SQL Notes

1. REPLACE
   1. Takes in 3 parameters (string\_expression, substring to be replaced, substring that is replacing)
   2. Returns (n)varchar type
2. CEILING
   1. Takes in a number as a parameter
   2. Returns the closest integer greater than the parameter value
3. SUM
   1. Function takes in a column’s data as a parameter
   2. After SELECT, but before WHERE
4. AVG
   1. Function takes in a column’s data as a parameter
   2. After SELECT, but before WHERE
   3. Takes in a collection of values either ALL or DISTINCT, and
5. GROUP BY
   1. Command to group the result of an aggregate function by the factor-parameter
   2. Comes after SELECT and an aggregate function
   3. Creates a list
6. COUNT
   1. Very particular – used in the Select Statement
   2. Takes in a collection of values either ALL or DISTINCT, and
7. LIKE
   1. Takes in % (any substring of characters) or \_ (a single character)
8. HAVING
   1. Can be used with aggregate data
9. WHERE
   1. Cannot be used with aggregate data
   2. The conditional expression can have any number of predicates (ie, WHERE lastname LIKE ‘s%a%’; WHERE Key =1 OR 2 OR Key =3)
      1. WHERE lname BETWEEN 10 AND 20, or WHERE lname IN (name1,…,nameK)
10. Order of operations:
    1. SELECT before FROM
    2. JOIN BEFORE WHERE
11. Common math functions in SQL
    1. ABS(X) -absolute value
    2. MOD(X) -modulus
    3. CEILING(X) – returns the closest integer that is greater than or equal to X
    4. FLOOR(X)- returns the closest integer that is less than or equal to X
    5. ROUND(X, decimal places)
12. Cases in SQL
    1. CASE can take in a set of mathematical expressions or Boolean expressions to determine a result
    2. CASE initial expression
       1. WHEN condition THEN result expression 1
       2. WHEN condition THEN result expression 2
       3. …
       4. WHEN condition THEN result expression K
       5. Else Condition
       6. End,
13. JOINS
    1. FROM clause implicitly takes in a join, whether you specify it or not
       1. If join is unspecified then it takes in an empty table in the join argument