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Lab 2
Due Wednesday February 3rd, 2016 @ midnight

1. Screen shots are uploaded in repository

2. Explain the distinctions amongst the terms : primary key, candidate key, super key

A primary key is what makes every row in the table original or unique. It is what can be used to link different tables together. A super key is a set of columns or attributes that makes every row unique. A candidate key is a minimum set set of super keys that make every row unique.

3. Write a short essay on data types. Select a topic for which you might create a table. Name the table and list its fields (columns). For each field, give its data type and whether or not its nullable.

A topic for which a database and, subsequently, a table would be created is for a pizzeria. There would be a database created for the overall company and there would be various tables needed for employees, sales, etc. I am going to take a look at the sales table that would be created. Within the sales table there would be many different field. Some being: customerNumber, orderNumber, productId, price, discountApplied, employeeId, dateSold. For each of the column names the only one that is nullable would be discount applied because not all sales would have a discount applied. As for the data types of the various fields, the following would be classified as an integer (customerNumber, orderNumber, productId, price, discountApplied, employeeId), the following would be classified as a date type (dateSold). These different data types help store the data in a very accurate and efficient manner.

4. Explain the following relational rules with examples and reasons why they are important:

- The “first normal form” rule: the table needs to fulfill admicity, everything in the table needs to be isolated and broken down to its simplest form. In other words each entry needs to have a specific meaning and reason for being there. This is important because you can not have duplicates.

- The “access rows by content only” rule: you can ask “what? NOT where?”, in other words you should be able to ask the system what your looking for, not a single location that you are looking for. It shouldn't depend on the location of the data needed, just depends on what you are looking for. This is important because you will always be able to find the information requested even if the location changed.

- The “all rows must be unique” rule: each row in a table must be unique of the others, otherwise a query will result in incorrect information based upon what was originally asked of it.