



# RDB & SQL

## Session 6-7



I've completed the pre-class content?

True

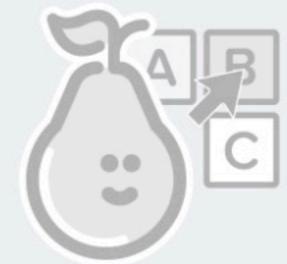


False



Students choose an option

Pear Deck Interactive Slide  
Do not remove this bar



No Multiple Choice Response  
You didn't answer this question

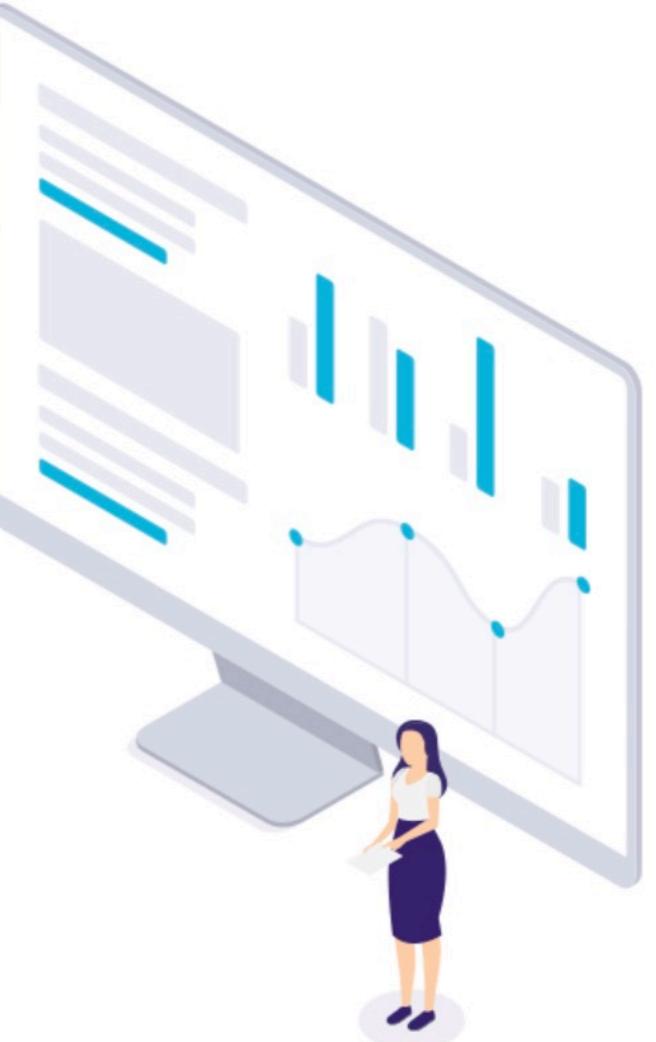


# ► Subqueries & CTE's



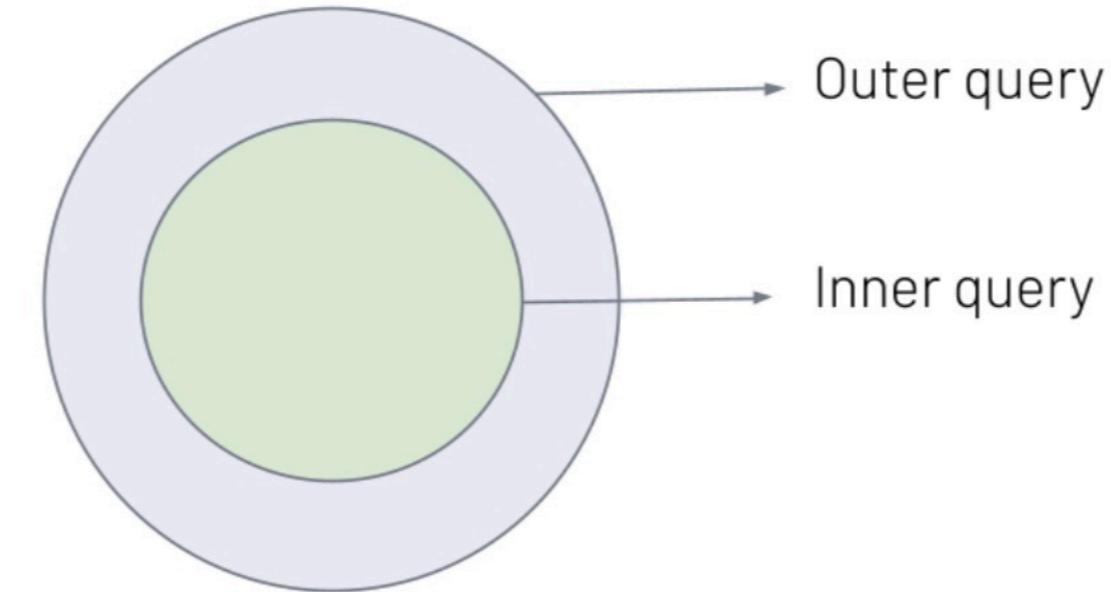


# Subqueries



# ▶ Introduction

A subquery is a **SELECT** statement that is nested within another statement. The subquery is also called the inner query or nested query.



