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Database Management

Lab2

2. A superkey represents a combination of fields which can uniquely identify a row. A primary key acts as an identifier for several rows, and a candidate key acts as an identifier for only one. A table can have more than one candidate key, but only one primary key.

3. The Data types in PostgreSQL include Boolean, Int or integers, numeric, Char, and Varchar. Each of these different data types represent a different kind of data. A Boolean data type represents a yes/no value, as in one answering a question, for example. An Int data type represents a number or string of numbers. Numeric represents a single number, for example user ratings on a product from 1-5. Char represents a fixed string of characters whereas Varchar represents the same string, but with a variable number of characters. If a table had a list of products sold, A Boolean could be used to represent the column of in stock, or not, an integer could be used to represent the number in stock, a numeric data type could represent the customer rating from 1-5, and the Varchar could represent the products name.

4. The normal form rule says that each column in a database must contain atomic values, or values which cannot be broken down further. This is important, because when searching for data, there cannot be ambiguity in which data you are looking for because both are stored in the same place. This rule also states that the data must be stored in rows and columns. The Access row by

content only, is important because rows aren't ordered in any specific way, so to access the

information in a table by asking for "the second column, and the third row" would not work,

seeing as the content contained in that space is not defined. Instead, it is necessary that

information is searched out by the content, not its placement in the table since it has one. The all

rows must be unique rule is important because if there was redundancy in rows, then the

database would not know which information to bring up, and there can't be ambiguity when

searching for data.

File   Edit   Query   Favourites   Macros   View   Help

SQL Editor   Graphical Query Builder

Previous queries

```
select *
from customers;
```

Output pane

Data Output   Explain   Messages   History

	cid character(4)	name text	city text	discount 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

File   Edit   Query   Favourites   Macros   View   Help

☐ CAP3 on postg

SQL Editor   Graphical Query Builder

Previous queries

```
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	eraser	Newark	200600	1.25

File   Edit   Query   Favourites   Macros   View   Help

□ CAP3 on postgres@loca

SQL Editor   Graphical Query Builder

Previous queries

```
select *
from orders;
```

Output pane

Data Output   Explain   Messages   History

	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	880.00
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.

File   Edit   Query   Favourites   Macros   View   Help

☐ CAP3 on postgres

SQL Editor   Graphical Query Builder

Previous queries

```
select *
from agents;
```

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	Perry	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.

Ask me anything