DWITE Online Computer Programming Contest
January 2005

Problem 4

Zeller's Congruence

Zeller's Congruence determines the day of the week for any date since October 15, 1582 of the Gregorian Calendar. For example, January 21, 2005 is a Friday.

The formula for Zeller's Congruence is:

```
DW =(INT((26 * (M + 1)) / 10) + K + Y + INT(Y / 4) + INT(C / 4) - (2 * C )) MOD 7
IF DW < 0 THEN DW=DW+7
```

where M is the month as you would expect(March = 3, April = 5, May = 5, etc.) EXCEPT January and February are considered the 13th and 14th month of the PREVIOUS year, K is the day of the month, C is the century, Y is the year in the century, and DW is the day of the week (0 = Saturday, 1 = Sunday, 2 = Monday, ... 6 = Friday)

Write a program that determines the day of the week given a date.

The input file (**DATA41.txt** for the first submission and **DATA42.txt** for the second submission) will contain 5 lines of data. Each line will contain a date in the format: MMM DD, YY
where MMM is the month (upper case), DD is the day (one or two digits) 1<=DD<=31and YY is the year (four digits) 1800<=YY<=2600.

The output file (**OUT41.txt** for the first submission and **OUT42.txt** for the second submission) will contain five lines of data. Each line will contain the day of the week, in upper case, for the corresponding line from the input.

Sample Input (3 lines only)	**Sample Output**
JANUARY 21, 2005 DECEMBER 31, 2004 NOVEMBER 22, 1963	FRIDAY FRIDAY FRIDAY