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Database Management  
Lab 2  
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2. Primary key is usually a combination of attributes that are assigned to uniquely identify a record within a database. A candidate key is usually a combination of fields that are not used as a primary key. While a super key is combination of attributes that are used in order to uniquely identify a record in relation to a database.

3. Creating a database can prove to be beneficial to nearly all businesses. Hypothetically, a rudimentary database is created for a grocery store. Within their database there will be multiple tables used for keeping track of suppliers, products, orders, etc. Within the databases, if a table containing information regarding products were created it would contain information such as the product id, product type, supplier id, product name, price, and quantity. The primary key in this case would be the product id. The product type and supplier id will both be assigned as foreign keys because they primary keys for another table. The remaining fields on the table are candidate keys but more specifically superkeys because they identify the constituent columns in order to ensure uniqueness. The primary keys and foreign keys should not be nullable since they are both used in order to uniquely identify rows within the table. The other tables can be nullable, however, in order to ensure data consistency it would be advised to not have null fields within a table.

4a. First normal form is a rule used in order to organize data within a database. The parameters for this rule include; the elimination of repeating groups on a sole table, creating an individual table for each set of data, and identifying data within the table and determining its relationship in regard to the primary key. An example of an instance that may violate the first normal form rule can potentially exist if there are multiple attributes for one designated field. This can be avoided by creating a new row with identical information with the exclusion of the data that is different from the previous version.

4b. The access rows by content only rule is used in order to ensure that the user doesn't use row numbers in order to refer to content due to the fact that data is always being entered and is constantly changing. For example, the user can't say: the second row from the top. Instead, they should access the content based on what row it lays in.

4c. All rows must be unique rule is used in order to ensure that data redundancy does not occur. This rule benefits the user making sure that there aren't any duplicates in the database.