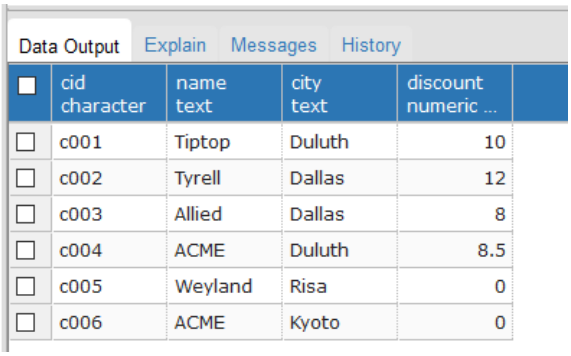
John Boyle – Database Systems – Lab 2

Part 1

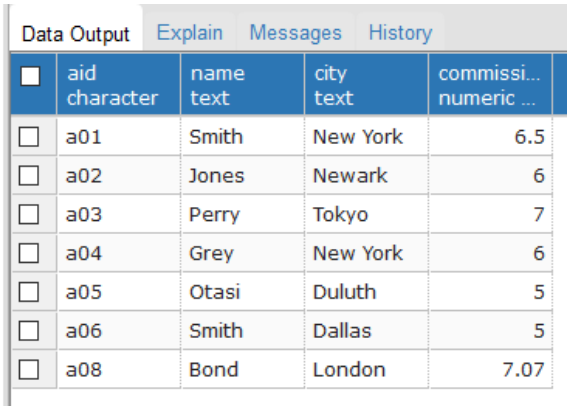
First Query:



Data Output | Explain | Messages | History

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

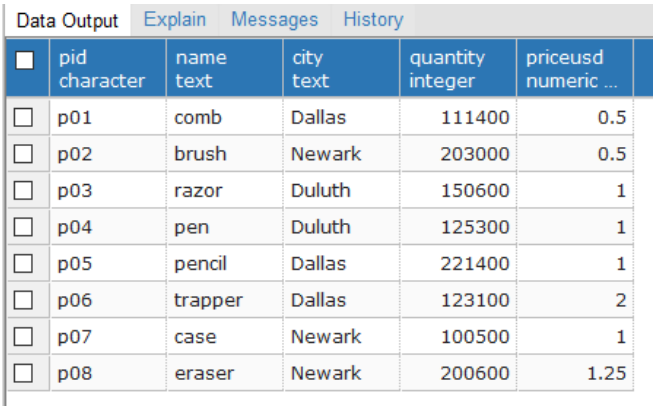
Second Query:



Data Output | Explain | Messages | History

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

Third Query:



Data Output | Explain | Messages | History

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

Fourth Query:

Data Output | Explain | Messages | History

ordnumb... integer	month character	cid character	aid character	pid character	qty integer	totalusd numeric ...
1011	Jan	c001	a01	p01	1000	450
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

These queries look exactly the same as in the cap4.pdf.

Part 2

The distinction between primary, candidate, and super keys.

A candidate key is a set of columns in a table that have uniqueness for each row. A table can have more than one candidate key. A primary key uniquely identifies every row in a database table. There can only be one. A super key is a superset of the candidate key. If you add a column to a candidate key then it becomes a super key. A superset key is a candidate key with extra unnecessary columns in it.

Part 3

Short Essay

There are numerous amounts of data types used in databases, with countless different situations on when each one is used. A data type defines what kind of value a column can contain. In a table, each column is required to have a name and a specific data type. Some generally used data types are: BOOLEAN, which denotes true or false values, INTEGER, which is a number, CHARACTER, which is a character string, and many others.

There are countless different circumstances where a table is corrected. Whether it be people subscribed to a magazine, an order list for amazon, or anything else. In this certain situation, we are

going to make a database of NFL Wide Receiver stats for the 2016 season. The name of this table is going to be “WR Statistics.” There will be 5 different fields, and the field names will be “Player Name”, “Team”, “# of Receptions”, “Yards Gained”, and “Touchdowns.” For “Player Name”, the data type will be the CHARACTER type, where a string of the players name will be inserted. This is not nullable, as every player must have a name. For “Team”, the CHARACTER data type will be used again, this is also not nullable, as they must have played opn a team. For “# of Receptions”, “Yards Gained”, and “Touchdowns” – the data type will be INTEGER, where an integer of the statistics this player earned will be entered. These three are nullable, as they can have amounted to neither of the three.

Part 4

The first normal form rule is a property in a database where a relation is in first normal form if and only if the domain of each attribute contains indivisible values, and the values contain only a single value from that domain. Ensure that there are no repeating groups of data and that there is a primary key. This is important because it makes the table easier to navigate, as there will be little to no repeating values. The access rows by content only rule is a rule where a user cannot take data by pointing out a certain box in the table (ex: the second row in “this” column). Instead they must access it by targeting the information in that field. This is important because it makes sure that user is accessing the content that they want to access, and not picking the incorrect box. The all rows must be unique rule is a rule where there can be no repeating rows in a column. This is important because if the user is looking for something specific, there will be no possibility of having more than one entity coming up in the search for that entity.