

Building and Organizing Complex Queries: Takeaways



by Dataquest Labs, Inc. - All rights reserved © 2019

Syntax

- Using the WITH clause:

```
WITH track_info AS
(
  SELECT
    t.name,
    ar.name artist,
    al.title album_name,
  FROM track t
  INNER JOIN album al ON al.album_id = t.album_id
  INNER JOIN artist ar ON ar.artist_id = al.artist_id
)
SELECT * FROM track_info
WHERE album_name = "Jagged Little Pill";
```

- Creating a view:

```
CREATE VIEW chinook.customer_2 AS
SELECT * FROM chinook.customer;
```

- Dropping a view

```
DROP VIEW chinook.customer_2;
```

- Selecting rows that occur in one or more SELECT statements:

```
[select_statement_one]
UNION
[select_statement_two];
```

- Selecting rows that occur in both SELECT statements:

```
SELECT * from customer_usa  
  
INTERSECT  
  
SELECT * from customer_gt_90_dollars;
```

- Selecting rows that occur in the first SELECT statement but not the second SELECT statement:

```
SELECT * from customer_usa  
  
EXCEPT  
  
SELECT * from customer_gt_90_dollars;
```

- Chaining WITH statements:

```
WITH  
  
usa AS  
  
    (  
  
        SELECT * FROM customer  
  
        WHERE country = "USA"  
  
    ),  
  
last_name_g AS  
  
    (  
  
        SELECT * FROM usa  
  
        WHERE last_name LIKE "G%"  
  
    ),  
  
state_ca AS  
  
    (  
  
        SELECT * FROM last_name_g  
  
        WHERE state = "CA"  
  
    )  
  
SELECT  
  
    first_name,  
  
    last_name,  
  
    country,  
  
    state  
  
FROM state_ca
```

Concepts

- A few tips to help make your queries more readable:
 - If a select statement has more than one column: put each selected column on a new line, indented from the select statement.
 - Always capitalize SQL function names and keywords.
 - Put each clause of your query on a new line.
 - Use indenting to make subqueries appear logically separate.
- A **WITH** statement helps a lot when your main query has some slight complexities.
- A view is a permanently defined **WITH** statement that you can use in all future queries.
- Redefining a view requires having to delete or drop the existing view.
- Statements before and after **UNION** clause must have the same number of columns, as well as compatible data types.
- Comparison of **UNION** , **INTERSECT** , and **EXCEPT** :

Operator	What it Does	Python Equivalent
UNION	Selects rows that occur in either statement.	or
INTERSECT	Selects rows that occur in both statements.	and
EXCEPT	Selects rows that occur in the first statement, but don't occur in the second statement.	and not

Resources

- [SQL Style Guide](#)
- [Set Operations](#)

