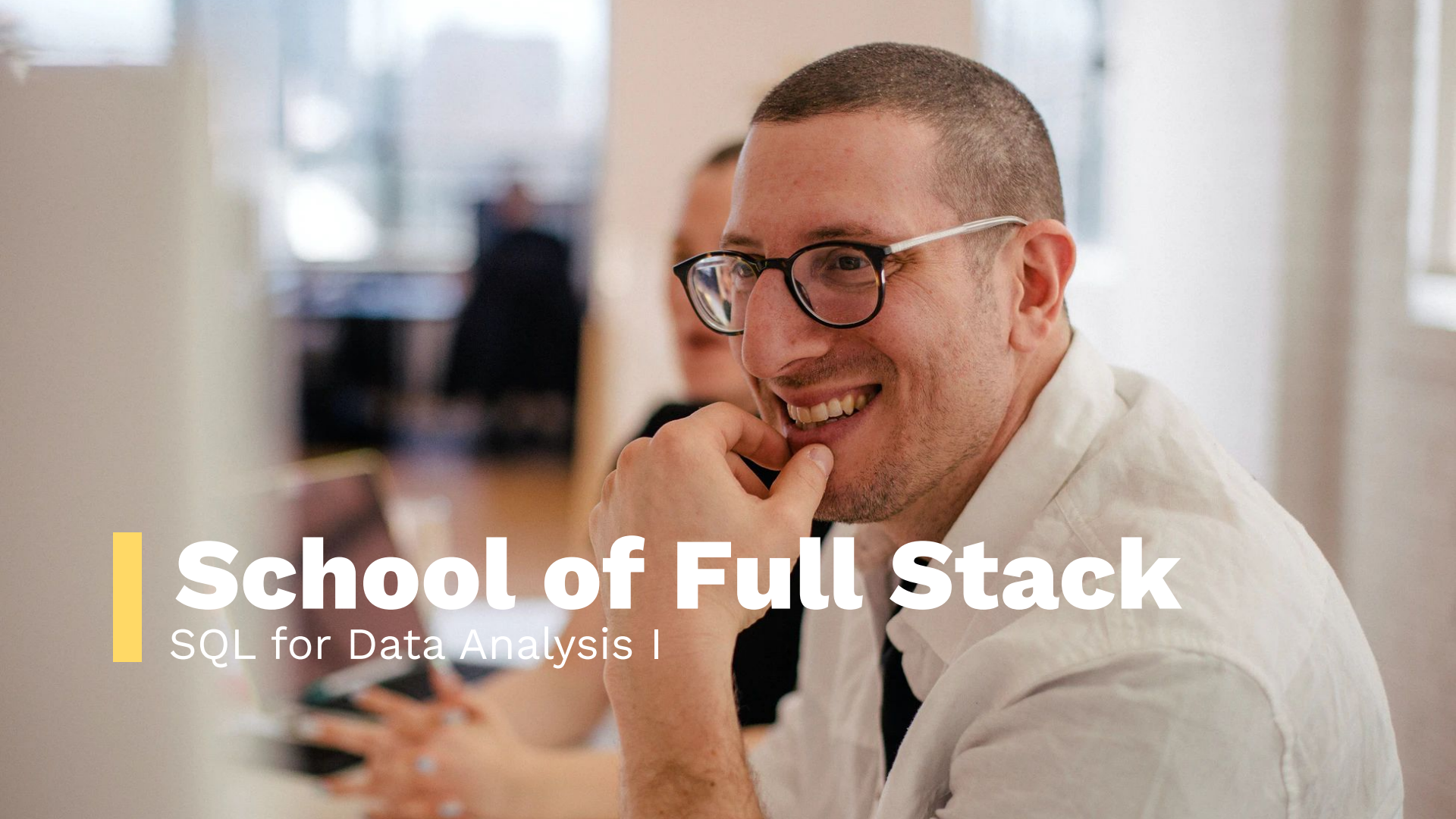
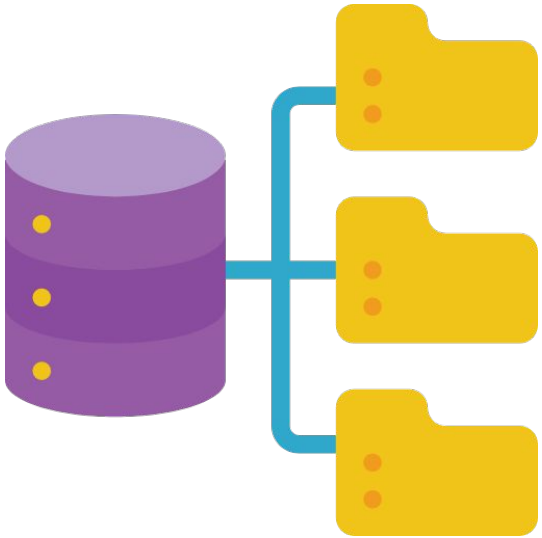

