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Python easy understand solution

formatmemory ★ 15 July 24, 2019 1:06 PM 303 VIEWS

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The key is to determin the target year is leap year or not. For those who are not familliar with the concept of leap year: https://en.wikipedia.org/wiki/Leap_year.
So there is one more day in February for leap year.

```
def numberOfDays(self, Y: int, M: int) -> int:
    up = [1,3,5,7,8,10,12]

    if M < 1 or M > 12:
        return 0
    else:
        if M == 2:
            return 29 if self.is_leap_year(Y) else 28
        else:
            return 31 if M in up else 30

def is_leap_year(self, y):
    """
    Leap Year:
        1.The year can be evenly divided by 4;
        2.If the year can be evenly divided by 100, it is NOT a leap year, unless;
        3.The year is also evenly divisible by 400. Then it is a leap year.
    """
    if y%4:
        return False
    elif y%100 != 0:
        return True
    elif y%400 != 0:
        return False
    else:
        return True
```

Analysis:
time: O(1), space: O(1)

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Post

JummyEgg ★ 151 February 6, 2020 10:52 AM

for the leap year, the following code is clear, concise and good to remember:

```
leap_year = (Y % 400 == 0) or (Y % 4 == 0 and Y % 100)
```

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