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Data Analytics 2

SQL SELECT, WHERE, DISTINCT practice

1. Write a select statement to return all columns and rows from the customer table.

The screenshot shows the pgAdmin interface with a SQL query editor and a data output table. The query editor contains the following SQL statement:

```
1 SELECT * FROM customer;
```

The data output table displays the results of the query, showing 17 rows of customer data. The columns are: customer_id, store_id, first_name, last_name, email, address_id, and activebool.

customer_id	store_id	first_name	last_name	email	address_id	activebool
1	524	Jared	Ely	jared.ely@sakilacustomer.org	530	true
2	1	Mary	Smith	mary.smith@sakilacustomer...	5	true
3	2	Patricia	Johnson	patricia.johnson@sakilacust...	6	true
4	3	Linda	Williams	linda.williams@sakilacusto...	7	true
5	4	Barbara	Jones	barbara.jones@sakilacusto...	8	true
6	5	Elizabeth	Brown	elizabeth.brown@sakilacust...	9	true
7	6	Jennifer	Davis	jennifer.davis@sakilacustom...	10	true
8	7	Maria	Miller	maria.miller@sakilacustome...	11	true
9	8	Susan	Wilson	susan.wilson@sakilacustom...	12	true
10	9	Margaret	Moore	margaret.moore@sakilacust...	13	true
11	10	Dorothy	Taylor	dorothy.taylor@sakilacusto...	14	true
12	11	Lisa	Anderson	lisa.anderson@sakilacusto...	15	true
13	12	Nancy	Thomas	nancy.thomas@sakilacusto...	16	true
14	13	Karen	Jackson	karen.jackson@sakilacusto...	17	true
15	14	Betty	White	betty.white@sakilacustomer...	18	true
16	15	Helen	Harris	helen.harris@sakilacustome...	19	true
17	16	Sandra	Martin	sandra.martin@sakilacusto...	20	true

- Write a query to select first name, last name, and email from the customer table.

The screenshot shows the pgAdmin 4 web interface. The top navigation bar includes 'File', 'Object', 'Tools', and 'Help'. The main toolbar contains various icons for database management. The 'Query Editor' tab is active, displaying the following SQL query:

```
1 SELECT first_name, last_name, email FROM customer;
2
```

Below the query editor, the 'Data Output' tab is selected, showing the results of the query in a table format. The table has three columns: 'first_name', 'last_name', and 'email'. The results are as follows:

	first_name character varying (45)	last_name character varying (45)	email character varying (50)
1	Jared	Ely	jared.ely@sakilacustomer.org
2	Mary	Smith	mary.smith@sakilacustomer...
3	Patricia	Johnson	patricia.johnson@sakilacust...
4	Linda	Williams	linda.williams@sakilacusto...
5	Barbara	Jones	barbara.jones@sakilacusto...
6	Elizabeth	Brown	elizabeth.brown@sakilacust...
7	Jennifer	Davis	jennifer.davis@sakilacustom...
8	Maria	Miller	maria.miller@sakilacustome...
9	Susan	Wilson	susan.wilson@sakilacustom...
10	Margaret	Moore	margaret.moore@sakilacust...
11	Dorothy	Taylor	dorothy.taylor@sakilacusto...
12	Lisa	Anderson	lisa.anderson@sakilacusto...
13	Nancy	Thomas	nancy.thomas@sakilacusto...
14	Karen	Jackson	karen.jackson@sakilacusto...
15	Betty	White	betty.white@sakilacustomer...
16	Helen	Harris	helen.harris@sakilacustome...
17	Sandra	Martin	sandra.martin@sakilacusto...

3. Write a query to return all rows and columns from the film table.

pgAdmin Dashboard Properties SQL Statistics Dependencies Dependents dvdrentals/pos... dvdrentals/postgres@PostgreSQL

