

      v. If the last letter of one name is the same as the first letter of the other add 1 point. (do the same for both names)

      vi. Add the int values of the first letter of each name. take the value mod 3 and add it to the total.

      vii. Add the int values of the second letter of each name. take the value mod 4 and add it to the total.

   c. You should have anywhere from -1 to 11 points. Print off the points and a snarky comment appropriate for each one. Be sure to include their names in the message. Use this list to determine which comment to display:
      i. 11 points → comment 1
      ii. 8 to 10 points → comment 2
      iii. 5 to 7 points → comment 3
      iv. 2 to 4 ponts → comment 4
      v. 0 or 1 points → comment 5
      vi. -1 points → comment 6

   Sample test runs on the next two pages

```
C:\Windows\system32\cmd.exe                               ─  □  ✕

Enter a month: JuL
July has 31 days

Please enter your birthday as mm/dd: 1/09
Your sign is Capricorn
Your horoscope says: the answers are not in the stars, but in Java Doc

Enter the name for the first person of the match: Tina

Enter the name for the second person of the match: Tony
Total Points: 4
Tina and Tony are just friends
Press any key to continue . . . _
```

```
C:\Windows\system32\cmd.exe                               ─  □  ✕

Enter a month: FEB

Please enter a 4 digit year:2100
February 2100 has 28 days

Please enter your birthday as mm/dd: 02/02
Your sign is Aquarius
Your horoscope says: you will meet an interesting program today

Enter the name for the first person of the match: Sandy

Enter the name for the second person of the match: Sammy
Total Points: 8
Sandy and Sammy should go out for dinner
Press any key to continue . . .
```

```
Enter a month: February

Please enter a 4 digit year:2000
February 2000 has 29 days

Please enter your birthday as mm/dd: 2/3
Your sign is Aquarius
Your horoscope says: the answers are not in the stars, but in Java Doc

Enter the name for the first person of the match: Anna

Enter the name for the second person of the match: Anton
Total Points: 5
Anna and Anton should go out for coffee
Press any key to continue . . .
```

```
Enter a month: Sept
Sept is not a valid month.

Please enter your birthday as mm/dd: 20/06
20 is an invalid month

Enter the name for the first person of the match: Fred

Enter the name for the second person of the match: Fred
Total Points: -1
That is just weird
Press any key to continue . . . .
```