

Kevin Scharr

Database Management

Lab 2

1- Screenshots

Query - Assignment 1 on postgres@localhost:5432

SQL Editor | Graphical Query Builder

Previous queries

```
INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1024, 'mar', 'c006', 'a06', 'p01', 800, 400.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1025, 'apr', 'c001', 'a05', 'p07', 800, 720.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1026, 'may', 'c002', 'a05', 'p03', 800, 740.00);

-- SQL statements for displaying example data into the CAP3 database
-- Connect to your Postgres server and set the active database to CAP3. Then . . .

select *
from customers;

select *
from agents;

select *
from products;

select *
from orders;

select *
from customers;
```

Output pane

	cid	name	city	discount
	character(4)	text	text	numeric(5,2)
1	c001	Tiptop	Duluth	10.00
2	c002	Tyrell	Dallas	12.00
3	c003	Allied	Dallas	8.50
4	c004	ACME	Duluth	8.00
5	c005	Weyland	Acheron	0.00
6	c006	ACME	Kyoto	0.00

OK. DOS Ln 198, Col 1, Ch 6165 27 chars 6 rows. 13 msec

Query - Assignment 1 on postgres@localhost:5432

SQL Editor | Graphical Query Builder

Previous queries

```
INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1020, 'feb', 'c004', 'a03', 'p07', 800, 800.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1021, 'feb', 'c004', 'a06', 'p01', 1000, 460.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1022, 'mar', 'c001', 'a05', 'p06', 400, 720.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1023, 'mar', 'c001', 'a04', 'p08', 500, 450.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1024, 'mar', 'c006', 'a06', 'p01', 800, 400.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1025, 'apr', 'c001', 'a05', 'p07', 800, 720.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1026, 'may', 'c002', 'a05', 'p03', 800, 740.00);

-- SQL statements for displaying example data into the CAP3 database
-- Connect to your Postgres server and set the active database to CAP3. Then . . .

select *
from agents;
```

Output pane

	aid	name	city	commission
	character(3)	text	text	numeric(5,2)
1	a01	Smith	New York	6.00
2	a02	Jones	Newark	6.00
3	a03	Perry	Tokyo	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

OK. DOS Ln 187, Col 1, Ch 6058 22 chars 7 rows. 12 msec

Query - Assignment 1 on postgres@localhost:5432*

File Edit Query Favourites Macros View Help

SQL Editor Graphical Query Builder

Previous queries

```

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1020, 'feb', 'c006', 'a03', 'p07', 600, 600.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1021, 'feb', 'c004', 'a06', 'p01', 1000, 460.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1022, 'mar', 'c001', 'a05', 'p06', 400, 720.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
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INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
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INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1025, 'apr', 'c001', 'a05', 'p07', 800, 720.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1026, 'may', 'c002', 'a05', 'p03', 800, 740.00);

-- SQL statements for displaying example data into the CAP3 database
-- Connect to your Postgres server and set the active database to CAP3. Then . . .
SELECT *
FROM products;

```

Output pane

Data Output Explain Messages History

	pid	name	city	quantity	priceusd
	character(3)	text	text	integer	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. DOS Ln 187, Col 1, Ch 6058 24 chars 8 rows, 13 msec

Query - Assignment 1 on postgres@localhost:5432*

File Edit Query Favourites Macros View Help

SQL Editor Graphical Query Builder

Previous queries

```

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
VALUES(1020, 'feb', 'c006', 'a03', 'p07', 600, 600.00);

INSERT INTO Orders( ordnum, mon, cid, aid, pid, qty, totalUSD )
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-- SQL statements for displaying example data into the CAP3 database
-- Connect to your Postgres server and set the active database to CAP3. Then . . .
SELECT *
FROM Orders;

```

Output pane

Data Output Explain Messages History

	ordnum	mon	cid	aid	pid	qty	totalusd
	integer	character(3)	character(4)	character(3)	character(3)	integer	numeric(12,2)
1	1011	jan	c001	a01	p01	1000	450.00
2	1013	jan	c002	a03	p03	1000	880.00
3	1019	jan	c003	a03	p05	1200	1104.00
4	1016	jan	c006	a01	p01	1000	500.00
5	1017	feb	c001	a06	p03	600	540.00
6	1018	feb	c001	a03	p04	600	540.00
7	1019	feb	c001	a02	p02	400	180.00
8	1020	feb	c006	a03	p07	600	600.00
9	1021	feb	c004	a06	p01	1000	460.00
10	1022	mar	c001	a05	p06	400	720.00
11	1023	mar	c001	a04	p05	500	450.00
12	1024	mar	c006	a06	p01	800	400.00

OK. DOS Ln 187, Col 1, Ch 6058 22 chars 14 rows, 11 msec

2-

Primary Key- Is a unique identifier for a block in a relational database. It is unique to each block.

Candidate Key- One or more keys that uniquely identifies a table.

Super Key- a column or set of columns that identifies every row in the table

3-

Star wars	Clone army		
Clone ID	Clone Name	Battalion	Rank
CC-3636	Wolffe	104th	Commander
CC-1010	Fox	Coruscant Guard	Commander
CC-1138	Bacara	Galactic Marines	Commander
CT-7567	Rex	501st	Captain
RC-1138	Boss		Commando

This table shows clone commanders on the clone army from star wars. The first column is their clone ID, which is a string. This field cannot be null, every clone has an ID. The second column is the clone's name. This is also a string but it can be null if a clone was never given a nickname. The third column is their assigned battalion. This field is a string and can be null, as certain clones like commandos and ARCs do not belong to any specific battalion. The last column is Rank. This field is also a string and cannot be null, every clone has a rank.

4-

a.The “first normal form” rule- One point can only be one piece of data. The intersection of all rows and columns are atomic. If multiple pieces of data are in the same position then references to that data point could be confusing, and a user wouldn't know what piece of data to use. If there are multiple pieces of data for a point then they should be seperated into seperate columns like numbered trial results in a science experiment.

b.The “access rows by content only” rule- You should only search a database based on what you are looking for, not where it is. Databases are supposed to organize data and make it easier to locate. If your database is where over what in locating data, your database is not detailed enough. Otherwise the user is not using the organization of the database to his benefit. Locating content based on what it is, is faster and easier.

c.The “all rows must be unique” rule- No duplicate rows, all rows must be unique. This prevents redundancies in a database. If two rows are the same then content can be confused. Data must be identified clearly in order to be clearly identified.