School of Full Stack
SQL for Data Analysis I

Contents

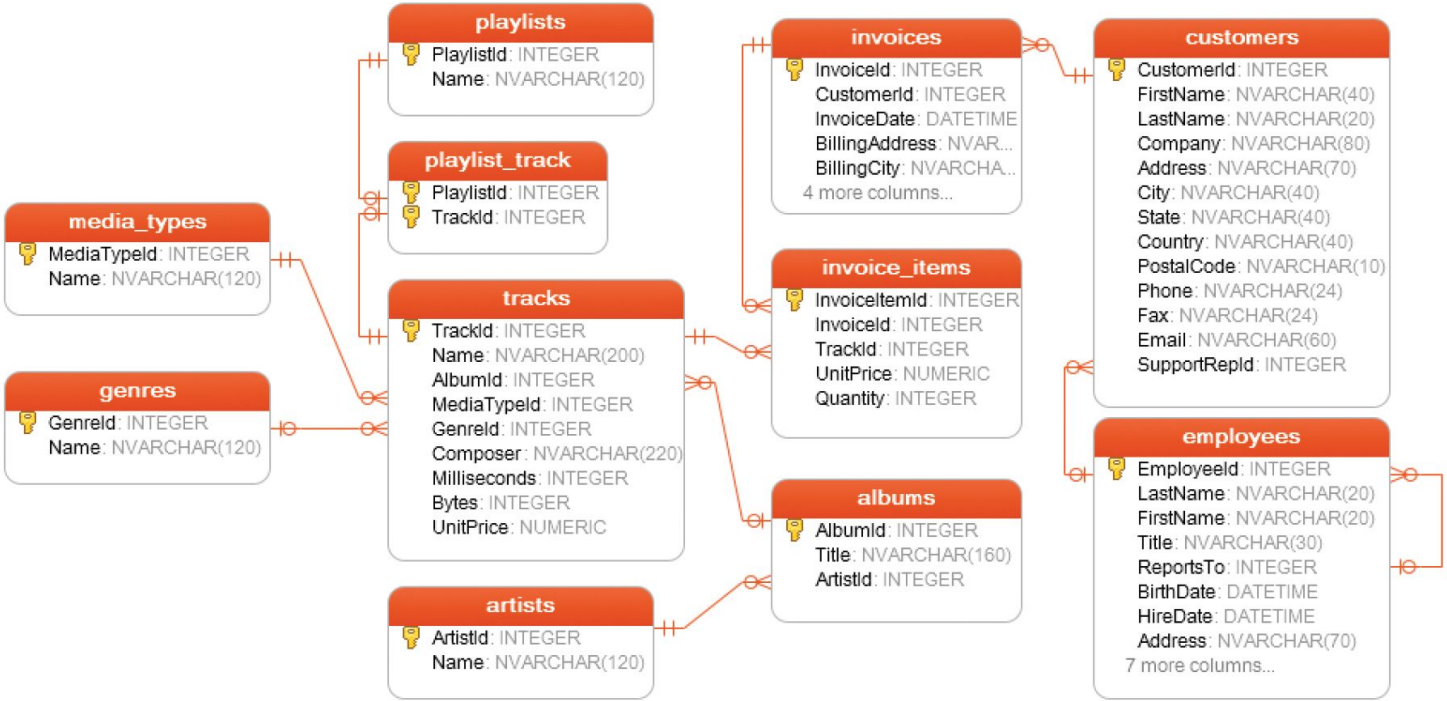
Database and Tables



Databases consist of many tables

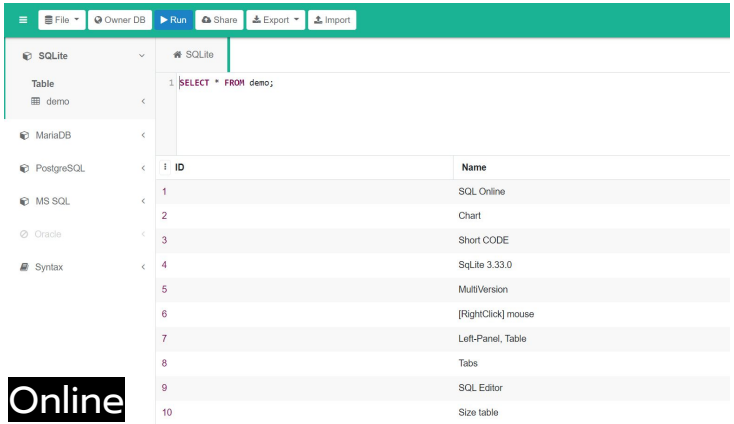
ID	Name	Department	Position	Salary
001	David	IT	Outsource	10000
002	Anna	Marketing	Manager	25000
003	John	Marketing	Manager	30000
004	Harry	CEO Office	CEO	65000

ER Diagram


playlists
PlaylistId: INTEGER
Name: NVARCHAR(120)
playlist_track
PlaylistId: INTEGER
TrackId: INTEGER
media_types
MediaTypeId: INTEGER
Name: NVARCHAR(120)
genres
GenreId: INTEGER
Name: NVARCHAR(120)
tracks
TrackId: INTEGER
Name: NVARCHAR(200)
AlbumId: INTEGER
MediaTypeId: INTEGER
GenreId: INTEGER
Composer: NVARCHAR(220)
Milliseconds: INTEGER
Bytes: INTEGER
UnitPrice: NUMERIC
artists
ArtistId: INTEGER
Name: NVARCHAR(120)
invoices
InvoiceId: INTEGER
CustomerId: INTEGER
InvoiceDate: DATETIME
BillingAddress: NVAR...
BillingCity: NVARCHA...
4 more columns...
invoice_items
InvoiceItemId: INTEGER
InvoiceId: INTEGER
TrackId: INTEGER
UnitPrice: NUMERIC
Quantity: INTEGER
albums
AlbumId: INTEGER
Title: NVARCHAR(160)
ArtistId: INTEGER
customers
CustomerId: INTEGER
FirstName: NVARCHAR(40)
LastName: NVARCHAR(20)
Company: NVARCHAR(80)
Address: NVARCHAR(70)
City: NVARCHAR(40)
State: NVARCHAR(40)
Country: NVARCHAR(40)
PostalCode: NVARCHAR(10)
Phone: NVARCHAR(24)
Fax: NVARCHAR(24)
Email: NVARCHAR(60)
SupportRepId: INTEGER
employees
EmployeeId: INTEGER
LastName: NVARCHAR(20)
FirstName: NVARCHAR(20)
Title: NVARCHAR(30)
ReportsTo: INTEGER
BirthDate: DATETIME
HireDate: DATETIME
Address: NVARCHAR(70)
7 more columns...

