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January 31, 2017
CMPT 308-111

Lab 2

2.) Primary, candidate and superkey.

Superkey's are columns or a set of columns that ensure every row will be unique. A candidate key is a minimal superkey. A primary key is a chosen 'candidate' key. Each table can only have one primary key.

3.) Data types

Data types are important because they specify what kind of values the columns can contain. An example table named Department Members might contain fields for employee serial number, first name, last name and phone number. Employee serial number would be integer and not nullable. First and last name fields are text, also not nullable. Phone number however would need to be a bigint (assuming we are allowing for international numbers). Phone number could be a nullable field if the employee does not have an office.

4.) Relational Rules

The "first normal form" rule states that each component must contain data with no structure. For example, if our CAP4 database had multiple discount values for each cid, we couldn't filter on one cid and come back with only 1 discount; many values would be found instead. The "access rows by content only" rule is the "what" not "where" rule. Access content by what it is, not where it's located. Locations in tables are not fixed as databases will naturally change. The "all rows must be unique" rule ensures referential integrity.