Query Editor Query History Scratch Pad

```
1 SELECT * FROM film;
2
```

Data Output Explain Messages Notifications

	film_id [PK] integer	title character varying (255)	description text	release_year integer	language_id smallint	rental_duration smallint	rental_rate numeric (4,2)	length smallint
1		133 Chamber Italian	A Fateful Reflec...	2006	1	7	4.99	
2		384 Grosse Wonderful	A Epic Drama of...	2006	1	5	4.99	
3		8 Airport Pollock	A Epic Tale of a ...	2006	1	6	4.99	
4		98 Bright Encounters	A Fateful Yarn o...	2006	1	4	4.99	
5		1 Academy Dinosaur	A Epic Drama of...	2006	1	6	0.99	
6		2 Ace Goldfinger	A Astounding E...	2006	1	3	4.99	
7		3 Adaptation Holes	A Astounding R...	2006	1	7	2.99	
8		4 Affair Prejudice	A Fanciful Docu...	2006	1	5	2.99	
9		5 African Egg	A Fast-Paced D...	2006	1	6	2.99	
10		6 Agent Truman	A Intrepid Panor...	2006	1	3	2.99	
11		7 Airplane Sierra	A Touching Sag...	2006	1	6	4.99	
12		9 Alabama Devil	A Thoughtful Pa...	2006	1	3	2.99	
13		10 Aladdin Calendar	A Action-Packe...	2006	1	6	4.99	
14		11 Alamo Videotape	A Boring Epistle...	2006	1	6	0.99	
15		12 Alaska Phantom	A Fanciful Saga ...	2006	1	6	0.99	
16		213 Date Speed	A Touching Sag...	2006	1	4	0.99	
17		13 Ali Forever	A Action-Packe...					

✓ Successfully run. Total query runtime: 97 msec. 1000 rows affected.

4. Write a query to return unique rows from the release_year column in the film table.

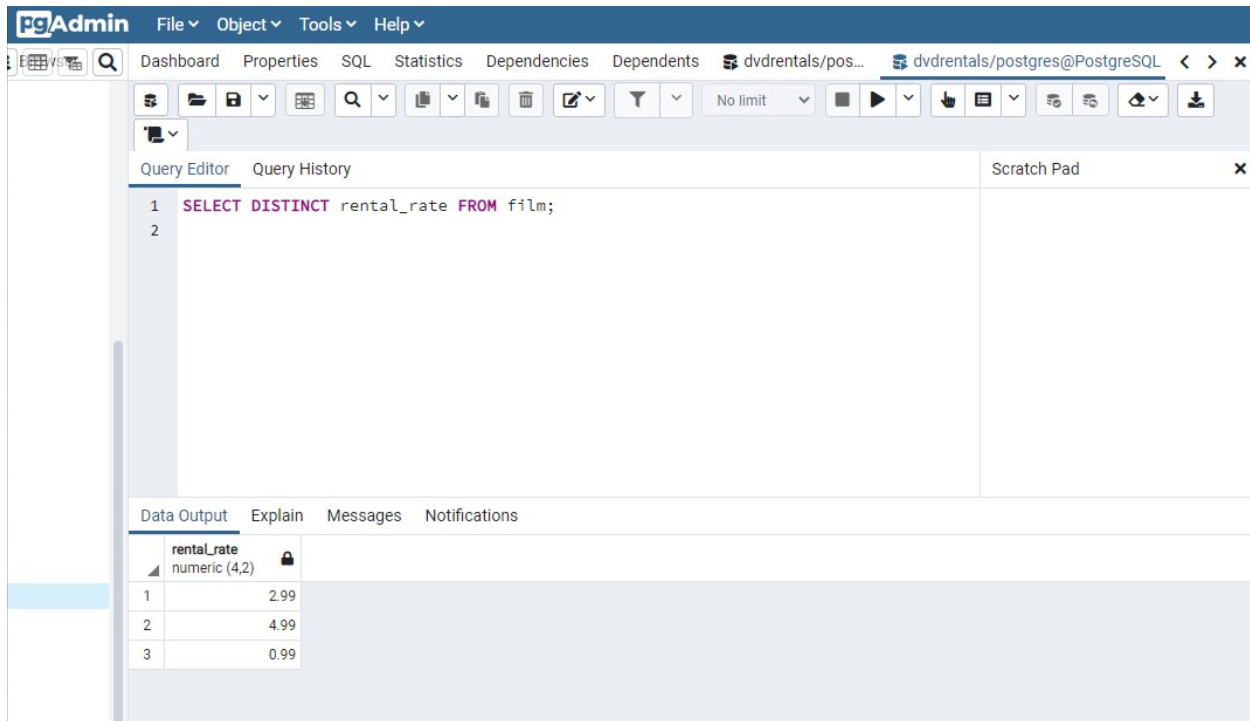
The screenshot shows the pgAdmin 4 web interface. The top navigation bar includes 'File', 'Object', 'Tools', and 'Help'. Below this is a toolbar with various icons for file operations, search, and execution. The main area is divided into three panes: 'Query Editor', 'Query History', and 'Scratch Pad'. The 'Query Editor' pane contains the following SQL query:

```
1 SELECT DISTINCT release_year FROM film;  
2
```