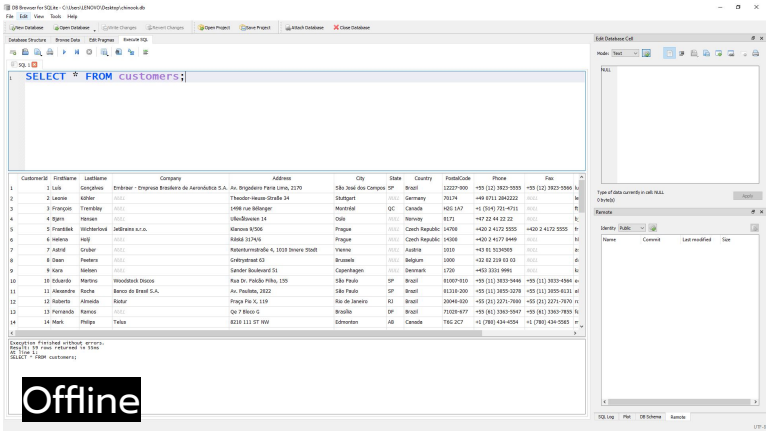
Online vs. Offline Editor

จะใช้ online หรือ offline editor ก็ได้สำหรับการเรียนคอร์สนี้



Online

https://sqliteonline.com/



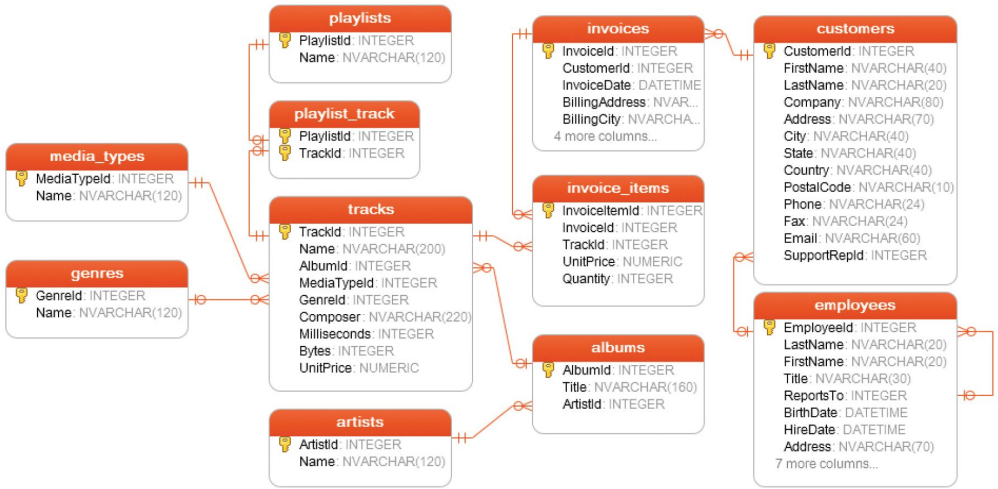
Offline

https://sqlitebrowser.org/

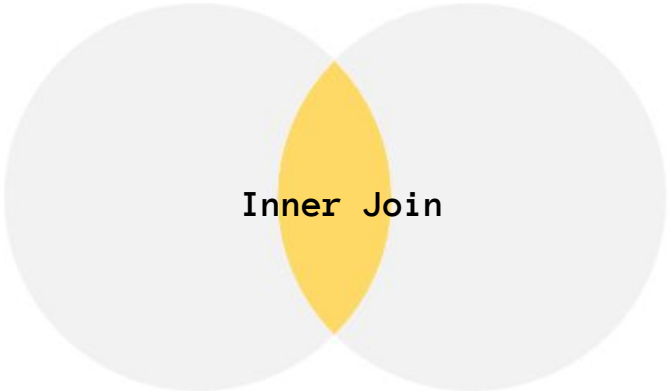
Join Syntax

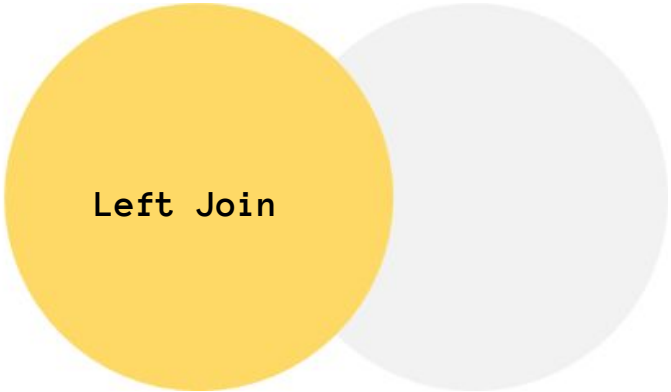
```
SELECT
     A.artistid,
     A.name,
     B.title
FROM artists AS A
JOIN albums  AS B
ON A.artistid = B.artistid;
```

