

Brandon Traditi

Database Management Lab 2

9/11/17

1.) Select *from Customers;

The screenshot shows the pgAdmin 4 interface. The SQL editor contains the query: `select * from Customers;`. The results are displayed in a table with 5 columns: `cid`, `name`, `city`, `discountpct`, and `numeric (5,2)`. The data is as follows:

cid	name	city	discountpct	numeric (5,2)
1	c001	Tiptop	Duluth	10.00
2	c002	Tyrell	Dallas	12.00
3	c003	Eldon	Dallas	8.00
4	c004	ACME	Duluth	8.50
5	c005	Weyland	Risa	0.00
6	c006	ACME	Beijing	0.00

Select *

from Agents;

The screenshot shows the pgAdmin 4 interface. The SQL editor contains the query: `select * from Agents;`. The results are displayed in a table with 4 columns: `aid`, `name`, `city`, and `commission numeric (5,2)`. The data is as follows:

aid	name	city	commission numeric (5,2)	
1	a01	Smith	New York	5.60
2	a02	Jones	Newark	6.00
3	a03	Perry	Hong Kong	7.00
4	a04	Gray	New York	6.00
5	a05	Otasi	Duluth	5.00
6	a06	Smith	Dallas	5.00
7	a08	Bond	London	7.07

Select *

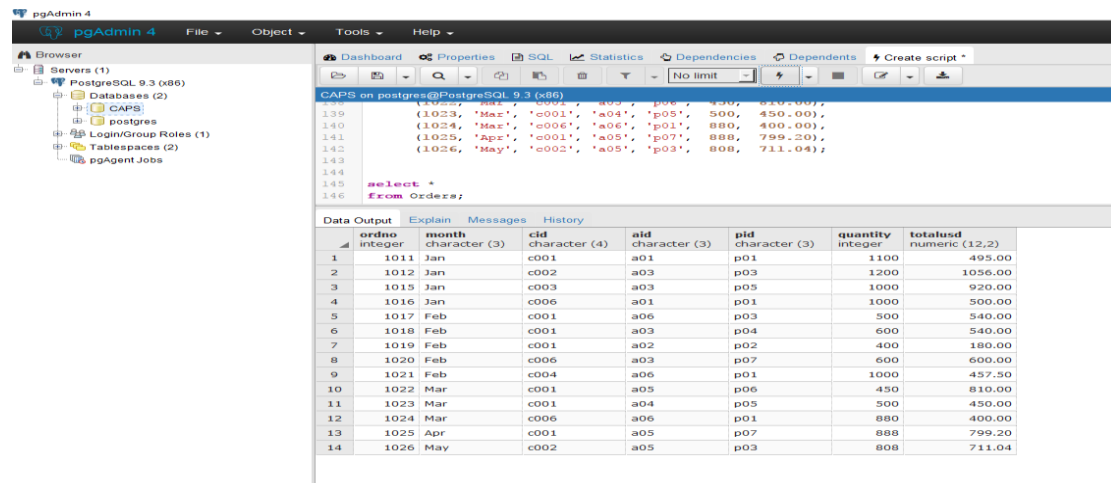
from Products;

The screenshot shows the pgAdmin 4 interface. The SQL editor contains the query: `select * from Products;`. The results are displayed in a table with 5 columns: `pid`, `name`, `city`, `qty`, and `pricedsd numeric (10,2)`. The data is as follows:

pid	name	city	qty	pricedsd numeric (10,2)	
1	p01	Heisenberg compensator	Dallas	111400	0.50
2	p02	universal translator	Newark	203000	0.50
3	p03	Commodore PET	Duluth	150600	1.00
4	p04	LCARS module	Duluth	125300	1.00
5	p05	pencil	Dallas	221400	1.00
6	p06	trapper keeper	Dallas	123100	2.00
7	p07	flux capacitor	Newark	100500	1.00
8	p08	HAL 9000 memory core	Newark	200600	1.25

Select *

from Orders;



The screenshot shows the pgAdmin 4 interface. The left pane displays the database structure: Servers (1) > PostgreSQL 9.3 (x86) > Databases (2) > CAPS. The main pane shows a SQL query in the SQL editor:

```
select *  
from Orders;
```

Below the query editor, the 'Data Output' tab is active, displaying the results of the query. The results are shown in a table with 8 columns: ordno, month, cid, aid, pid, quantity, and totalusd. The data is as follows:

ordno	month	cid	aid	pid	quantity	totalusd
1	Jan	c001	a01	p01	1100	495.00
2	Jan	c002	a03	p03	1200	1056.00
3	Jan	c003	a03	p05	1000	920.00
4	Jan	c006	a01	p01	1000	500.00
5	Feb	c001	a06	p03	500	540.00
6	Feb	c001	a03	p04	600	540.00
7	Feb	c001	a02	p02	400	180.00
8	Feb	c006	a03	p07	600	600.00
9	Feb	c004	a06	p01	1000	457.50
10	Mar	c001	a05	p06	450	810.00
11	Mar	c001	a04	p05	500	450.00
12	Mar	c006	a06	p01	880	400.00
13	Apr	c001	a05	p07	888	799.20
14	May	c002	a05	p03	808	711.04

2.) Primary Key- is a field in a table which uniquely identifies each row in a database table. Primary keys contain unique values and cannot have NULL as a value. Each table can only have one primary key.

Candidate key-is a column, or set of columns, in a table that can uniquely identify any database record without referring to any other data. Each table could have one or more candidate keys but each candidate key is unique and can also classify as the primary key.

Superkey-is a set of attributes within a table whose values can be used to uniquely identify a tuple. A superkey is a set of columns that uniquely defines a row. A superkey can be any combination of data using the primary key within it.

3.) Data types in sql are the different types of ways data can be put into the table or field. There is a wide base of data types that can be used in SQL but common inputs could include integer if its pertaining to a price or id number, or Text if its pertaining to a month that a product was bought or the city which it is being bought from. For example in an orders table, the list of fields would be Order No., Date ordered, Customer, Product, Quantity, and Price. For each field, the data type would be as follows

Order No.-INT, not nullable

Date ordered- TEXT, not nullable

Customer-INT or TEXT(depending on if customers have id numbers), Nullable or Not nullable(depending on if customer has an account)

Product-INT or TEXT(depending on if products have id numbers), not nullable

Quantity-INT, not nullable

Price-INT, not nullable

4.) "First normal form" rule- The data is in a database table and the table stores information in rows and columns where one or more columns are the primary key that uniquely identifies each row. There is also no repeating groups of columns. This is important because the data is then organized into tables that are easily researchable and obtainable.

"Access rows by content order" rule- This rule objects to there being an order of rows. To say the third row from the bottom would not be classified as correct, this rule makes each row distinct by the content within that row and nothing else.

"All rows must be unique" rule- In this rule, two tuples cannot be identical in all column values at once. This stops the ability for there to be multiple identical rows in the tables which ties back into each row being its own unique entity.