# ► Syntax



```
1  SELECT column_name  
2  FROM table_1, table_2  
3  WHERE column_name OPERATOR ( → Outer query or  
4    SELECT column_name  
5    FROM table_1, table_2) ; → enclosing query  
6  |  
          nested  
          query or  
          subquery
```

- Subqueries are nested queries that provide data to the enclosing query.
- Subqueries can return individual values or a list of records
- Subqueries must be enclosed with parenthesis



A subquery may be used in:

- SELECT clause
- FROM clause
- WHERE clause

# ▶ Introduction



## In SELECT statement

```
SELECT order_id,  
      list_price,  
      (  
          SELECT AVG(list_price)  
          FROM sale.order_item  
      ) AS avg_price  
FROM sale.order_item
```

## In WHERE clause

```
SELECT order_id, order_date  
FROM sale.orders  
WHERE order_date IN (  
    SELECT TOP 5 order_date  
    FROM sale.orders  
    ORDER BY order_date DESC  
);
```

## In FROM clause

```
SELECT order_id, order_date  
FROM (  
    SELECT TOP 5 *  
    FROM sale.orders  
    ORDER BY order_date DESC  
) A;
```



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## Types of Subqueries

# ► Types of Subqueries



There are three main types of subqueries:

- Single-row subqueries
- Multiple-row subqueries
- Correlated subqueries



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# Single-row Subqueries

# ► Single-row Subqueries



Single-row subqueries return one row with only one column and are typically used with single-row operators such as `=`, `>`, `>=`, `<=`, `<>`, `!=` especially in **WHERE** clause.



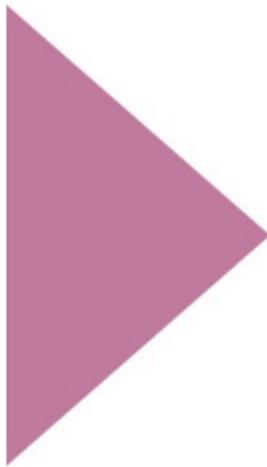
Most queries using a join can be rewritten using a subquery (a query nested within another query), and most subqueries can be rewritten as joins.



# Query Time

**Question:** Write a query that shows all employees in the store where Davis Thomas works.

**Expected Output:**



	staff_id	first_name	last_name	email	phone	active	store_id	manager_id
1	1	James	Garcia	jgarcia@techno.shop	(916) 555-5554	1	1	NULL
2	2	Charles	Cussona	ccussona@techno.shop	(916) 555-5555	1	1	1
3	3	Jhon	Setamento	jsetamento@techno.shop	(916) 555-5556	1	1	2
4	4	Davis	Thomas	dthomas @techno.shop	(916) 555-5557	1	1	2

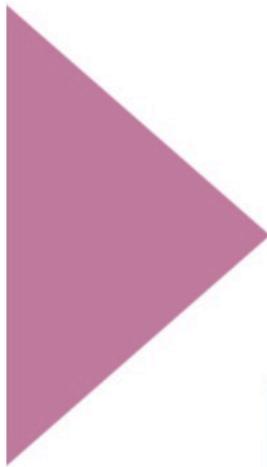
Query executed successfully. | (local) (15.0 RTM) | DESKTOP-3E95HEO\DataSc... | SampleRetail | 00:00:00 | 4 rows



# Query Time

**Question:** Write a query that shows the employees for whom Charles Cussona is a first-degree manager. (To which employees are Charles Cussona a first-degree manager?)

**Expected Output:**



	staff_id	first_name	last_name	email	phone	active	store_id	manager_id
1	3	Jhon	Setamento	jsetamento@techno.shop	(916) 555-5556	1	1	2
2	4	Davis	Thomas	dthomas @techno.shop	(916) 555-5557	1	1	2

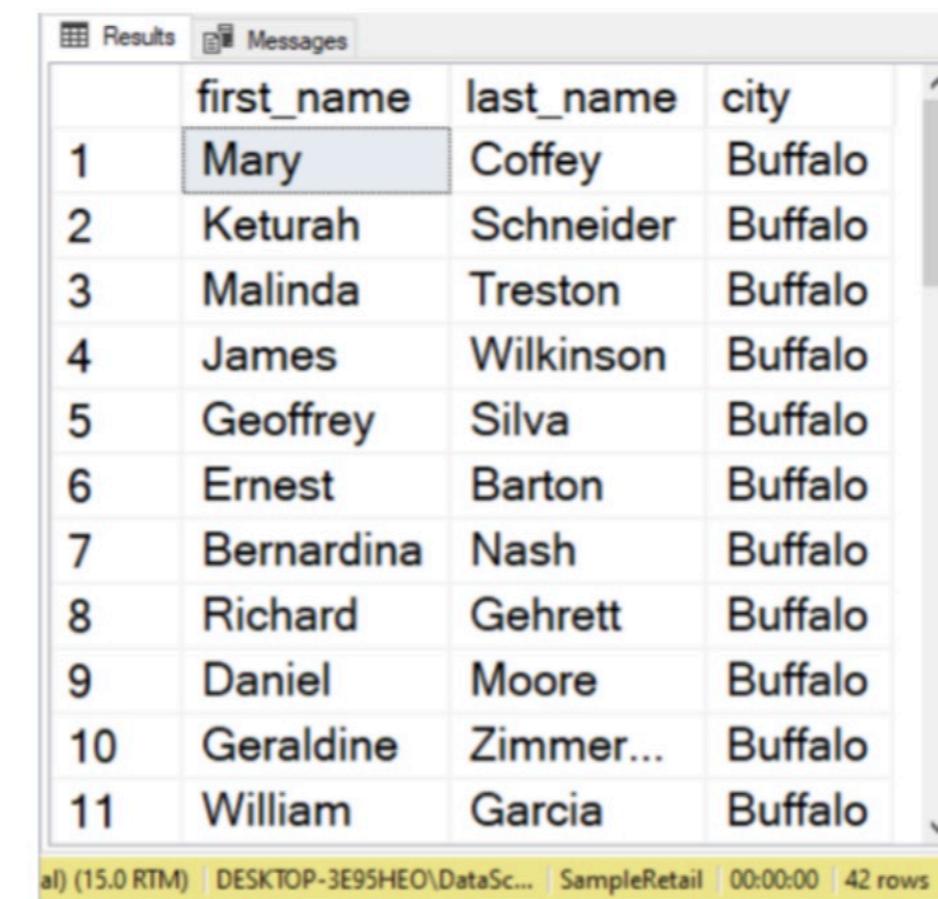
Query executed successfully. | (local) (15.0 RTM) | DESKTOP-3E95HEO\Datas... | SampleRetail | 00:00:00 | 2 rows



# Query Time For You

Question: Write a query that returns the customers located where 'The BFLO Store' is located.

