

Robert Lynch

Professor Labouseur

Database Systems – CMPT 308 114

15 September 2016

Lab 2

1. Primary keys are keys in the specific table that identifies a row (record) in the table. For example, the primary key in the Products table is named “pid”. The primary key is the way the database identifies each record. A candidate key is a necessary key for the attributes to work. Without the candidate key the information is cannot be accessed. A superkey is a key that be removed and still remain true.
2. The data types in a database are string, integer, Boolean, array, and object. A string is very similar to a sentence, meaning it can contain any character, null. An integer in a database is the same thing as an integer in Mathematics, meaning it doesn’t have any decimals attached to it. A Boolean is a data type with a true or false value (1 or 0). An array is a very similar to a list, an array could be a list of integers, strings, Booleans, objects, null, or even other arrays.

Name	Age	Sex	21 or Older?
Joe	21	M	TRUE
Jane	20	F	FALSE
Annie	19	F	FALSE

3. The first of the three relational rules is first normal rule. The first normal is states that all fields are atomic, meaning that no field can be divided into smaller values. An example

of this is if a field had a table inside of it (i.e. if the Name field had a table inside for first and last name). This rule is important because it doesn't allow tables to be built inside of one another, making it more and more complicated. The second rule is the access rows by content only. This rule allows users to search for something by saying "show me where xxx shows up". The second rule does not allow the user to say "Show me what is at column x and row y". This rule is important because it gives context to queries and allows the user to get the information he or she intended on. The last rule is the all rows are unique rule. This rule makes each row different than each other. For example, in a database there is not two rows that have the same entity. This rule is important so that there are no duplications in a table. Duplications can cause errors in reports because one entity could have other key (necessary) information about it, but the second one might not.

lab2-CAPdatabase.pages x www.labouseur.com/cou x

www.labouseur.com/courses/db/lab2-CAPdatabase.pdf

Query - postgres on postgres@localhost:5432 *

File Edit Query Favourites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
select *  
from agents;
```

Scratch pad

Output pane

Data Output Explain Messages History

	aid character(3)	name text	city text	commission numeric(5,2)
1	a01	Smith	New York	6.50
2	a02	Jones	Newark	6.00
3	a03	Ferry	Tokyo	7.00
4	a04	Grey	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 2, Col 13, Ch 23 7 rows. 16 msec

Resources

- Chapter 6.1 in our text
- pgAdminIII documentation - <http://www.pgadmin.org/docs/>
- pgAdmin tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/pgadmin>
- SQL tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/sql>

Submitting

Make a PDF document and push your work to your GitHub repository before due date.

1:17 PM 9/10/2016

lab2-CAPdatabase.pages x www.labouseur.com/cou X

www.labouseur.com/courses/db/lab2-CAPdatabase.pdf

Query - postgres on postgres@localhost:5432 *

File Edit Query Favourites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
select *  
from customers;
```

Scratch pad

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	8.00
4	c004	ACME	Duluth	8.50
5	c005	Weyland	Acheron	0.00
6	c006	ACME	Kyoto	0.00

OK. DOS Ln 2, Col 16, Ch 26 6 rows. 17 msec

Resources

- Chapter 6.1 in our text
- pgAdminIII documentation - <http://www.pgadmin.org/docs/>
- pgAdmin tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/pgadmin>
- SQL tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/sql>

Submitting

Make a PDF document and push your work to your GitHub repository before due date

1:17 PM 9/10/2016

lab2-CAPdatabase.pages x www.labouseur.com/cou x

www.labouseur.com/courses/db/lab2-CAPdatabase.pdf

Query - postgres on postgres@localhost:5432 *

File Edit Query Favourites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
select *
from orders;
```

Scratch pad

Output pane

	ordnum integer	mon character(3)	cid character(4)	aid character(3)	pid character(3)	qty integer	totalusd numeric(12,2)
1	1011	jan	c001	a01	p01	1000	450.00
2	1013	jan	c002	a03	p03	1000	980.00
3	1015	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
13	1025	apr	c001	a05	p07	800	720.00
14	1026	may	c002	a05	p03	800	744.00

OK. DOS Ln 2, Col 13, Ch 23 14 rows, 17 msec

Submitting SQL tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/sql>

Make a PDF document and push your work to your GitHub repository before due date

1:18 PM 9/10/2016

lab2-CAPdatabase.pages x www.labouseur.com/cou X

www.labouseur.com/courses/db/lab2-CAPdatabase.pdf

Query - postgres on postgres@localhost:5432 *

File Edit Query Favourites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
select *  
from products;
```

Scratch pad

Output pane

	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	eraser	Newark	200600	1.25

OK. DOS Ln 2, Col 15, Ch 25 8 rows. 31 msec

Resources

- Chapter 6.1 in our text
- pgAdminIII documentation - <http://www.pgadmin.org/docs/>
- pgAdmin tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/pgadmin>
- SQL tag at Stack Overflow - <http://stackoverflow.com/questions/tagged/sql>

Submitting

Make a PDF document and push your work to your GitHub repository before due date

1:17 PM 9/10/2016