Below the query editor, there are tabs for 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is active, displaying the results of the query in a table format:

release_year
2006

5. Write a query to return unique rows from the rental_rate column in the film table.



The screenshot shows the pgAdmin interface with the following components:

- Top Bar:** pgAdmin logo, File, Object, Tools, Help menus. Breadcrumbs: Dashboard > Properties > SQL > Statistics > Dependencies > Dependents > dvdrentals/pos... > dvdrentals/postgres@PostgreSQL.
- Toolbar:** Icons for file operations, search, and execution. A dropdown menu is open showing "No limit".
- Query Editor:** Contains the SQL query:

```
1 SELECT DISTINCT rental_rate FROM film;
2
```
- Data Output:** A table with the following data:

	rental_rate numeric (4,2)
1	2.99
2	4.99
3	0.99

6. A customer left us some feedback about our store. Write a query to find her email address – for Nancy Thomas.

The screenshot shows the pgAdmin 4 web interface. The top navigation bar includes 'File', 'Object', 'Tools', and 'Help'. Below this is a toolbar with various icons for database management. The main window is divided into several panes. The 'Query Editor' pane contains the following SQL query:

```
1 SELECT email FROM customer WHERE first_name = 'Nancy' and last_name = 'Thomas';
2
```

The 'Data Output' pane at the bottom shows the results of the query. It displays a table with one column, 'email', and one row containing the email address 'nancy.thomas@sakilacusto...'. The table has a header row with the column name and a data row with the email address.

email
nancy.thomas@sakilacusto...

7. We're trying to find a customer located at a certain address '259 Ipoh Drive' – can you find their phone number?

The image shows the pgAdmin interface. The top menu bar includes File, Object, Tools, and Help. Below the menu is a toolbar with icons for various actions. The main window is titled 'dvdrentals/postgres@PostgreSQL 13'. The 'Query Editor' tab is active, showing a SQL query:

```
1 SELECT phone FROM address WHERE address='259 Ipoh Drive';
2
```

Below the query editor, the 'Data Output' tab is active, displaying the results of the query. The results are shown in a table with one column, 'phone', and one row containing the value '419009857119'.

	phone
1	419009857119

8. Write a query from the customer table, where store id is 1 and address id is greater than 150.

pgAdmin

File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents dvdrentals/pos... dvdrentals/postgres@PostgreSQL

Query Editor Query History Scratch Pad

```
1 SELECT * FROM customer WHERE store_id=1 and address_id>150;
2
```

Data Output Explain Messages Notifications

	customer_id [PK] integer	store_id smallint	first_name character varying (45)	last_name character varying (45)	email character varying (50)	address_id smallint	activebool boolean
1	524	1	Jared	Ely	jared.ely@sakilacustomer.org	530	true
2	148	1	Eleanor	Hunt	eleanor.hunt@sakilacustom...	152	true
3	149	1	Valerie	Black	valerie.black@sakilacustom...	153	true
4	152	1	Alicia	Mills	alicia.mills@sakilacustomer...	156	true
5	155	1	Gail	Knight	gail.knight@sakilacustomer...	159	true
6	156	1	Bertha	Ferguson	bertha.ferguson@sakilacust...	160	true
7	158	1	Veronica	Stone	veronica.stone@sakilacusto...	162	true
8	159	1	Jill	Hawkins	jill.hawkins@sakilacustomer...	163	true
9	161	1	Geraldine	Perkins	geraldine.perkins@sakilacus...	165	true
10	163	1	Cathy	Spencer	cathy.spencer@sakilacusto...	167	true
11	166	1	Lynn	Payne	lynn.payne@sakilacustomer...	170	true
12	168	1	Regina	Berry	regina.berry@sakilacustome...	172	true
13	170	1	Beatrice	Arnold	beatrice.arnold@sakilacusto...	174	true
14	172	1	Bernice	Willis	bernice.willis@sakilacustom...	176	true
15	173	1	Audrey	Ray	audrey.ray@sakilacustomer....	177	true
16	175	1	Annette	Olson	annette.olson@sakilacusto...	179	true
17	176	1	June	Carroll	june.carroll@sakilacustomer...	180	true