Expected Output:



The screenshot shows a database interface with two tabs at the top: 'Results' and 'Messages'. The 'Results' tab is selected and displays a table with four columns: 'first\_name', 'last\_name', 'city', and a primary key column labeled '1'. The data consists of 11 rows, each representing a customer. The 'first\_name' column contains values like Mary, Keturah, Malinda, James, Geoffrey, Ernest, Bernardino, Richard, Daniel, Geraldine, and William. The 'last\_name' column contains values like Coffey, Schneider, Treston, Wilkinson, Silva, Barton, Nash, Gehrett, Moore, Zimmer..., and Garcia. The 'city' column consistently shows Buffalo. Row 11 is partially cut off at the bottom. At the bottom of the grid, there is a yellow status bar with the text: 'al) (15.0 RTM) | DESKTOP-3E95HEO\DataSc... | SampleRetail | 00:00:00 | 42 rows'.

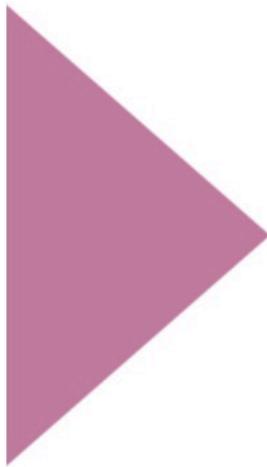
	first_name	last_name	city
1	Mary	Coffey	Buffalo
2	Keturah	Schneider	Buffalo
3	Malinda	Treston	Buffalo
4	James	Wilkinson	Buffalo
5	Geoffrey	Silva	Buffalo
6	Ernest	Barton	Buffalo
7	Bernardina	Nash	Buffalo
8	Richard	Gehrett	Buffalo
9	Daniel	Moore	Buffalo
10	Geraldine	Zimmer...	Buffalo
11	William	Garcia	Buffalo



# Query Time For You

Question: Write a query that returns the list of products that are more expensive than the product named 'Pro-Series 49-Class Full HD Outdoor LED TV (Silver)'

Expected Output:



Results				
	product_id	product_name	model_year	list_price
1	440	Samsung - 88 Class - LED - Q9F Series - 2160p - S...	2020	16999.95
2	494	LG Electronics OLED65E6P Flat 65-Inch 4K Ultra H...	2020	4296.99

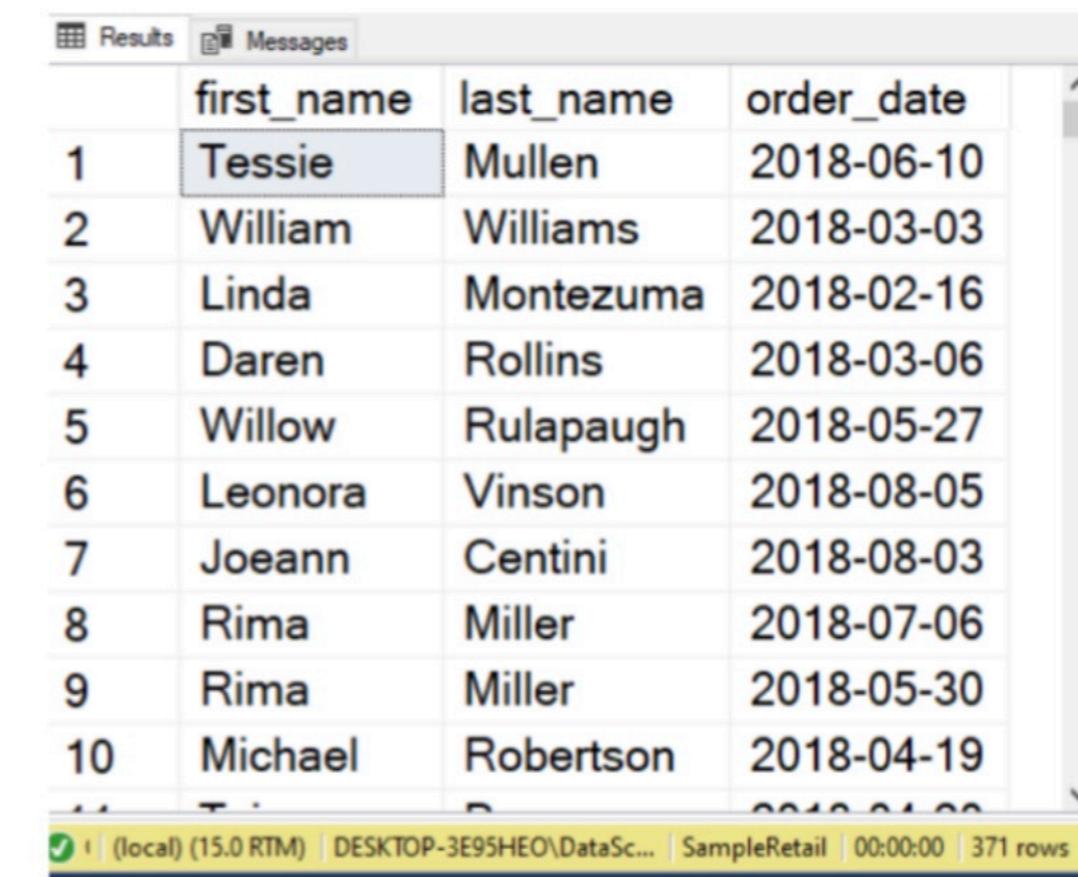
Query executed successfully. | (local) (15.0 RTM) | DESKTOP-3E95HEO\DataSc... | SampleRetail | 00:00:00 | 2 rows



# Query Time For You

Question: Write a query that returns the customer names, last names, and order dates. The customers who are order before order date of Hassan Pope.

