

Danny Puckett
CMPT 308 – Database Management
02/20/17
Lab 4

1.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favourites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries

```
/* Danny Puckett Lab 4 CMPT 308 - Database Management 02/20/17 */  
//Question 1.  
select city  
from agents  
where aid in (select aid  
              from orders  
              where cid = 'c006')  
//Question 2.  
select pid, name  
from products  
where pid in (select distinct bid
```

Scratch pad

Output pane

Data Output Explain Messages History

	city text
1	Tokyo
2	Dallas
3	New York

OK. DOS Ln 8, Col 2, Ch 196 113 chars 3 rows. 31 msec

2.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favurites Macros View Help

SQL Editor Graphical Query Builder

Previous queries

```
where pid in (select distinct pid
              from orders
              where aid in (select aid
                           from orders
                           where cid in (select cid
                                          from customers
                                          where city = 'Kyoto'))))
order by pid DESC
--Question 3.
select cid, name
```

Scratch pad

Output pane

Data Output Explain Messages History

	pid character(3)	name text
1	p07	case
2	p05	pencil
3	p04	pen
4	p03	razor
5	p01	comb

OK. DOS Ln 22, Col 1, Ch 588 377 chars 5 rows. 32 msec

3.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favurites Macros View Help

SQL Editor Graphical Query Builder

Previous queries

```
--Question 3.
select cid, name
from customers
where cid in (select distinct cid
              from orders
              where cid not in (select distinct cid
                                from orders
                                where aid = 'a01'))
--Question 4.
```

Scratch pad

Output pane

Data Output Explain Messages History

	cid character(4)	name text
1	c002	Tyrell
2	c003	Allied
3	c004	ACME

OK. DOS Ln 23, Col 1, Ch 603 248 chars

4.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favurites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
//Question 4.
select name, cid
from customers
where cid in (select distinct cid
              from orders
              where pid = 'p07' and cid in (select distinct cid
                                             from orders
                                             where pid = 'p01'))
//Question 5.
select name, pid
```

Output pane

Data Output Explain Messages History

	name text	cid character(4)
1	ACME	c006
2	Tiptop	c001

OK. DOS Ln 32, Col 1, Ch 868 284 chars

5.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favurites Macros View Help

postgres on postgres@localhost:5432

SQL Editor Graphical Query Builder

Previous queries Delete Delete All

```
//Question 5.
select name, pid
from products
where pid in (select distinct cid
              from orders
              where aid = 'a08')
order by pid DESC
//Question 6.
select name, discount, city
from customers
```

Output pane

Data Output Explain Messages History

name text	pid character(3)
--------------	---------------------

OK. DOS Ln 41, Col 1, Ch 1169 149 chars 0 rows. 32 msec

6.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favurites Macros View Help

SQL Editor Graphical Query Builder

Previous queries

```
//Question 6.
select name, discount, city
from customers
where cid in (select distinct cid
              from orders
              where aid in (select aid
                           from agents
                           where city = 'Tokyo'
                           or city = 'New York'))
;
//Question 7.
select name, cid
```

Output pane

Data Output Explain Messages History

	name text	discount numeric(5,2)	city text
1	Tiptop	10.00	Duluth
2	Tyrell	12.00	Dallas
3	Allied	8.00	Dallas
4	ACME	0.00	Kyoto

OK. DOS Ln 49, Col 1, Ch 1335 294 chars 4 rows

7.

Query - postgres on postgres@localhost:5432 - [C:\Users\Danny Puckett\Desktop\Databases repo\fourth lab.sql]

File Edit Query Favurites Macros View Help

SQL Editor Graphical Query Builder

Previous queries

```
//Question 7.
select name, cid
from customers
where discount in (select discount
                  from customers
                  where city = 'London'
                  or city = 'Duluth' )
;
/* if we are actually asking for similar discounts between **AGENTS** in Duluth or London mixed up discount for comissionPct...
select name, aid
```

Output pane

Data Output Explain Messages History

	name text	cid character(4)
1	Tiptop	c001
2	ACME	c004

OK. DOS Ln 59, Col 1, Ch 1646 192 chars 2

8.

Tell me about check constraints:

What are they?

Check constraints are the limitations of value ranges that can be placed in a column. This is done so we can query more specified information.

What are they good for?

They are good because they provide more concise data outputs! It gives a database manager and their clients more access control within the usage of information in their databases.

What's the advantage of putting that sort of thing inside the database?

The advantage of having this is that we can fully utilize the capabilities of the relational model implemented by the database configurations! We have the ability to fully utilize the relational math inclusively and we can create concise queries.

Make up some examples of good uses of check constraints and some examples of bad uses of check constraints.

To find a good check constraint lets use an idea of purchase orders...

A good check constraint could be 'list all orders that are above 100\$ USD, then supply these customers with a 20\$ USD store credit' similar to an AutoZone customer appreciation credit.

Another good check constraint could be 'list all customers who spent 400\$ USD within date of 09/15/16 and 12/24/17, then supply these customers with a coupon toward a FREE Holiday Item' similar to a ShopRite customer appreciation credit.

Bad uses of check constraints would be a different sort of application, maybe its too redundant or something that returns no values at all.

Possibly a check constraint of all products that have a price, OR a check constraint of all products that have a price greater than 0\$USD... Both of these check constraints would be examples of Bad usage of check constraints...

Explain the differences in your examples and argue your case.

The difference is that a Good check constraint is concise and is tangibly usable to a database manager and/or their client, in opposition a Bad check constraint is vague or too broad, and therefore is not very helpful toward examination or implementation of concise information usage, and has little value. If you are to utilize check constraints, you will want to do so for a specific reason or reasons, so the proper usage of check constraints is to be as formative of the information as you possibly can be for the greatest utilization of said information.