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CMPT 308
Lab2

1)

The image displays three sequential screenshots of the pgAdmin 4 web interface, showing the execution of SQL queries and the resulting data tables. The desktop background features a sports car and various icons like 'DVD_VIDEO', 'PATRIOT', and 'GTRIDE'.

Query 1:

```
select *
from Customers;
```

id	name	city	amount	numeric
0001	Tanya	Dakota	10	
0002	Tyler	Dallas	12	
0003	Albert	Dallas	8	
0004	ACME	Dakota	6.5	
0005	Wayland	Ohio	0	
0006	ACME	Kyoto	0	

Query 2:

```
select *
from Agents;
```

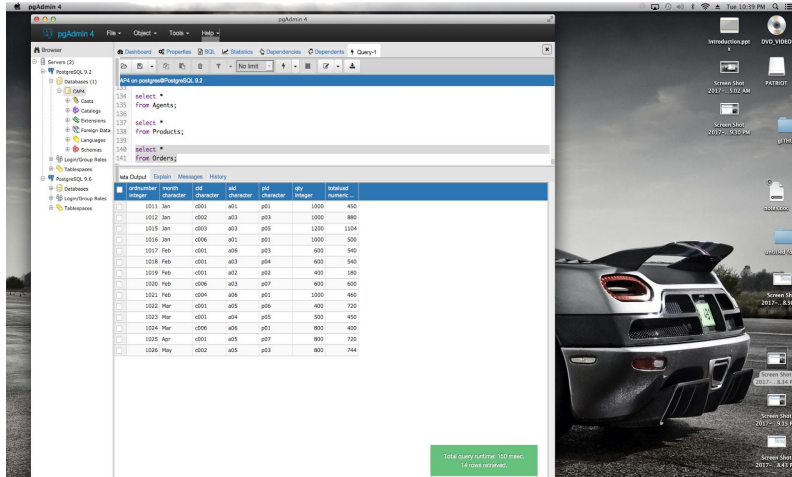
id	name	city	commission	numeric
0001	Smith	New York	6.5	
0002	James	Newark	6	
0003	Perry	Texas	7	
0004	Gray	New York	6	
0005	Olson	Dakota	5	
0006	Smith	Dallas	5	
0008	Bond	London	7.07	

Query 3:

```
select *
from Products;
```

pid	name	city	quantity	priceval	numeric
0001	comb	Dallas	111400	0.5	
0002	brush	Newark	203000	0.5	
0003	rebar	Dakota	230000	1	
0004	pen	Dakota	123300	1	
0005	pencil	Dallas	231400	1	
0006	resistor	Dallas	123100	2	
0007	case	Newark	100000	1	
0008	resistor	Newark	200000	1.25	

Total Query (string, not numeric): 8 rows returned.



2) Primary key - is the columns a database designer uses to maintain unique identification of each row in a database.

Example - Employee ID , SSN

Candidate Key- are individual columns in a table that uniquely identifies a record.

- is a minimal super key meaning none of its proper subsets identify a super key

Super key- any attribute or combination of attributes that uniquely identify a table is called a super key.

3) Data types are classifications of data that the database designer intends to use in the record (table). For example, if you are entering a numeric value, that field needs to have a data type indicating what type of numeric value is being entered.

Example :- `CREATE TABLE employees`
`Id INT PRIMARY KEY ,`
`First Name VARCHAR(25) ,`
`Last Name VARCHAR (25),`
`Date TIMESTAMP`

);

On this employees table we have INT, VARCHAR and TIMESTAMP data types.

4)

- The first normal form rule :- The first normal rule sets the basic rules to build an organized database. These rule contains three main rules that are used to define the required data items ,prevent repetition and ensure that there is a primary key for each table that we created.
- The access rows by content only rule :- we access rows by content not by row and column as the third row or fourth row because it disallows pointers to row. You cannot access rows by pointer

or the number of rows. An example from the CAP4 database accessing “OrdNumber1015” instead of accessing the row by saying “Row5”.

- c) The all rows must be unique rule :- In every row, some column must contain a unique value. If no single column has this property, the values of some group of columns taken as a whole must be different in every row. Two tuples in a relation cannot be identical in all columns at once.