Expected Output:



The screenshot shows a database query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab is selected and displays a table with four columns: 'first\_name', 'last\_name', and 'order\_date'. There are 10 rows of data, indexed from 1 to 10. The data is as follows:

	first_name	last_name	order_date
1	Tessie	Mullen	2018-06-10
2	William	Williams	2018-03-03
3	Linda	Montezuma	2018-02-16
4	Daren	Rollins	2018-03-06
5	Willow	Rulapaugh	2018-05-27
6	Leonora	Vinson	2018-08-05
7	Joeann	Centini	2018-08-03
8	Rima	Miller	2018-07-06
9	Rima	Miller	2018-05-30
10	Michael	Robertson	2018-04-19

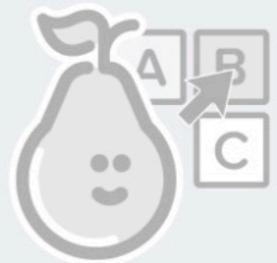
At the bottom of the window, there is a status bar with the following information: '(local) (15.0 RTM) DESKTOP-3E95HEO\Datas... | SampleRetail | 00:00:00 | 371 rows'.

Is everything clear so far?



Students choose an option

Pear Deck Interactive Slide  
Do not remove this bar



No Multiple Choice Response  
You didn't answer this question



3

# Multiple-row Subqueries

# ► Multiple-row Subqueries

Multiple-row subqueries return sets of rows and are used with multiple-row operators such as **IN**, **NOT IN**, **ANY**, **ALL**.

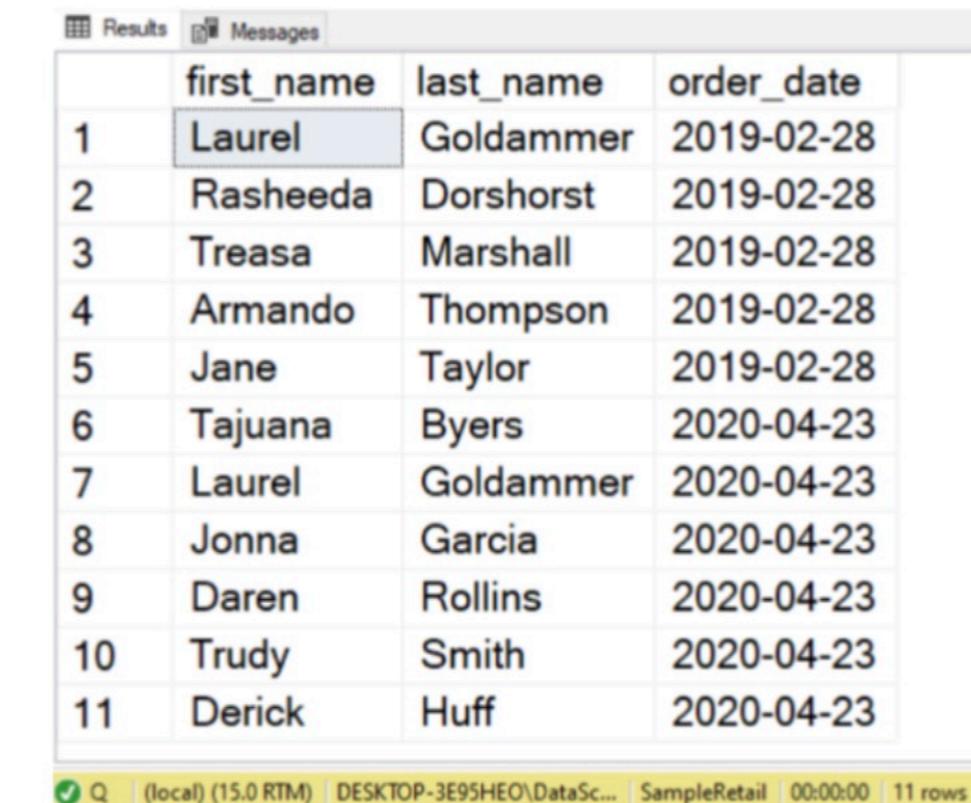


# Query Time



Question: Write a query that returns customer first names, last names and order dates. The customers who are order on the same dates as Laurel Goldammer.

Expected Output:



The screenshot shows a database query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab is selected and displays a table with 11 rows of data. The columns are labeled 'first\_name', 'last\_name', and 'order\_date'. The data shows various customers and their order dates, with Laurel Goldammer appearing twice in the results.

	first_name	last_name	order_date
1	Laurel	Goldammer	2019-02-28
2	Rasheeda	Dorshorst	2019-02-28
3	Treasa	Marshall	2019-02-28
4	Armando	Thompson	2019-02-28
5	Jane	Taylor	2019-02-28
6	Tajuana	Byers	2020-04-23
7	Laurel	Goldammer	2020-04-23
8	Jonna	Garcia	2020-04-23
9	Daren	Rollins	2020-04-23
10	Trudy	Smith	2020-04-23
11	Derick	Huff	2020-04-23



# Query Time

Question: List the products that ordered in the last 10 orders in Buffalo city.

