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## Lab 2

1)

The image displays two screenshots of the pgAdmin 4 web interface, showing a PostgreSQL 9.6 database environment. The left sidebar shows the database structure, including a 'CAPS' database with various objects like casts, catalogs, event triggers, extensions, foreign data wrappers, languages, schemas, and tables. The main pane shows the SQL editor and the query results.

**Top Screenshot:** The SQL editor shows a query with two SELECT statements. The first SELECT statement is highlighted in blue, and the second is highlighted in purple. The query results are displayed in a table with 6 rows.

cid	character (4)	name	city	discountpct
1	c001	Tipt...	Dul...	10.00
2	c002	Tyrell	Dall...	12.00
3	c003	Eldon	Dall...	8.00
4	c004	ACME	Dul...	8.50
5	c005	We...	Risa	0.00
6	c006	ACME	Beij...	0.00

**Bottom Screenshot:** The SQL editor shows the same query, but the second SELECT statement is highlighted in purple. The query results are displayed in a table with 7 rows.

aid	character (3)	name	city	commission
1	a01	Smith	Ne...	5.60
2	a02	Jon...	Ne...	6.00
3	a03	Perry	Ho...	7.00
4	a04	Gray	Ne...	6.00
5	a05	Otasi	Dul...	5.00
6	a06	Smith	Dall...	5.00
7	a08	Bond	Lon...	7.07

A green status bar at the bottom right indicates: "Successfully run. Total query runtime: 256 msec. 7 rows affected."

pgAdmin 4

File Object Tools Help

pgAdmin 4

PostgreSQL 9.6

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Catalogs

Event Triggers

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Schemas

Login/Group Roles

Tablespaces

Dashboard Properties SQL Statistics Dependencies Dependents Query - CAPS on postgres@PostgreSQL 9.6

SQL

```
select *
from Agents;

select *
from Products;

select *
from Orders;
```

Data Output Explain Messages History

pid	name	city	qty	pricesnd
character (3)	text	text	integer	numeric (10,2)
1	p01	Hei.. Dall.	111400	0.50
2	p02	uni.. Ne..	203000	0.50
3	p03	Co.. Dul..	150600	1.00
4	p04	LCA.. Dul..	125300	1.00
5	p05	pen.. Dall.	221400	1.00
6	p06	tra.. Dall.	123100	2.00
7	p07	flux.. Ne..	100500	1.00
8	p08	HAL.. Ne..	200600	1.25

Successfully run. Total query runtime: 176 msec. 8 rows affected.

Type here to search

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pgAdmin 4

File Object Tools Help

pgAdmin 4

PostgreSQL 9.6

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Dashboard Properties SQL Statistics Dependencies Dependents Query - CAPS on postgres@PostgreSQL 9.6

SQL

```
select *
from Agents;

select *
from Products;

select *
from Orders;
```

Data Output Explain Messages History

ordno	month	cid	aid	pid	quantity	totaland
integer	character (3)	character (4)	character (3)	character (3)	integer	numeric (12,2)
1	1011	Jan	c001	a01	1100	495.00
2	1012	Jan	c002	a03	1200	1056.00
3	1015	Jan	c003	a03	1000	920.00
4	1016	Jan	c006	a01	1000	500.00
5	1017	Feb	c001	a06	500	540.00
6	1018	Feb	c001	a03	600	540.00
7	1019	Feb	c001	a02	400	180.00
8	1020	Feb	c006	a03	600	600.00
9	1021	Feb	c004	a06	1000	457.50
10	1022	Mar	c001	a05	450	810.00
11	1023	Mar	c001	a04	500	450.00
12	1024	Mar	c006	a06	880	400.00
13	1025	Apr	c001	a05	888	799.20
14	1026	May	c002	a05	808	711.04

Successfully run. Total query runtime: 472 msec. 14 rows affected.

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- 2) A primary key is a unique identifier. It is also a key in a relational database. A candidate key is a column in a table that can identify any database information without needing to look at other data. A superkey are attributes in a table which contains values that can be used to identify information.
- 3) The table I'm going to use is the type of video games.

Types of Video Games

Type	Uncharted 4	Destiny 2	The Witcher 3
Shooter?	Yes	Yes	No
Gore?	Yes	No	Yes
First person?	No	Yes	No
RPG?	No	No	Yes

4a) The "first normal form" rule checks to see if the data is in a database table. This is important because if nothing checks to see if there is data already in the table than there would be constant repeats within the table.

4b) The "access rows by content only" does not have order to the rows or the columns. This can be important so you can't identify the row or column.

4c) The "all rows must be unique" rule says that two tuples can't be the same in all the column values at the same time. This is important so that there are not any repeats of values in a table.