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1.31.17
Lab 2: CAP Database

The image displays two screenshots of the pgAdmin 4 web interface, showing a PostgreSQL database environment. The left sidebar shows the 'Servers' tree with 'PostgreSQL 9.6' selected, and the 'Databases' tree with 'CAP' selected. The main pane shows the 'Query-1' window with SQL statements for displaying example data.

Top Screenshot: The SQL query is executed, and the 'Data Output' tab shows the results of the query. The results are displayed in a table with columns: aid character, name text, city text, and commissi... numeric ...

aid character	name text	city text	commissi... numeric ...
a01	Smith	New York	6.5
a02	Jones	Newark	6
a03	Perry	Tokyo	7
a04	Grey	New York	6
a05	Otasi	Duluth	5
a06	Smith	Dallas	5
a08	Bond	London	7.07

Bottom Screenshot: The SQL query is executed, and the 'Data Output' tab shows the results of the query. The results are displayed in a table with columns: cid character, name text, city text, and discount numeric ...

cid character	name text	city text	discount numeric ...
c001	Tiptop	Duluth	10
c002	Tyrell	Dallas	12
c003	Allied	Dallas	8
c004	ACME	Duluth	8.5
c005	Weyland	Risa	0
c006	ACME	Kyoto	0

pgAdmin 4

File Object Tools Help

Browser

- Servers (4)
 - PostgreSQL 9.3
 - PostgreSQL 9.4
 - PostgreSQL 9.5
 - PostgreSQL 9.6
 - Databases (3)
 - CAP
 - Casts
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 - Event Triggers
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 - Schemas (1)
 - public
 - postgres
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 - pgAgent Jobs

Dashboard Properties SQL Statistics Dependencies Dependents Query-1

AP on postgres@PostgreSQL 9.6

```
-- SQL statements for displaying the example data
select *
from Customers;
select *
from Agents;
select *
from Products;
select *
from Orders;
```

Data Output Explain Messages History

	ordnumber integer	month character	cid character	aid character	pid character	qty integer	totalusd numeric ...
<input type="checkbox"/>	1011	Jan	c001	a01	p01	1000	450
<input type="checkbox"/>	1012	Jan	c002	a03	p03	1000	880
<input type="checkbox"/>	1015	Jan	c003	a03	p05	1200	1104
<input type="checkbox"/>	1016	Jan	c006	a01	p01	1000	500
<input type="checkbox"/>	1017	Feb	c001	a06	p03	600	540
<input type="checkbox"/>	1018	Feb	c001	a03	p04	600	540
<input type="checkbox"/>	1019	Feb	c001	a02	p02	400	180
<input type="checkbox"/>	1020	Feb	c006	a03	p07	600	600

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AP on postgres@PostgreSQL 9.6

```
-- SQL statements for displaying the example data
select *
from Customers;
select *
from Agents;
select *
from Products;
select *
from Orders;
```

Data Output Explain Messages History

	pid character	name text	city text	quantity integer	priceusd numeric ...
<input type="checkbox"/>	p01	comb	Dallas	111400	0.5
<input type="checkbox"/>	p02	brush	Newark	203000	0.5
<input type="checkbox"/>	p03	razor	Duluth	150600	1
<input type="checkbox"/>	p04	pen	Duluth	125300	1
<input type="checkbox"/>	p05	pencil	Dallas	221400	1
<input type="checkbox"/>	p06	trapper	Dallas	123100	2
<input type="checkbox"/>	p07	case	Newark	100500	1
<input type="checkbox"/>	p08	eraser	Newark	200600	1.25

Total query runtime: 181 msec.
8 rows retrieved.

Assignment #2

Primary Key- The chosen candidate key, so by definition, every primary key is also a candidate key as well.

Candidate Key- Essentially a minimal super key which means it's a super key with no redundant attributes. If any of these attributes are removed, the remaining attributes will no longer form a super key.

Super Key- A set of attributes such that the values of the attributes uniquely identify one entity in the given entity set.

Assignment #3

Example of the different data types within a given table. Being nullable elicits that the value can in fact, can have no nothing within it whatsoever. NN denotes non-nullable below.

Football Players							
Frstname	Lstname	Gpa	Height	Weight	Touchdown's	Classyear	Eligible
String, NN	String, NN	Float	Int, NN	Int, NN	Int	Int	Boolean, NN

Assignment #4

First Normal Rule- This rule vindicates the uniqueness of a data table. It explains that the intersection of a row and column cannot be multi valued. This means that each attribute only contains a single value of data for that given domain. This helps reduce the inconsistencies of data.

Access rows by content only (what not where)- The significance behind this rule is that rows must be accessed by content only, rather than location. The reason being, if data were to be added or deducted from the table, this could potentially shift the placement of the other data values. Searching data by location deems to be a very unreliable way of querying due to this possibility of location change.

All rows must be unique- This rule states that for each table, all rows must be unique. No two rows within the same table can have the same value. If two rows had the same value within a table, they would become impossible to call upon or select out from the database.