Expected Output:

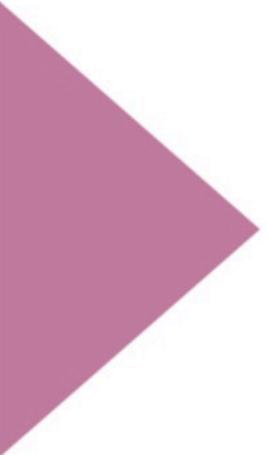
	product_name
1	128GB iPod touch (Space Gray) (6th Generation)
2	151 SE Outdoor Environmental Speakers (White)
3	2TB Red 5400 rpm SATA III 3.5 Internal NAS H...
4	AudioQuest - Golden Gate 9.8' RCA-to-RCA A...
5	CORSAIR - AX760 760-Watt ATX Power Suppl...
6	CORSAIR - MM800 Polaris RGB Gaming Mous...
7	Details About *brand New* Pny Anarchy 16gb ...
8	Details About Netgear 16 X 4 Docsis 3.0 Cable...
9	Details About Samsung Gear Iconx 2018 Editio...
10	HD 4.40 BT Wireless Bluetooth Headphones
11	Lenovo - AC Adapter for Select Lenovo Yoga L...
12	Lenovo - Yoga 710 2-in-1 11.6 Touch-Screen L...
13	Logitech - G560 LIGHTSYNC 2.1 Bluetooth Ga...
14	Logitech Circle Black Portable Wifi Video Monit...
15	Logitech iPad Pro 12.9 inch Keyboard Case Si...

# Query Time For You



Question: Write a query that returns the product\_names that were made in 2021. (Exclude the categories that match Game, gps, or Home Theater )

Expected Output:



	product_name	list_price
1	DENAQ - AC Adapter for TOSHIBA SATELLITE 1700 1710...	23.99
2	NS-SP1800BL 5.1-Channel Home Theater System (Black)	136.99
3	Acoustimass 6 Series V Home Theater Speaker System (Bl...	599.00
4	Corsair Vengeance LPX 16GB (2x8GB) DDR4 DRAM 3000...	151.99
5	Details About Samsung Gear Iconx 2018 Edition Cordfree ...	199.99
6	2TB Red 5400 rpm SATA III 3.5 Internal NAS HDD	89.95
7	Details About Alpine 480w 6.5 2way Typee Coaxial Car Sp...	59.99
8	Kenwood KFC-1653MRW 6.5 2-way Marine Speakers Pair ...	99.99

Query executed successfully. | (local) (15.0 RTM) | DESKTOP-3E95HEO\Datas... | SampleRetail | 00:00:00 | 80 rows



# Query Time For You

Question: Write a query that returns the list of product names that were made in 2020 and whose prices are higher than maximum product list price of Receivers Amplifiers category.

Expected Output:

The screenshot shows a SQL query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab is selected, displaying a table with four columns: 'product\_name', 'model\_year', and 'list\_price'. The table contains six rows of data, each representing a different TV model. The 'product\_name' column includes model numbers and descriptions like 'Samsung - 88 Class - LED - Q9F Series - 2160p - Smart...', 'LG Electronics OLED65E6P Flat 65-Inch 4K Ultra HD S...', 'Sony 65 Class 4K (2160P) Smart OLED TV (XBR65A1E)"', 'X850F-Series 75-Class HDR UHD Smart LED TV', 'Marantz - 11.2-Ch. Network-Ready 4K Ultra HD and 3D ...', and 'Samsung UN65KS9500 65-inch Smart 4K UHD TV'. The 'model\_year' column shows all entries as 2020, and the 'list\_price' column shows various prices ranging from 16999.95 to 2495.00. The 'Messages' tab is visible but empty. At the bottom of the window, a yellow bar displays the message 'Query executed successfully.' and other system information: '(local) (15.0 RTM) | DESKTOP-3E95HEO\Datas... | SampleRetail | 00:00:00 | 6 rows'.

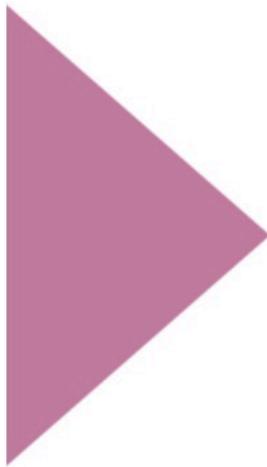
	product_name	model_year	list_price
1	Samsung - 88 Class - LED - Q9F Series - 2160p - Smart...	2020	16999.95
2	LG Electronics OLED65E6P Flat 65-Inch 4K Ultra HD S...	2020	4296.99
3	Sony 65 Class 4K (2160P) Smart OLED TV (XBR65A1E)"	2020	4275.00
4	X850F-Series 75-Class HDR UHD Smart LED TV	2020	3298.00
5	Marantz - 11.2-Ch. Network-Ready 4K Ultra HD and 3D ...	2020	2499.00
6	Samsung UN65KS9500 65-inch Smart 4K UHD TV	2020	2495.00



# Query Time For You

**Question:** Write a query that returns the list of product names that were made in 2020 and whose prices are higher than minimum product list price of Receivers Amplifiers category.

