Single Table Queries (Part 1)

**1) What is a primary key constraint? What two other constraints is it equivalent to?**

-A primary key constraint enforces the uniqueness of rows and disallows *NULLs* in the constraint attributes. Each unique set of values in the constraint attributes can only appear once in the table. The two other constraints that are equivalent to it are the UNIQUE constraint and the NOT NULL constraint.

**2) What is a nullability constraint? What does it prevent?**

-A nullability constraint or a NOT NULL constraint ensures that a column can’t have a NULL value.

**3) What is a unique constraint? What does it prevent?**

-A UNIQUE constraint ensures that all values in a column are different. This prevents data repetition.

**4) What is a foreign key constraint? What does it allow?**

-A foreign key constraint uniquely identifies a row or record in another table. It is used to link two tables together by referring to the primary key in the referenced table. This allows for the restriction of values in the foreign key’s columns to those that exist in the referenced columns.

**5) What is a check constraint? What does it allow?**

-A CHECK constraint ensures that all the values in a column satisfies a specific condition. This allows the database to be updated only when the checked condition evaluates to true (or unknown).

**6) What is a default constraint? What does it allow?**

-A default constraint sets a default value for a column or row when no value is specified. This constraint allows for the insertion of system values as data into tables such as the date and time.

**7) What is domain integrity? This is not in your textbook, but it’s important.**

-Domain integrity is the assurance that all data in a field contain values that are established by the values of the attributes such as integer, decimal, and character. For example, if the defined data type for a column is an integer the domain integrity insures that only integer values be inserted into that column.

**8) What is the difference between the where and the having clauses? How are they alike?**

-The where clause is used to filter records and used to extract only those records that fulfill a specified condition. It filters the rows returned by the from phase. The having clause is a group filter and only returns records where the HAVING predicate evaluates to TRUE. The HAVING cause was added to SQL because the WHERE keyword could not be used with aggregate functions. These clauses are alike in that they are both filters used to return records from a query.

**9) What SQL operator has the highest precedence? What SQL operator has the lowest precedence?**

-In SQL, the operator that has the highest precedence are parenthesis “()”. The operator that has the lowest precedence is the assignment operator “=”

**10) Yes or no: In the SQL standard, is NULL equal to NULL? Why or why not?**

-No because Null is essentially an unknown value, so stating “is an unknown equal to another unknown” is arbitrary.