9. Write a query from the payment table where the amount is either 4.99 or 1.99.

pgAdmin File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents dvdrentals/pos... dvdrentals/postgres@P

dvdrentals/postgres@PostgreSQL 13

Query Editor Query History

```
1 SELECT * FROM payment WHERE amount=4.99 or amount=1.99;
2
```

Data Output Explain Messages Notifications

	payment_id [PK] integer	customer_id smallint	staff_id smallint	rental_id integer	amount numeric (5,2)	payment_date timestamp without time zone
1	17504	341	1	1778	1.99	2007-02-16 17:23:14.996577
2	17512	343	2	1547	4.99	2007-02-16 00:10:50.996577
3	17520	344	2	1475	4.99	2007-02-15 19:36:27.996577
4	17523	345	1	1457	4.99	2007-02-15 18:34:15.996577
5	17525	345	2	2766	4.99	2007-02-19 16:13:41.996577
6	17531	347	1	3026	4.99	2007-02-20 10:16:26.996577
7	17549	352	1	1649	4.99	2007-02-16 07:48:59.996577
8	17550	352	1	1678	4.99	2007-02-16 09:36:54.996577
9	17551	352	1	1780	4.99	2007-02-16 17:40:11.996577
10	17552	352	2	3331	4.99	2007-02-21 08:06:19.996577
11	17557	354	1	2275	4.99	2007-02-18 04:59:55.996577
12	17564	356	1	2433	4.99	2007-02-18 16:38:43.996577
13	17566	357	1	1788	1.99	2007-02-16 18:15:44.996577
14	17567	357	2	1971	1.99	2007-02-17 07:52:25.996577
15	17575	359	2	1329	4.99	2007-02-15 09:53:32.996577
16	17576	359	2	1770	1.99	2007-02-16 16:36:21.996577
17	17578	359	1	2736	4.99	2007-02-19 14:11:46.996577

10. Write a query to return a list of transitions from the payment table where the amount is greater than 5

pgAdmin

File Object Tools Help

Dashboard Properties SQL Statistics Dependencies Dependents dvdrentals/pos... dvdrentals/postgres@PostgreSQL 13 *

dvdrentals/postgres@PostgreSQL 13

Query Editor Query History

```
1 SELECT * FROM payment WHERE amount>5;
2
```

Data Output Explain Messages Notifications

	payment_id [PK] integer	customer_id smallint	staff_id smallint	rental_id integer	amount numeric (5,2)	payment_date timestamp without time zone
1	17503	341	2	1520	7.99	2007-02-15 22:25:46.996577
2	17505	341	1	1849	7.99	2007-02-16 22:41:45.996577
3	17507	341	2	3130	7.99	2007-02-20 17:31:48.996577
4	17508	341	1	3382	5.99	2007-02-21 12:33:49.996577
5	17509	342	2	2190	5.99	2007-02-17 23:58:17.996577
6	17510	342	1	2914	5.99	2007-02-20 02:11:44.996577
7	17513	343	1	1564	6.99	2007-02-16 01:15:33.996577
8	17516	343	2	2461	6.99	2007-02-18 18:26:38.996577
9	17517	343	1	2980	8.99	2007-02-20 07:03:29.996577
10	17526	346	1	1994	5.99	2007-02-17 09:35:32.996577
11	17529	347	2	1711	8.99	2007-02-16 12:40:18.996577
12	17532	347	1	3092	8.99	2007-02-20 14:33:08.996577
13	17533	347	1	3326	7.99	2007-02-21 07:33:16.996577
14	17535	348	1	2041	8.99	2007-02-17 12:47:26.996577
15	17539	349	2	2987	6.99	2007-02-20 07:24:16.996577
16	17540	349	1	3067	8.99	2007-02-20 12:27:47.996577
17	17545	351	2	1792	5.99	2007-02-16 18:33:16.996577