**Expected Output:**



	product_name	model_year	list_price
1	Polk Audio - PSW Series 10 Active Subwoofer - Black"	2020	239.99
2	Sony - XB7 Extra Bass Audio System with Bluetooth - Black	2020	248.00
3	CORSAIR - DOMINATOR PLATINUM 32GB (2PK 16GB) 3.0G...	2020	293.99
4	9.7 iPad (2017, 32GB, Wi-Fi Only, Silver)	2020	319.99
5	Apple - MacBook Pro 13.3 Pre-owned Laptop - Intel Core i5 - 4...	2020	339.95
6	391 Series C32F391 32 16:9 Curved FreeSync LCD Monitor	2020	349.99
7	Asus RT-AC5300 IEEE 802.11ac Ethernet Wireless Router - 2....	2020	355.72
8	HP 15-ba009dx 15.6 AMD A6-7310 2GHz 4GB DDR3 500GB ...	2020	359.99
9	12.3 32GB Multi-Touch 2-in-1 Chromebook Plus	2020	414.00
10	SAMSUNG 40 Class FHD (1080P) Smart LED TV (UN40J520...	2020	429.99

Query executed successfully. (local) (15.0 RTM) DESKTOP-3E95HEO\Datas... SampleRetail 00:00:00 50 rows



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# Correlated Subqueries

# ► EXISTS



```
SELECT *
FROM   sale.customer
WHERE  EXISTS (SELECT 1)
```

```
SELECT *
FROM   sale.customer A
WHERE  EXISTS (
    SELECT 1
    FROM   sale.orders B
    WHERE  B.order_date > '2020-01-01'
    AND   A.customer_id = B.customer_id
)
```

```
SELECT *
FROM   sale.customer A
WHERE  EXISTS (
    SELECT 1
    FROM   sale.orders B
    WHERE  B.order_date > '2020-01-01'
)
```

# ▶ NOT EXISTS



```
SELECT *
FROM   sale.customer A
WHERE  NOT EXISTS (SELECT 1)
```

```
SELECT *
FROM   sale.customer A
WHERE  NOT EXISTS (
    SELECT 1
    FROM   sale.orders B
    WHERE  B.order_date > '2020-01-01'
    AND   A.customer_id = B.customer_id
)
```

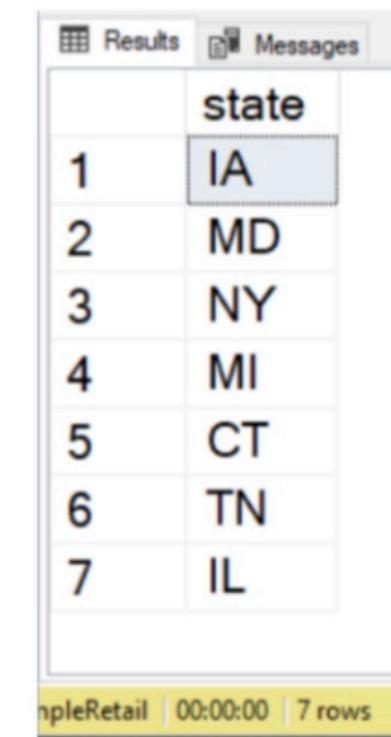
```
SELECT *
FROM   sale.customer A
WHERE  NOT EXISTS (
    SELECT 1
    FROM   sale.orders B
    WHERE  B.order_date > '2020-01-01'
)
```



# Query Time

Question: Write a query that returns a list of States where 'Apple - Pre-Owned iPad 3 - 32GB - White' product is not ordered

Expected Output:



The screenshot shows a database interface with a 'Results' tab selected. A table is displayed with a single column labeled 'state'. The data consists of seven rows, each containing a number from 1 to 7 followed by a two-letter state abbreviation: IA, MD, NY, MI, CT, TN, and IL. The row for state 'IA' is highlighted with a light gray background.

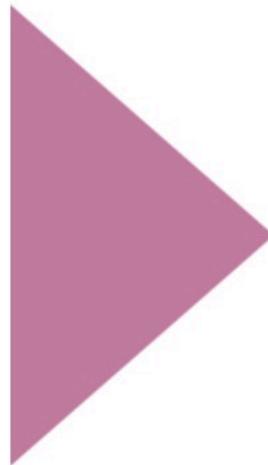
	state
1	IA
2	MD
3	NY
4	MI
5	CT
6	TN
7	IL

appleRetail | 00:00:00 | 7 rows



# Query Time

Question: Write a query that returns stock information of the products in Davi techno Retail store.  
The BFLO Store hasn't got any stock of that products.



Expected Output:

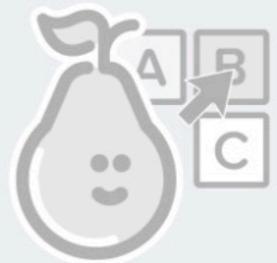
	store_name	store_id	product_id	quantity
1	Davi techno Retail	1	22	29
2	Davi techno Retail	1	47	21
3	Davi techno Retail	1	91	8
4	Davi techno Retail	1	158	11
5	Davi techno Retail	1	175	2
6	Davi techno Retail	1	184	4
7	Davi techno Retail	1	192	20
8	Davi techno Retail	1	198	1
9	Davi techno Retail	1	251	2
10	Davi techno Retail	1	299	18
11	Davi techno Retail	1	314	2
12	Davi techno Retail	1	315	10

Is everything clear so far?



Students choose an option

Pear Deck Interactive Slide  
Do not remove this bar



No Multiple Choice Response  
You didn't answer this question



## 3 CTE's



# ▶ Introduction



- **Common Table Expression** exists for the duration of a single statement.
- That means they are only usable inside of the query they belong to.
- It is similar to views. In this manner, it's defined as "**statement scoped views**".
- All CTEs (ordinary and recursive) start with a **WITH clause in front of a SELECT, INSERT, DELETE, or UPDATE statement**.
- There may be **one or more CTEs** in a single WITH clause.

