Leap Year

The month of February normally has 28 days. But if it is a leap year, February has 29 days. Write a program that asks the user to enter a year. The program should then display the number of days in February that year. Use the following criteria to identify leap years:

Determine whether the year is divisible by 100.

* If it is, then it is a leap year if and if only it is also divisible by 400. For example, 2000 is a leap year but 2100 is not.
* If the year is not divisible by 100, then it is a leap year if and if only it is divisible by 4. For example, 2008 is a leap year but 2009 is not.

.586

.MODEL FLAT

INCLUDE io.h

.STACK 4096

.DATA

year DWORD ?

prompt BYTE "Enter A Year", 0

string BYTE 40 DUP (?)

resultLbl1 BYTE "leap year.", 0

resultLbl2 BYTE "not a leap year.",0

lmonth DWORD 0

.CODE

\_MainProc PROC

input prompt, string, 40 ; read ASCII characters

atod string ; convert to integer

mov year, eax ; store in memory

mov eax, year

mov ebx, 4

mov edx, 0

div ebx

cmp edx, 0

jne common

mov eax, year

mov ebx, 0

mov ebx, 100

div ebx

cmp edx, 0

jne leap

mov eax, year

mov ebx, 0

mov ebx, 400

div ebx

cmp edx, 0

jne common

leap:

mov eax, 29

dtoa lmonth, eax

output resultLbl1, lmonth

mov eax, 0

ret

common:

mov eax, 28

dtoa lmonth, eax

output resultLbl2, lmonth

mov eax, 0

ret

\_MainProc ENDP

END