





### Dodatko Alexander November 2012





## How many moths does the year consist of?



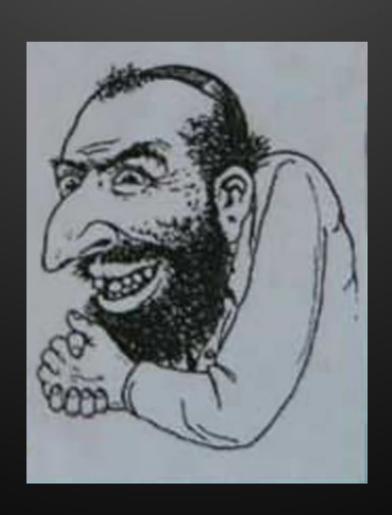
## What is the first day of the year?



## Which day is the beginning of the week?

Right, but did you know that ...

## Jewish calendar consists of 13 months. And month #6 is a leaping one.



# In Japan the calendar may return to year #1 at the day of the emperor's death



### In Russia week starts on Monday.

In the USA the first day is Sunday



## Dates must look in the way the user expects











### The Typical Solution



```
-(NSDate*)parseDate:( NSString* )date_
 NSDateFormatter* df_ = [ NSDateFormatter new ];
 df_.dateFormat = @"yyyy-MM-dd";
 return [ df_ dateFromString: date_ ];
```

### WRONG!



```
-(NSDate*)parseDate:( NSString* )data_

{

    NSDateFormatter* df_ = [NSDateFormatter new ];

    df_.dateFormat - @"yyyy-MM-dd";
```

return [ df\_ dateFromString: date\_};

## NSDateFormatter NSCalendar **NSLocale NSLocale**



## Use en US POSIX locale for dates from the network

Use Gregorian calendar too



# Do not forget to set the same Locale for both NSCalendar and NSDateFormatter

### Or let my library do it for you



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SELECT SUM( Visits)
FROM VisitsLog
WHERE Date BETWEEN
x AND y
GROUP BY week



### What should I take as week?



SELECT SUM( Visits)
FROM VisitsLog
WHERE Date BETWEEN x AND y
GROUP BY

Strftime('%Y-%W', Date)



SELECT SUM( Visits)
FROM VisitsLog
WHERE Date BETWEEN x AND y
GROUP BY

Stritime('%Y-%W', Date)

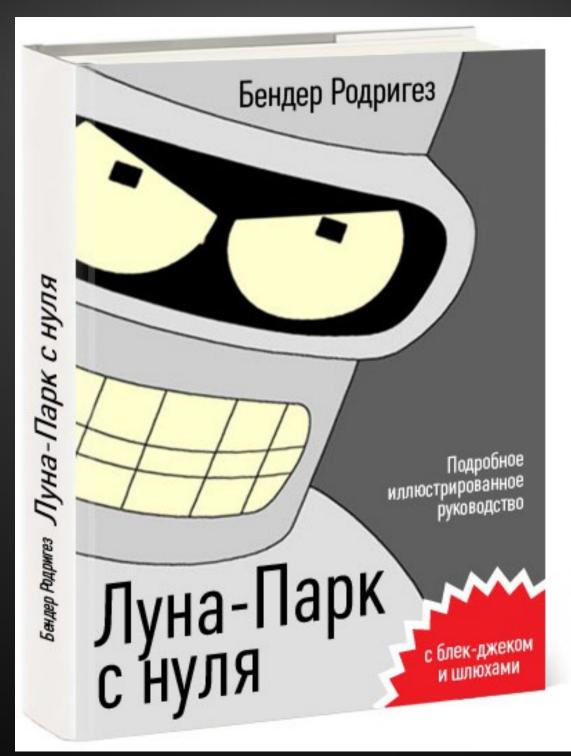






SELECT SUM( Visits)
FROM VisitsLog
WHERE Date BETWEEN x AND y
GROUP BY

```
ObjcFormatDate('YYYY-ww', Date, 'en_US_POSIX')
```



```
int sqlite3 create function(
   dbHandle,
   "ObjcFormatDate",
   3, //int nArg,
   SQLITE UTF8,
   NULL, // sqlite user data
void (*xFunc)
(sqlite3_context*,int,sqlite3_value**),
 NULL, NULL // for aggregates
```



### Plan of attack

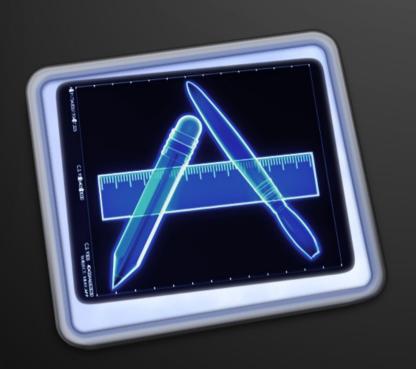
Convert C strings to NSString

Convert date string to NSDate

Format NSDate using locale

## NSDateFormatter NSCalendar **NSLocale NSLocale**

### One More Thing





### 1000 times slower than strftime



10K records

Creating NSDateFormatter on-the-fly



### Same speed as strftime

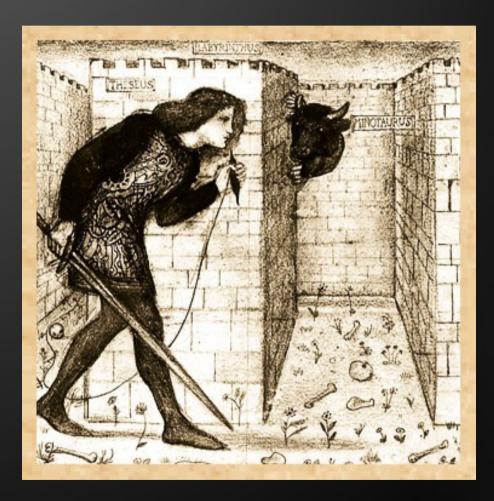
Singletone NSDateFormatter



Same 10K records

### Thread Safety





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#### Contacts



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