# ► Advantages of CTE's



## Advantages of CTE's

**Easy to Read  
and Use**



**Fast**



**Easy to  
Maintainability**



# ► CTE Types



## Ordinary

```
1 WITH query_name [(column_name1, ...)] AS  
2     (SELECT ...) -- CTE Definition  
3  
4 SQL_Statement;  
5
```

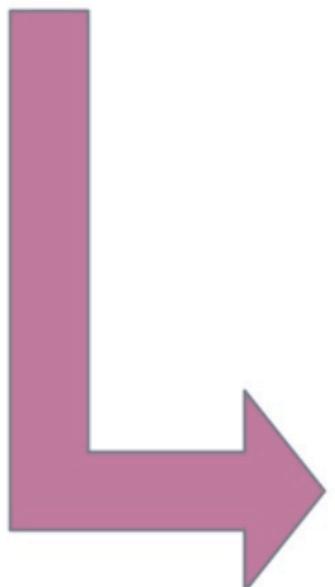
## Recursive

```
1 WITH table_name (column_list)  
2 AS  
3 (  
4     -- Anchor member  
5     initial_query  
6     UNION ALL  
7     -- Recursive member that references table_name.  
8     recursive_query  
9 )  
10    -- references table_name  
11    SELECT *  
12    FROM table_name
```

 Ordinary CTE Example

	emp_id	first_name	last_name	salary	job_title	gender	hire_date
1							
2	-----	-----	-----	-----	-----	-----	-----
3	17679	Robert	Gilmore	110000	Operations Director	Male	2018-09-04
4	26650	Elvis	Ritter	86000	Sales Manager	Male	2017-11-24
5	30840	David	Barrow	85000	Data Scientist	Male	2019-12-02
6	49714	Hugo	Forester	55000	IT Support Speciali	Male	2019-11-22
7	51821	Linda	Foster	95000	Data Scientist	Female	2019-04-29
8	67323	Lisa	Wiener	75000	Business Analyst	Female	2018-08-09
9	70950	Rodney	Weaver	87000	Project Manager	Male	2018-12-20
10	71329	Gayle	Meyer	77000	HR Manager	Female	2019-06-28
11	76589	Jason	Christian	99000	Project Manager	Male	2019-01-21
12	97927	Billie	Lanning	67000	Web Developer	Female	2018-06-25

query :



```
1 WITH temp_table (avg_salary) AS
2     (SELECT AVG(salary)
3      FROM employees)
4     SELECT salary
5      FROM employees, temp_table
6     WHERE employees.salary > temp_table.avg_salary;
```

output :

1	salary
2	-----
3	110000
4	86000
5	85000
6	95000
7	87000
8	99000

# Query Time



Question: List customers who have an order prior to the last order of a customer named Jerald Berray and are residents of the city of Austin.

Expected Output:

The screenshot shows a database query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab displays a table with 14 rows of data. The columns are labeled: customer\_id, first\_name, last\_name, city, and order\_date. The data shows various customers from Austin, with their last names listed in descending order of their last order date. The last row, which is the 14th row, corresponds to the question's requirements. The 'Messages' tab is empty.

	customer_id	first_name	last_name	city	order_date
1	696	Raeann	Anderson	Austin	2018-01-14
2	1413	Rod	Macdon...	Austin	2018-02-10
3	76	Lynn	Hickman	Austin	2018-03-29
4	363	Diane	Callaro	Austin	2018-05-10
5	1358	Felicidad	Horton	Austin	2018-05-12
6	1314	Vi	Yates	Austin	2018-06-05
7	1110	Mozell	Schroeder	Austin	2018-07-28
8	551	Joshua	Dunlap	Austin	2018-08-03
9	14	Leonora	Vinson	Austin	2018-08-05
10	14	Leonora	Vinson	Austin	2018-09-04
11	555	Nicki	Cox	Austin	2018-09-28
12	697	Afton	Thompson	Austin	2018-09-30
13	1056	Nu	Lang	Austin	2018-10-24
14	1111	Iorri	Martinez	Austin	2018-11-02

Query executed successfully.

(local) (15.0 RTM) DESKTOP-3E95HEO\Datas... SampleRetail 00:00:00 31 rows



# Query Time For You

Question: List all customers their orders are on the same dates with Laurel Goldammer.

Expected Output:

The screenshot shows a database interface with a 'Results' tab selected. The table has columns: first\_name, last\_name, and order\_date. The data is as follows:

	first_name	last_name	order_date
1	Laurel	Goldammer	2019-02-28
2	Rasheeda	Dorshorst	2019-02-28
3	Treasa	Marshall	2019-02-28
4	Armando	Thompson	2019-02-28
5	Jane	Taylor	2019-02-28
6	Tajuana	Byers	2020-04-23
7	Laurel	Goldammer	2020-04-23
8	Jonna	Garcia	2020-04-23
9	Daren	Rollins	2020-04-23
10	Trudy	Smith	2020-04-23
11	Derick	Huff	2020-04-23

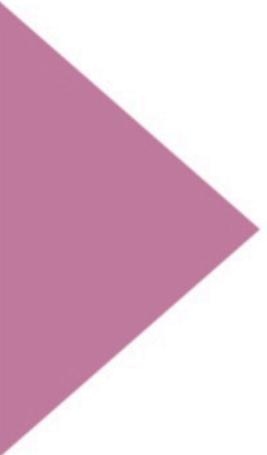
At the bottom, there is a status bar with: ✓ Q (local) (15.0 RTM) DESKTOP-3E95HEO\DataSc... SampleRetail 00:00:00 11 rows



# Query Time For You

Question: List products their model year are 2021 and their categories other than Game, gps, or Home Theater.

