

John Kryspin Lab 02

The screenshot shows a PostgreSQL query editor window titled "Query - postgres on postgres@localhost:5432 *". The window has a menu bar (File, Edit, Query, Favourites, Macros, View, Help) and a toolbar with various icons. The "SQL Editor" tab is active, showing a SQL query: `select *
from customers;`. Below the editor is an "Output pane" with tabs for "Data Output", "Explain", "Messages", and "History". The "Data Output" tab is selected, displaying a table with 6 rows and 5 columns: `cid` (character(4)), `name` (text), `city` (text), and `discount` (numeric(5,2)). The table contains the following data:

	<code>cid</code> character(4)	<code>name</code> text	<code>city</code> text	<code>discount</code> numeric(5,2)
1	c001	Tiptop	Duluth	10.00
2	c002	Basics	Dallas	12.00
3	c003	Allied	Dallas	8.00
4	c004	ACME	Duluth	8.00
5	c005	Weyland-Yutani	Acheron	0.00
6	c006	ACME	Kyoto	0.00

The status bar at the bottom indicates "OK.", "Unix", "Ln 3, Col 1, Ch 26", "6 rows.", and "12 ms".

Query - postgres on postgres@localhost:5432 *

File Edit Query Favourites Macros View Help

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
select *  
from agents;
```

Output pane

Data Output Explain Messages History

	aid character(3)	name text	city text	percent real
1	a01	Smith	New York	6
2	a02	Jones	Newark	6
3	a03	Brown	Tokyo	7
4	a04	Gray	New York	6
5	a05	Otasi	Duluth	5
6	a06	Smith	Dallas	5
7	a08	Bond	London	7

OK. Unix Ln 2, Col 12, Ch 21 7 rows. 11 ms

Query - postgres on postgres@localhost:5432 *

File Edit Query Favourites Macros View Help

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
select *  
from products;
```

Output pane

Data Output Explain Messages History

	pid character(3)	name text	city text	quantity integer	priceusd numeric(10,2)
1	p01	comb	Dallas	111400	0.50
2	p02	brush	Newark	203000	0.50
3	p03	razor	Duluth	150600	1.00
4	p04	pen	Duluth	125300	1.00
5	p05	pencil	Dallas	221400	1.00
6	p06	folder	Dallas	123100	2.00
7	p07	case	Newark	100500	1.00
8	p08	clip	Newark	200600	1.25

OK. Unix Ln 2, Col 14, Ch 23 8 rows. 13 ms

The screenshot shows a PostgreSQL query editor window titled "Query - postgres on postgres@localhost:5432 *". The window has a menu bar (File, Edit, Query, Favourites, Macros, View, Help) and a toolbar. The "SQL Editor" tab is active, displaying the query: `select * from orders;`. Below the editor is the "Output pane" with tabs for "Data Output", "Explain", "Messages", and "History". The "Data Output" tab is selected, showing a table with 14 rows and 8 columns. The columns are: `ordno` (integer), `mon` (character(3)), `cid` (character(4)), `aid` (character(3)), `pid` (character(3)), `qty` (integer), and `dollars` (numeric). The status bar at the bottom indicates "OK.", "Unix", "Ln 3, Col 1, Ch 23", "14 rows.", and "11 ms".

	<code>ordno</code> integer	<code>mon</code> character(3)	<code>cid</code> character(4)	<code>aid</code> character(3)	<code>pid</code> character(3)	<code>qty</code> integer	<code>dollars</code> numeric
1	1011	jan	c001	a01	p01	1000	4
2	1013	jan	c002	a03	p03	1000	8
3	1015	jan	c003	a03	p05	1200	11
4	1016	jan	c006	a01	p01	1000	5
5	1017	feb	c001	a06	p03	600	5
6	1018	feb	c001	a03	p04	600	5
7	1019	feb	c001	a02	p02	400	1
8	1020	feb	c006	a03	p07	600	6
9	1021	feb	c004	a06	p01	1000	4
10	1022	mar	c001	a05	p06	400	7
11	1023	mar	c001	a04	p05	500	4
12	1024	mar	c006	a06	p01	800	4

2. The primary key is a unique number or string which can be used to uniquely identify a row. It is the best candidate key. The candidate key is the minimal superkey with the least columns. The superkey is any set of columns which uniquely identify the row.

3. Data types are hugely important. They help designate what type of data goes into a value. Having different data types allows for data to be more integrated into information. I might want a table for the statistics of a League of Legend game. Rows would be each player and the columns would be stats like kills, deaths, score, assists, gold.

4a. The first normal rule states that there can be no values with multiple attributes. This means if you have a family and there is a slot for children you cannot have three people in it. You have to make

another table and point to it through that slot. Multiple data in one slot makes it hard to parse through and figure out what it actually is.

4b. This rule states you must only reference data by what it is not where. This is true because tables of rows and columns are sets and sets don't have any order so saying row 3 makes no sense because it could change at any time and is not always going to point to the same data.

4c. The last rule means that the rows cannot be the same. If you have two rows with the same exact data there is no way to reference only one of them. It's an impossible task which is why you need rows to be unique with a primary key for instance.