DB assignment:

1) What is Database ?

Ans) Data base is a tool used to manage data.

2) What is Table?

Table is a basic storage unit in the database used to store data.Table has Header+Body.

Header = Structure +Overhead (Managed by system).

Structure = Column name + Data type.

3) What is Column?

Columns are defined to hold a specific type of data, such as dates, numeric, or textual data.In the simplest of definitions a column is defined by its name and data type. The name is used in SQLstatements when selecting and ordering data, and the data type is used to validate information stored.

4) What is Row ?

A table can contain zero or more rows. When there are zero, it said to be empty. There is not practical limit on the number of rows a table can hold; however, remember the table’s primary key may have some influence on this.There is no guarantee that the rows in a table are stored in a particular order. Use the ORDER BY clause to do so.

5) Example for Inner join?

The INNER JOIN creates a new result table by combining column values of two tables (table1 and table2) based upon the join-predicate. The query compares each row of table1 with each row of table2 to find all pairs of rows which satisfy the join-predicate. When the join-predicate is satisfied, column values for each matched pair of rows of A and B are combined into a result row.

Select table1.column1,table2.column2 From table1 INNER JOIN table2 ON table1.common\_field = table2.common\_field;

6) Example for Left outer join ?

LEFT JOIN returns all rows from the left table, even if there are no matches in the right table. This means that if the ON clause matches 0 (zero) records in right table, the join will still return a row in the result, but with NULL in each column from right table.This means that a left join returns all the values from the left table, plus matched values from the right table or NULL in case of no matching join predicate.

SELECT column\_name(s) FROM table1 RIGHT JOIN table2 ON table1.column\_name=table2.column\_name;

7) Example for Right Outer join?

A RIGHT OUTER JOIN is one of the Joint Operation that allow you to specify a JOIN clause. It preserves the unmatched rows from the second (right) table, joining them with a NULL in the shape of the first (left) table. A LEFT OUTER JOIN B is equivalent to B RIGHT OUTER JOIN A, with the columns in a different order.

8) Example for Max, sum, Avg ?

* SELECT MAX returns the maximum value for a column.

SELECT MAX(column-name) FROM table-name

* SELECT SUM returns the sum of the data values.

SELECT SUM(column-name) FROM table-name

* SELECT AVG returns the average of the data values.

SELECT AVG(column-name)FROM table-name

9) Example for Group by?

* The GROUP BY clause groups records into summary rows.
* GROUP BY returns one records for each group.
* GROUP BY typically also involves aggregates: COUNT, MAX, SUM, AVG, etc.
* GROUP BY can group by one or more columns

Syntax: SELECT column-names FROM table-name WHERE condition GROUP BY column-names.

10) Example for Having ?

HAVING filters records that work on summarized GROUP BY results.HAVING applies to summarized group records, whereas WHERE applies to individual records.Only the groups that meet the HAVING criteria will be returned.HAVING requires that a GROUP BY clause is present.WHERE and HAVING can be in the same query.

Example : SELECT column-names FROM table-name WHERE condition GROUP BY column-names HAVING condition

11) Example for Where condition ?

To limit the number of rows use the WHERE clause.The WHERE clause filters for rows that meet certain criteria.WHERE is followed by a condition that returns either true or false.WHERE is used with SELECT, UPDATE, and DELETE.

SELECT column-names FROM table-name WHERE condition

Example for Primary key ?

Primary keys must contain UNIQUE values. A primary key column cannot contain NULL values.

Most tables should have a primary key, and each table can have only ONE primary key.

Example for Foreign key ?

A FOREIGN KEY in one table points to a PRIMARY KEY in another table.

Finding second highest salary from row table?