Primary Key = Foreign Key

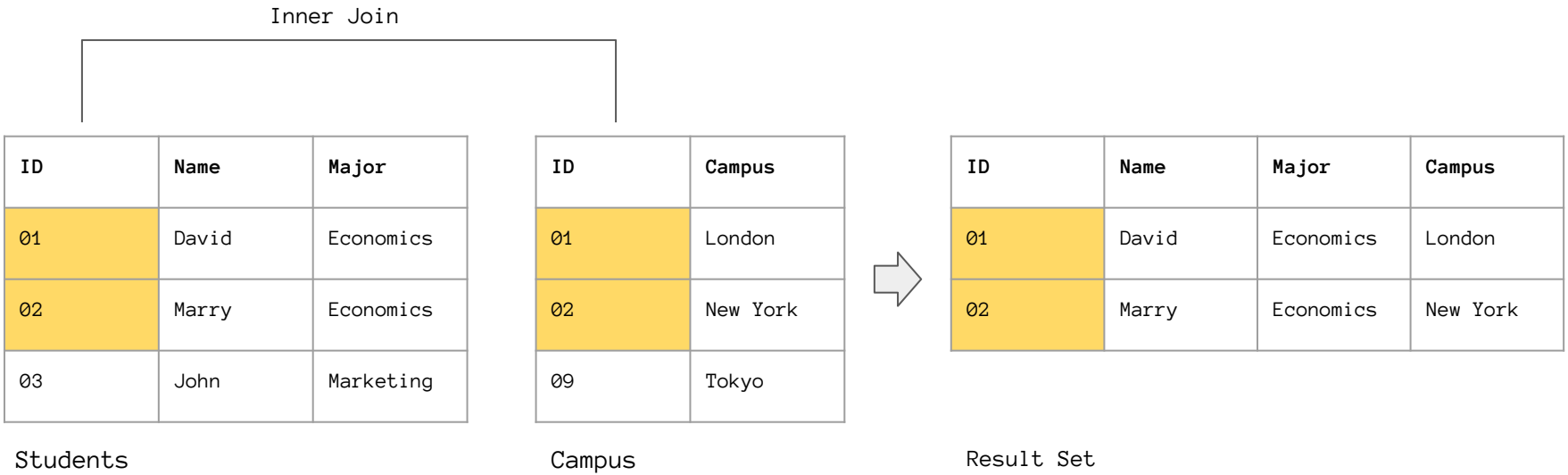


Inner vs. Left Join

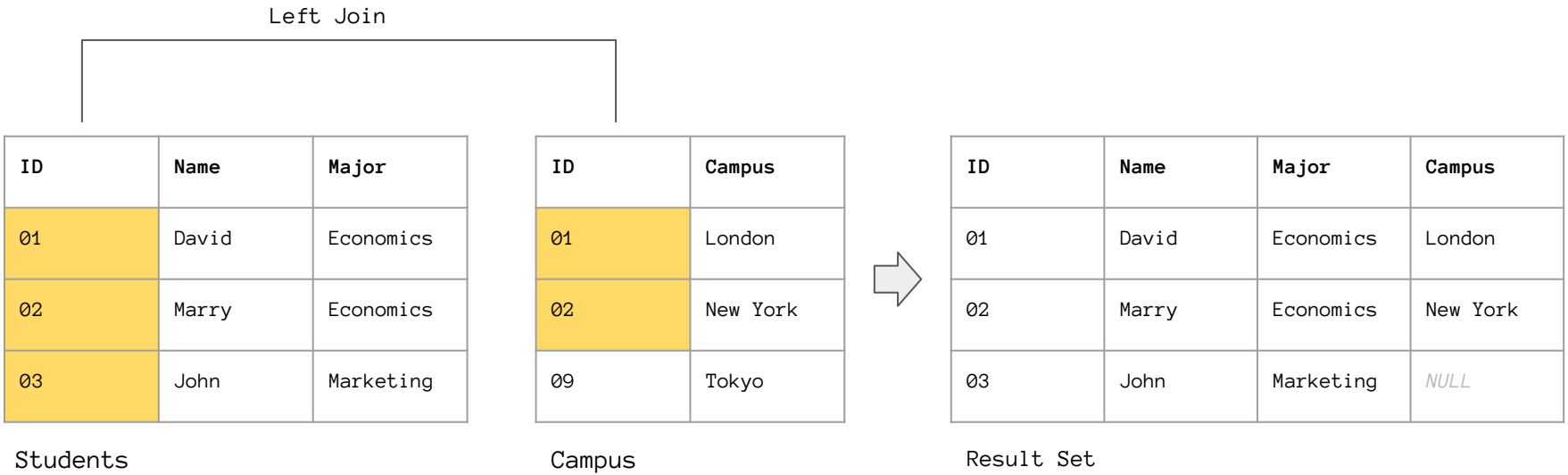




Inner Join Illustration



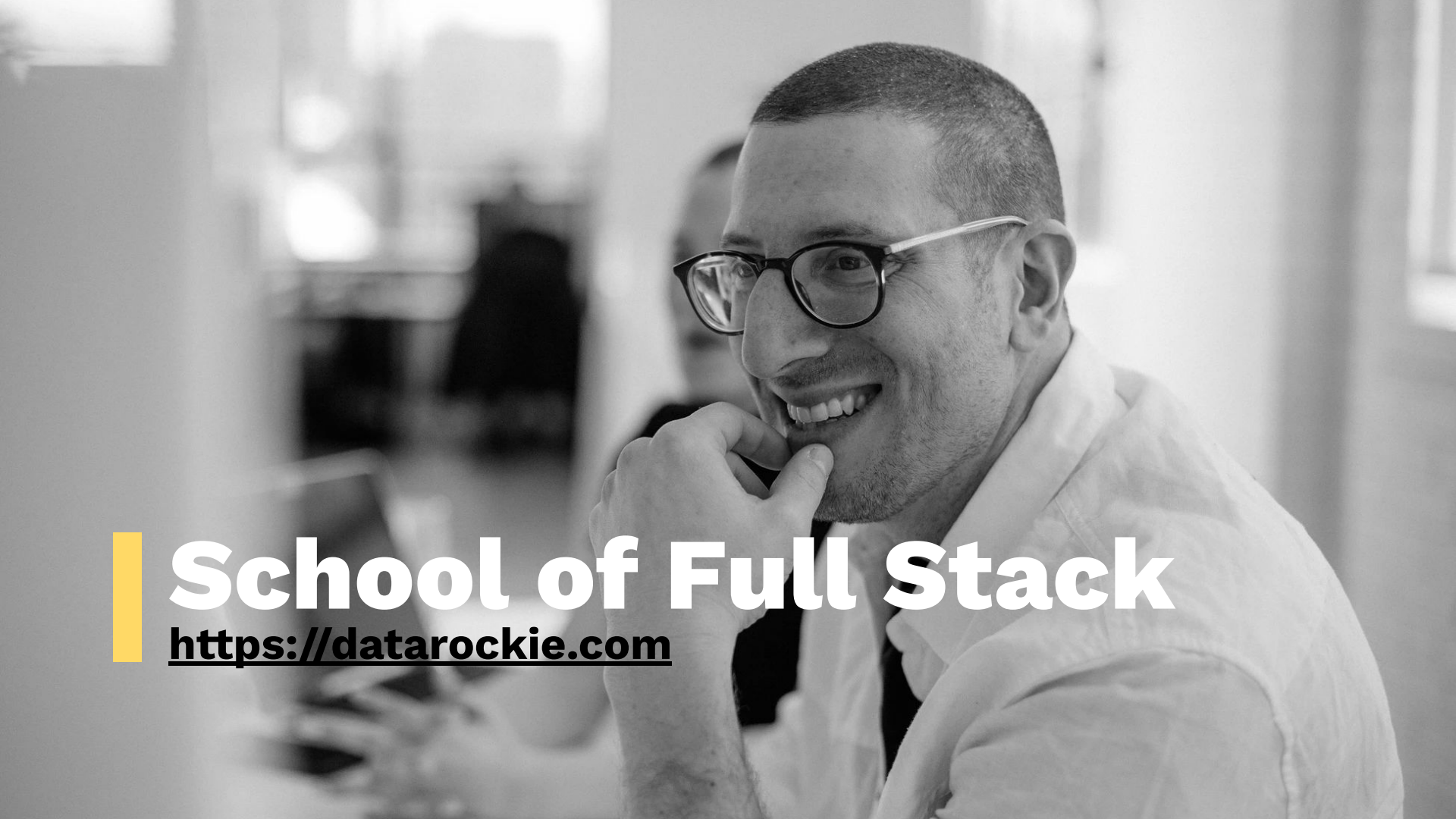
Left Join Illustration



Inner vs. Left Join Syntax

```
SELECT
    A.artistid,
    A.name,
    B.title
FROM artists AS A
INNER JOIN albums  AS B
ON A.artistid = B.artistid;
```

```
SELECT
    A.artistid,
    A.name,
    B.title
FROM artists AS A
LEFT JOIN albums  AS B
ON A.artistid = B.artistid;
```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https://datarockie.com