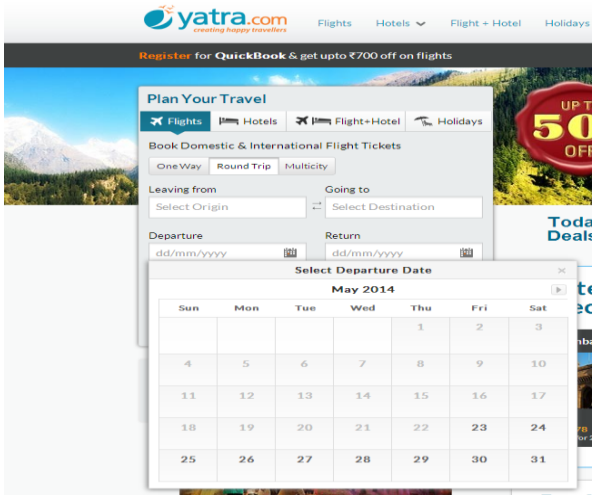


CREATIVE PROBLEM SOLVING

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Date: 17/12/2014



SEPTEMBER 2013						
SUN	MON	TUE	WED	THU	FRI	SAT
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					

CALENDAR GENERATION

CONCEPTS: Loop, Arithmetic, Input/Output

LEVEL: Medium

Every travel site (IRCTC, REDBUS, YATRA) needs to know your date of journey. To make it easy, they need to load a calendar where customers can click a date they are travelling on. You need to generate this calendar for a new travel site that is coming on, we call it "Student Bus".

PROBLEM STATEMENT

You are given a Month (MM) and Year (YYYY) as input. You are supposed to generate the calendar for that month and year combination. Keeping in mind that it can be a leap year too. No need to validate the input parameters.

INPUT

Input contains two Integers separated by space in following format

MM YYYY

OUTPUT

First line contains month name (as string) space year.

Second line contains Initials for days

Next four to five lines contain the dates aligned with days column.

CONSTRAINTS

$1 \leq MM \leq 12$

$1600 \leq YYYY \leq 5000$

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SAMPLE TEST CASES

	Input	Output
Test Case 1	2 2009	February 2009 SUN MON TUE WED THU FRI SAT 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
Test Case 2	7 2014	July 2014 SUN MON TUE WED THU FRI SAT 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 31
Test Case 3	2 2016	February 2016 SUN MON TUE WED THU FRI SAT 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

RELATED PROBLEMS

1. Extend this program to complete a full year calendar by taking just year as input.
2. Use this program to build a horoscope generator, by taking user's date of birth as input.

You can Use Following Snippets

```
/* Returns 0 - SUN, 1 - MON, ... , 6 - SAT */
int determineFirstDayOfYear(int year)
{
    int d1, d2, d3;

    d1 = (year - 1.) / 4.0;
    d2 = (year - 1.) / 100.;
    d3 = (year - 1.) / 400.;

    return (year + d1 - d2 + d3) % 7;
}
```

CREATIVE PROBLEM SOLVING

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```
int daysInMonth[13]= {0,31,28,31,30,31,30,31,31,30,31,30,31};  
char months[13][20]=  
{  
    "",  
    "January",  
    "February",  
    "March",  
    "April",  
    "May",  
    "June",  
    "July",  
    "August",  
    "September",  
    "October",  
    "November",  
    "December"  
};
```