Faith Matthew

Lab 2

1/27/17

1) Customers

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

Agents

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

Products

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

Orders

ordnumb... integer	month character	cid character	aid character	pid character	qty integer	totalusd numeric ...
1012	Jan	c002	a03	p03	1000	880
1015	Jan	c003	a03	p05	1200	1104
1016	Jan	c006	a01	p01	1000	500
1017	Feb	c001	a06	p03	600	540
1018	Feb	c001	a03	p04	600	540
1019	Feb	c001	a02	p02	400	180
1020	Feb	c006	a03	p07	600	600
1021	Feb	c004	a06	p01	1000	460
1022	Mar	c001	a05	p06	400	720
1023	Mar	c001	a04	p05	500	450
1024	Mar	c006	a06	p01	800	400
1025	Apr	c001	a05	p07	800	720
1026	May	c002	a05	p03	800	744

2) The super key is a column or set of columns that ensures every row will be unique. The candidate key is a minimal super key, it's the minimum number of columns needed to uniquely identify each row. The primary key is the chosen candidate key that maintains uniqueness in a table.

3) We assign data types to each column in a table. A data type just defines what type of data should belong in that specific column. There are plenty of datatypes such as text, VARCHAR, int, DATE, DATETIME and so on and so forth

Table Name: People	Data Type
Name	text NOT NULL
Favorite Color	text NULL
DOB	date NOT NULL

4) a) The first normal form rule states that the data at the intersection of all rows and columns should have no structure/be indivisible. There should never be more than one piece of data stored at an intersection. This improves the search function.

Name	DOB
Faith Matthew	1/15/1997

Its better if we have a column dedicated to first names and another column dedicated to last names. This way we can search for students or organize them by last names.

b) The second rule states that we should access the rows by content only. So, we can't issue a query asking for the nth row of a table. A database can be reordered therefore, the nth row can always

change. It's like a professor taking attendance. Often, students sit in the same seats after a week of class being in session. If the Professor takes attendance, he'll call a name and look towards the spot the student usually sits. There's always one student who likes to sit in a seat they don't usually sit in. This can cause a problem for the Professor, perhaps even forcing him to call the student's name to receive a response. The professor calls for **what** he's looking for vs **where**.

c) The third and final rule states that all rows should be unique. Without any duplications, the database becomes more searchable. Marist has plenty of students. What happens if two students happen to have the same first and last name? We can distinguish between the two with CWID numbers. Therefore, having a table with first names, last names, and CWIDs is better than a table with just first and last names.