Table Joins.

* joins are used to combine two table records with some columns name.
* Joins are show the records to combine more then one .

Types of Joins.

* CROSS JOIN
* INNER JOIN
* LEFT OUTER JOIN
* RIGHT OUTER JOIN
* FULL OUTER JOIN

CROSS JOIN : - Cross Join is used to combine all possibilities of the multiple tables and returns the output, which contain each row from all the selected tables. The CROSS JOIN, further known as CARTESIAN JOIN that allows us to produce the Cartesian product of all related tables.

The Cartesian product can be described as all existing rows in the first table multiplied by all rows in the second table.

Syntax1 : - SELECT column-lists FROM Table1 CROSS JOIN Table2;

Example : - book\_management\_db=# select \*from student Cross join course;

in my student table 17 records and course table 8 records exits .the upper sql commands print the 17\*8 records.

Syntax2 : - The below syntax is similar to the above syntax as we did not use the Cross Join keyword:

SELECT [column\_list|\*] FROM Table1, Table2;

Example :- book\_management\_db=# select std\_name,course\_name from student,course;

Syntax3 :- we can use an INNER JOIN clause with the condition that always analyzes toward exact duplicate of the cross join:

SELECT \* FROM Table1 INNER JOIN Table2 ON true

Example :- book\_management\_db=# select \*from student inner join course on true;

2.INNER JOIN.

Inner Join clause creates a new table (not physical) by combining rows that have matching values in two or more tables. This join is based on a logical relationship (or a common field) between the tables and is used to retrieve data that appears in both tables.

The Join condition returns the similar rows between the tables described in the Inner condition.

Syntax : -SELECT [column\_list |\*] FROM table1 INNER JOIN table2

ON table1.column\_name=table2.column.name;

Example : - select std\_roll\_no,std\_name,course\_name from student inner join course on student.c\_id = course.course\_id;

3.LEFT OUTER OR LEFT.

LEFT JOIN returns all the rows from the table on the left even if no matching rows have been found in the table on the right. When no matching record found in the table on the right, NULL is returned.

book\_management\_db=# select course\_name,course\_id,std\_name,std\_roll\_no from course left outer join student on course.course\_id = student.c\_id;

course\_name | course\_id | std\_name | std\_roll\_no

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B A | B A arts | AAA | 441

b-tech computer science | b-tech cs | BBB | 472

b-tech computer science | b-tech cs | ccc | 221

b-tech information technology | b-tech it | ddd | 321

b-tech information technology | b-tech it | eee | 421

b-tech information technology | b-tech it | ffff | 621

b-tech | b-tech ee | gggg | 105

b-tech | b-tech ee | puja | 705

b-tech | b-tech ee | ravi | 205

b-tech | b-tech ee | raja | 305

b-tech | b-tech ee | mjnhbg | 405

b-tech | b-tech ee | aweds | 505

b.pharma | pharma pci | nitu | 35

mca LE | mca le | rahul | 2051

mca LE | mca le | rajaravi | 210

mca | mca 01 | mjvfgnhbg | 45

b-tech | b-tech ee | aweds | 1405

mba Human resources | mba hr | |

(18 rows)

4.RIGHT OUTER OR RIGHT.

RIGHT JOIN returns all the columns from the table on the right even if no matching rows have been found in the table on the left. Where no matches have been found in the table on the left, NULL is returned. RIGHT outer JOIN is the opposite of LEFT JOIN.

Example :-

book\_management\_db=# select std\_roll\_no as Roll\_Number,std\_name as Name,age(now(),std\_dob) as DOB,course\_name,course\_id from student right join course on student.c\_id = course.course\_id;

roll\_number | name | dob | course\_name | course\_id

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441 | AAA | 21 years 11 mons 29 days 16:12:34.631492 | B A | B A arts

472 | BBB | 25 years 5 mons 18 days 16:12:34.631492 | b-tech computer science | b-tech cs

221 | ccc | 19 years 3 mons 3 days 16:12:34.631492 | b-tech computer science | b-tech cs

321 | ddd | 22 years 10 mons 16:12:34.631492 | b-tech information technology | b-tech it

421 | eee | 23 years 6 mons 10 days 16:12:34.631492 | b-tech information technology | b-tech it

621 | ffff | 16 years 6 mons 10 days 16:12:34.631492 | b-tech information technology | b-tech it

105 | gggg | 19 years 4 mons 22 days 16:12:34.631492 | b-tech | b-tech ee

705 | puja | 17 years 6 mons 6 days 16:12:34.631492 | b-tech | b-tech ee

205 | ravi | 24 years 8 mons 13 days 16:12:34.631492 | b-tech | b-tech ee

305 | raja | 14 years 3 mons 16:12:34.631492 | b-tech | b-tech ee

405 | mjnhbg | 15 years 5 mons 7 days 16:12:34.631492 | b-tech | b-tech ee

505 | aweds | 23 years 10 mons 24 days 16:12:34.631492 | b-tech | b-tech ee

35 | nitu | 17 years 6 mons 6 days 16:12:34.631492 | b.pharma | pharma pci

2051 | rahul | 24 years 8 mons 13 days 16:12:34.631492 | mca LE | mca le

210 | rajaravi | 14 years 3 mons 16:12:34.631492 | mca LE | mca le

45 | mjvfgnhbg | 15 years 5 mons 7 days 16:12:34.631492 | mca | mca 01

1405 | aweds | 23 years 10 mons 24 days 16:12:34.631492 | b-tech | b-tech ee

| | | mba Human resources | mba hr

(18 rows)

5.FULL JOIN.

The FULL OUTER JOIN keyword returns all records when there is a match in left (table1) or right (table2) table records. FULL OUTER JOIN and FULL JOIN are the same.

Example : -

book\_management\_db=# select std\_name,c\_id,course\_id,course\_name from student full join course on c\_id = course\_id;