

# EP06 – Working with Date in SQLite

Data Science Bootcamp / SQL for Data Analysis 101



คำอธิบาย :

- STRFTIME (สตริฟไทม์) เป็น function specific เฉพาะ SQLite

ในกรณีนี้จะเป็นที่ดึงข้อมูลเฉพาะในส่วนของ Year ออกมาเป็นอีก 1 คอลัมน์หนึ่ง

DB Browser for SQLite - C:\Users\LENOVO\Desktop\chinese.db

File Edit View Tools Help

New Database Open Database Write Changes Revert Changes Open Project Save Project Attach Database Close Database

Database Structure Browse Data Edit Pragma Execute SQL

SQL 1

```
1 SELECT
2   invoicedate,
3   STRFTIME('%Y', invoicedate) AS year,
4   STRFTIME('%m', invoicedate) AS month,
5   STRFTIME('%d', invoicedate) AS day,
6   STRFTIME('%Y-%m', invoicedate) AS monthid
7 FROM invoices;
```

	invoicedate	year	month	day	monthid
1	2009-01-01 00:00:00	2009	01	01	2009-01
2	2009-01-02 00:00:00	2009	01	02	2009-01
3	2009-01-03 00:00:00	2009	01	03	2009-01
4	2009-01-06 00:00:00	2009	01	06	2009-01
5	2009-01-11 00:00:00	2009	01	11	2009-01
6	2009-01-19 00:00:00	2009	01	19	2009-01
7	2009-02-01 00:00:00	2009	02	01	2009-02
8	2009-02-01 00:00:00	2009	02	01	2009-02
9	2009-02-02 00:00:00	2009	02	02	2009-02
10	2009-02-03 00:00:00	2009	02	03	2009-02
11	2009-02-06 00:00:00	2009	02	06	2009-02
12	2009-02-11 00:00:00	2009	02	11	2009-02
13	2009-02-19 00:00:00	2009	02	19	2009-02
14	2009-03-04 00:00:00	2009	03	04	2009-03
15	2009-03-04 00:00:00	2009	03	04	2009-03
16	2009-03-05 00:00:00	2009	03	05	2009-03

Execution finished without errors.  
Result: 432 rows returned in 3ms  
At time 1:  
SELECT  
invoicedate,  
STRFTIME('%Y', invoicedate) AS year,  
STRFTIME('%m', invoicedate) AS month,  
STRFTIME('%d', invoicedate) AS day,  
STRFTIME('%Y-%m', invoicedate) AS monthid

DB Schema

Name	Type	Schema
Tables (12)		
albums	CREATE TABLE "albums" ([Albumid] INTEGER IN	
artists	CREATE TABLE "artists" ([Artistid] INTEGER IN	
customers	CREATE TABLE "customers" ([Customerid] IN	
employees	CREATE TABLE "employees" ([Employeeid] IN	
genres	CREATE TABLE "genres" ([Genreid] INTEGER IN	
invoice_items	CREATE TABLE "invoice_items" ([InvoiceLine	
invoices	CREATE TABLE "invoices" ([Invoiceid] INTEGER	
media_types	CREATE TABLE "media_types" ([MediaTypeId]	
playlist_track	CREATE TABLE "playlist_track" ([Playlistid] IN	
playlists	CREATE TABLE "playlists" ([Playlistid] INTEGE	
sqlite_sequence	CREATE TABLE "sqlite_sequence" (name, seq)	
sqlite_stat1	CREATE TABLE "sqlite_stat1" (tbl, col, stat)	
tracks	CREATE TABLE "tracks" ([Trackid] INTEGER IN	
Indexes (10)		
PK_AlbumArtistid	CREATE INDEX [PK_AlbumArtistid] ON "album	
PK_CustomerSupportRepId	CREATE INDEX [PK_CustomerSupportRepId] ON	
PK_EmployeeReportsTo	CREATE INDEX [PK_EmployeeReportsTo] ON	
PK_InvoiceCustomerId	CREATE INDEX [PK_InvoiceCustomerId] ON "	
PK_InvoiceLineInvoiceId	CREATE INDEX [PK_InvoiceLineInvoiceId] ON	
PK_InvoiceLineTrackId	CREATE INDEX [PK_InvoiceLineTrackId] ON "	
PK_PlaylistTrackTrackId	CREATE INDEX [PK_PlaylistTrackTrackId] ON "	
PK_TrackAlbumId	CREATE INDEX [PK_TrackAlbumId] ON "track	
PK_TrackGenreId	CREATE INDEX [PK_TrackGenreId] ON "tracks	
PK_TrackMediaTypeId	CREATE INDEX [PK_TrackMediaTypeId] ON "	
Views (0)		
Triggers (0)		

03:21

หากอยากได้ resource set ออกมาเป็นปี 2010 เท่านั้น ทำแบบนี้

หรืออีกวิธีหนึ่ง อาจใช้ function cast ในการเปลี่ยน datatype

ทำได้โดยการ wrap ตามด้านล่าง

(ก็จะไม่ต้องใส่ Single code @2010 แล้ว)

(cast ตัวที่ถูก wrap ให้กลายเป็น integer)

The screenshot shows the DB Browser for SQLite interface. The SQL editor contains the following query:

```
SELECT
  invoicedate,
  STRFTIME('%Y', invoicedate) AS year,
  STRFTIME('%m', invoicedate) AS month,
  STRFTIME('%d', invoicedate) AS day,
  STRFTIME('%Y-%m', invoicedate) AS monthid
FROM invoices
WHERE year = '2010';
```

The results pane displays a table with 5 columns: InvoiceDate, year, month, day, and monthid. It shows 13 rows of data for the year 2010. Below the results, a message states: "Execution finished without errors. Result: 13 rows returned in 0ms. At Time 1:1 SELECT".

หากไม่ใส่ Single code จะรันได้ แต่จะไม่มี Result ออก

The screenshot shows the DB Browser for SQLite interface. The SQL editor contains the following query:

```
SELECT
  InvoiceDate,
  cast(strftime('%Y',invoicedate) As INT) AS Year,
  strftime('%m',invoicedate) AS Month,
  strftime('%d',invoicedate) AS Day,
  strftime('%Y-%m',invoicedate) AS MonthID
FROM invoices
WHERE year = 2010;
```

The results pane displays a table with 5 columns: InvoiceDate, Year, Month, Day, and MonthID. It shows 6 rows of data for the year 2010. Below the results, a message states: "Execution finished without errors.".