8. Queries on Joins and Correlated Sub-Queries

Joint Multiple Table (Equi Join): Some times we require to treat more than one table as though manipulate data from all the tables as though the tables were not separate object but one single entity. To achieve this we have to join tables.Tables are joined on column that have dame data type and data with in tables.

The tables that have to be joined are specified in the FROM clause and the joining attributes in the WHERE clause.

Algorithm for JOIN in SQL:

1. Cartesian product of tables (specified in the FROM clause)
2. Selection of rows that match (predicate in the WHERE clause)
3. Project column specified in the SELECT clause.

1. Cartesian product:-

Consider two
table
student
and course
Select
B.*,P.*
FROM student B, course P;

2. INNER JOIN:

Cartesian product
followed by
selection
Select
B.*,P.*
FROM
student B,
Course P
WHERE
B.course #
P.course # ;

3. LEFT OUTER JOIN:

LEFT OUTER JOIN = Cartesian product + selection but include rows from the left table which are unmatched pat nulls in the values of attributes belonging to th e second table

Exam:

Select B.*,P*
FROM student

B left join
course p ON
B.course #
P.course #;

4. RIGHT OUTER JOIN:

RIGHT OUTER JOIN = Cartesian product + selection
but include rows from right table which are unmatched

Exam:

Select B.*,P.*
From student B
RIGHT JOIN
course P B.course#
= P course # ;

5. FULL OUTER JOIN

Exam
Select B.*,P.*
From student B FULL JOIN course P On B.course # = P course #