Reynaldo Alvarez
Professor Rivas-Perea
Database Management
04 Feburary 2016

Lab 2

2) Explain the distinctions among the terms Primary key, Candidate key, and Super key.

A primary key is what brings all tables together in its own unique column that is never repeated anywhere else. In the queries that we took a screenshot of displays the primary key as the ordno (order number). It has its own unique number for every order that is placed using all other information in the database. The super key is different in the sense that it has a unique set of attributes, but in a tuple. The distinction between a super key and candidate key is very simple to understand. A candidate key has the same concept, however is unique with the least amount of attributes in a tuple.

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 it is nullable.

Data types are the different attributes that specify the different types of data in a table. Data types allows tables to express their data in a unique manner. For example, if I was creating a table of users and how long they are logged in, I would need to use different data types for getting the date and time of the user. I would name the table Users. First column would be the Users username with the data type varchar(10) because it uses strings and has a max count of 10 letters for the username. Next column would be the password that would contain the data type text so that it can contain strings and integers for different user combinations. After I would include email with data type text so that users can input letters. Finally I would add DateLogin with the data type date that saves the day they logged in and TimeLogin that holds the data type time to save the time the user logged in. Non of these data types are nullable because I did not keep the default null value and it would not suit any of my columns. This is how I would create a table.

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

First Normal Form Rule:

Also said as 1NF is when all data attributes contain atomic values, which means that the attributes cannot be divided and they also only have a single value from that data attribute.

Access Rows By Content Only Rule:

The attributes in a table must have a restriction that follows a specific path way. This means that in order to access an attribute you must access this tuple by bypassing an attribute. For example, a password follows this rule.

All Rows Must Be Unique Rule:

All rows must be unique is in accordance to the super key. This means no attribute repeats.