

Project# 1 C A L E N D A R

Write a complete program using 80x86 assembly language to display a universal Gregorian calendar.

1.1 SPECIFICATIONS:

1. The program must be developed using MASM programming language.
2. The program is intended to run in DOS environment.
3. The program prompts a user to enter a month and a year and then it displays the Gregorian calendar of that month and year.
4. The program should run like the following example:

Example:

Enter a month (1 – 12): 11

Enter a year (>1580): 2001

November 2001

Sat	Sun	Mon	Tue	Wed	Thu	Fri
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

The Algorithm:

- a. The year X is a leap year (366 days: Feb=29 days) if the year X fulfills $((X \% 4 == 0) \ \&\& \ (X \% 100 != 0)) \ || \ (X \% 400 == 0)$.
- b. January 1st, 1600 is On Saturday.
- c. The calendar has a period of 400 years. It means that the calendar of year X is exactly the same with the calendar of year X+400.

Example:

Q: What day was February 13, 1601?

A: Between January 1st, 1600 and January 1st, 1601 there were 366 days because year 1600 was a leap year. So, January 1st, 1601 was on $(366 \% 7) = 2$ (Monday). Next, Between January 1st 1601 and February 13, 1601 inclusively there were $(31 + 13 - 1) = 43$ days. Thus, February 13, 1601 was on $(2 + 43) \% 7 = 3$ (Tuesday).

1.2 THE GRADING POLICY

1. You have to demonstrate the compilation and linking process to show your program is free of compilation error (5 points).
2. If your program has one or more compilation errors, you are not allowed to earn the following assessments.
3. Fulfillment specifications. (80 points)
4. Report. (5 points)
5. Presentation. (10 points)
6. Submission date: **Saturday, January 3, 2004.**
7. For any reasons, after the above date late submission will not be entertained.