The time function calculates the number of seconds passed since 1970/01/01. It is efficient for memory to record time by an integer values. To show the time in a friendly way for human beings, we can translate the value back to the universal time format. Your goal is to write a program to do such a translation. You have to write a class to store passed seconds since 1970/01/01 as an unsigned long integer value by using its constructor. The class also has to provide a method to print the time in universal time format as follows: MM/DD/YYYY HH:MM:SS

Note that there are 29 days in February in a leap year, and 28 day in a normal year. The leap years occur every four years, do not occur every one hundred years, and do occur every four hundred years.

Requirement: Provide a class to store and print the time. Prepare your class with appropriate constructor and encapsulate the required methods. Separate your program in three files: the class header file (.h), the class source code file (.cpp), and the file containing main function (.cpp).

Prohibited: Use ctime library, and C-style input/output.

Input

Each case contains an integer in a single line. The input ends with -1.

Output

For each case, output the time with the format mentioned above.

Sample Input

```
3359615270
2933630948
21414038
1043013166
-1
```

Sample Output

```
06/17/2076 10:27:50
12/18/2062 01:29:08
09/05/1970 20:20:38
01/19/2003 21:52:46
```