Expected Output:



	product_name	list_price
1	DENAQ - AC Adapter for TOSHIBA SATELLITE 1700 1710...	23.99
2	NS-SP1800BL 5.1-Channel Home Theater System (Black)	136.99
3	Acoustimass 6 Series V Home Theater Speaker System (Bl...	599.00
4	Corsair Vengeance LPX 16GB (2x8GB) DDR4 DRAM 3000...	151.99
5	Details About Samsung Gear Iconx 2018 Edition Cordfree ...	199.99
6	2TB Red 5400 rpm SATA III 3.5 Internal NAS HDD	89.95
7	Details About Alpine 480w 6.5 2way Typee Coaxial Car Sp...	59.99
8	Kenwood KFC-1653MRW 6.5 2-way Marine Speakers Pair ...	99.99

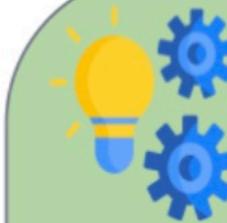
Query executed successfully. | (local) (15.0 RTM) | DESKTOP-3E95HEO\Datas... | SampleRetail | 00:00:00 | 80 rows

# Recursive CTE Example

```
1 WITH cte
2   AS (SELECT 1 AS n -- anchor member
3        UNION ALL
4        SELECT n + 1 -- recursive member
5        FROM   cte
6        WHERE  n < 10) -- terminator
7   SELECT n
8   FROM   cte;
```

output :

```
1 n
2 -----
3 1
4 2
5 3
6 4
7 5
8 6
9 7
10 8
11 9
12 10
```



A recursive CTE is useful in querying hierarchical data such as organization charts where one employee reports to a manager





# Query Time

Question: Create a table with a number in each row in ascending order from 0 to 9.

Expected Output:

	rakam
1	0
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	9

OLERetail | 00:00:00 | 10 rows



# Query Time

Question: Write a query that returns all staff with their manager\_ids. (Use Recursive CTE)

Expected Output:

The screenshot shows a SQL query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab displays a table with four columns: staff\_id, first\_name, and manager\_id. The manager\_id column for staff\_id 1 is highlighted in yellow. The data is as follows:

	staff_id	first_name	manager_id
1	1	James	NULL
2	2	Charles	1
3	5	Williams	1
4	8	Elizabeth	1
5	6	Barbara	5
6	7	Taylor	5
7	9	Brown	7
8	10	Linda	7
9	3	Jhon	2
10	4	Davis	2

At the bottom of the window, there is a status bar with the text: '5.0 RTM) DESKTOP-3E95HEO\DataSc... SampleRetail 00:00:00 | 10 rows'.



# Query Time For You

Question: List the stores whose turnovers are under the average store turnovers in 2018.

Expected Output:

The screenshot shows a Windows-style application window titled 'Results' with a tab for 'Messages'. The results grid has four columns: 'store\_name', 'Store\_earn', and 'Avg\_earn'. There are two rows of data. The first row, highlighted with a light blue background, contains the values 'Burkes Outlet', '50162.6717', and '160625.685400'. The second row contains the values 'Davi techno Retail', '98265.5069', and '160625.685400'. At the bottom of the window, a status bar displays: 'Query execute... | (local) (15.0 RTM) | DESKTOP-3E95HEO\Datas... | SampleRetail | 00:00:00 | 2 rows'.

	store_name	Store_earn	Avg_earn
1	Burkes Outlet	50162.6717	160625.685400
2	Davi techno Retail	98265.5069	160625.685400



# Query Time For You

Question: Write a query that returns the net amount of their first order for customers who placed their first order after 2019-10-01.

Expected Output:

The screenshot shows a database query results window with two tabs: 'Results' and 'Messages'. The 'Results' tab displays a table with the following data:

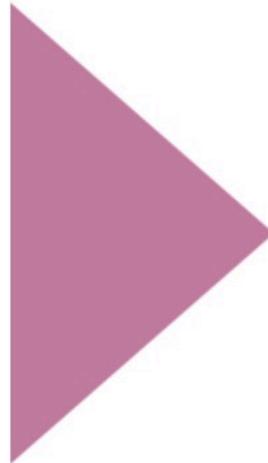
	customer_id	first_name	last_name	order_id	net_price
1	3	Teddy	Mills	1468	1304.7931
2	15	Siobhan	Weber	1401	4674.0492
3	19	Tarra	Kannady	1211	1180.6415
4	21	Charlesetta	Warner	1177	104.7924
5	28	Parthenia	Paa	1306	1726.2038
6	34	Ryan	Wilcox	1190	27.8907
7	35	Lavonne	Anderson	1476	3000.2547
8	37	Venus	Martin	1295	600.1165

At the bottom of the window, a status bar indicates: 'Query executed successfully.' (local) (15.0 RTM) DESKTOP-3E95HEO\DataSc... SampleRetail 00:00:00 | 306 rows

# Query Time



Subquery in Select Statement:



**Question:** Write a query that creates a new column named "total\_price" calculating the total prices of the products on each order.

Expected Output:

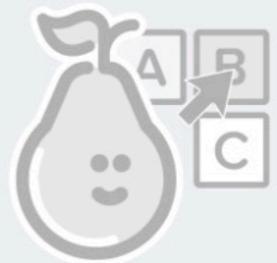
	order_id	total_price
1	1	1275.96
2	2	848.99
3	3	848.99
4	4	136.99
5	5	386.97
6	6	1495.96
7	7	678.98
8	8	273.98
9	9	59.99
10	10	249.99
11	11	722.98
12	12	181.98

Is everything clear so far?



Students choose an option

Pear Deck Interactive Slide  
Do not remove this bar

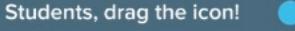


No Multiple Choice Response  
You didn't answer this question

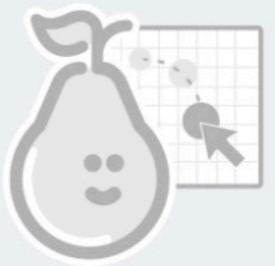
How well did you like this lesson?



Students, drag the icon!



Pear Deck Interactive Slide  
Do not remove this bar



No Draggable™ Response  
You didn't answer this question