WOMEN WHO CODE®
/data-science

SQL Coding Series

WEBINAR SERIES

SESSION 3

Intermediate - Part I

| FRIDAY, JAN 27

| 10 PM ET

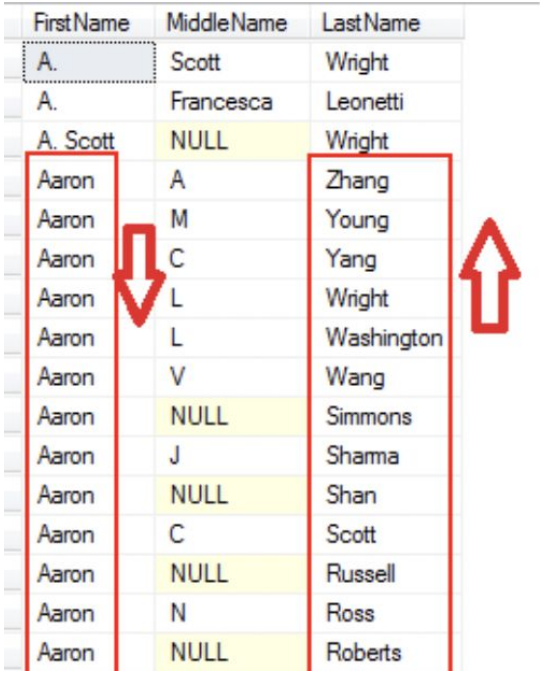
Astha Puri

Senior Data Scientist @ Twilio

womenwhocode.com/datascience/events

SESSION 2 REVIEW

ORDER BY



FirstName	MiddleName	LastName
A.	Scott	Wright
A.	Francesca	Leonetti
A. Scott	NULL	Wright
Aaron	A	Zhang
Aaron	M	Young
Aaron	C	Yang
Aaron	L	Wright
Aaron	L	Washington
Aaron	V	Wang
Aaron	NULL	Simmons
Aaron	J	Sharma
Aaron	NULL	Shan
Aaron	C	Scott
Aaron	NULL	Russell
Aaron	N	Ross
Aaron	NULL	Roberts

We can user ORDER BY clause to order any column or multiple columns:

- Default is ascending
- DESC can be added to the query to order in descending
- Multiple columns can be ordered together

COUNT vs COUNT DISTINCT

CAT
DOG
DOG
MOUSE

COUNT = 4
COUNT DISTINCT = 3

SUM, AVG

Table: Orders

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

What is the total amount of sales done?

```
SELECT SUM(amount) AS total_sales
FROM Orders;
```

total_sales
13350

SUM, AVG

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

What is the average age of our customers?

```
SELECT AVG(age) AS average_age
FROM Customers;
```

average_age
25.6

MIN, MAX

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

What is the age of our youngest customers?

MIN, MAX

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

What is the age of our oldest customer?

GROUP BY

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

How many customers do we have from each country?

```
SELECT country, COUNT(*) AS number
FROM Customers
GROUP BY country;
```

country	number
UAE	1
UK	2
USA	2

GROUP BY

Table: Orders

order_id	item	amount	customer_id
1	Keyboard	400	4
2	Mouse	300	4
3	Monitor	12000	3
4	Keyboard	400	1
5	Mousepad	250	2

How much amount has each customer spent?

```
SELECT customer_id, SUM(amount) AS total
FROM Orders
GROUP BY customer_id;
```

customer_id	total
1	400
2	250
3	12000
4	700

HAVING

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

From which countries do we have more than 1 customer?

```
SELECT COUNT(customer_id), country
FROM Customers
GROUP BY country
HAVING COUNT(customer_id) > 1;
```

COUNT(customer_id)	country
2	UK
2	USA

CASE STATEMENTS

Table: Customers

customer_id	first_name	last_name	age	country
1	John	Doe	31	USA
2	Robert	Luna	22	USA
3	David	Robinson	22	UK
4	John	Reinhardt	25	UK
5	Betty	Doe	28	UAE

I want USA and UK to be displayed by their full name.

```
SELECT customer_id, first_name
CASE
   WHEN country = 'USA' THEN 'United States of America'
   WHEN country = 'UK' THEN 'United Kingdom'
   ELSE 'Unknown Country'
END AS country_name
FROM Customers;
```

customer_id	first_name	country_name
1	John	United States of America
2	Robert	United States of America
3	David	United Kingdom
4	John	United Kingdom
5	Betty	Unknown Country

Join us on Slack to ask questions and keep the discussion going!

Use the channel:

#sql-coding-series

Code with SQL

https://www.sql-practice.com/

Thank you!

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