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DIV: SE A (A3) COMPS

EXPERIEMENT 7

AIM: Perform Join operations.

THEORY:

CROSS JOIN: In this join, the result set appeared by multiplying each row of the first table with all rows in the second table if no condition introduced with CROSS JOIN. This kind of result is called as Cartesian Product.

In MySQL, the CROSS JOIN behaves like JOIN and INNER JOIN of without using any condition.

SYNTAX:

```
SELECT table111.*,table113.* FROM table111 CROSS JOIN table113 WHERE  
table111.id=table113.id;
```

NATURAL JOIN: The NATURAL JOIN is such a join that performs the same task as an INNER or LEFT JOIN, in which the ON or USING clause refers to all columns that the tables to be joined have in common.

The MySQL NATURAL JOIN is structured in such a way that, columns with the same name of associate tables will appear once only.

SYNTAX:

```
SELECT id, aval1, cval1 FROM table111 NATURAL JOIN table113;
```

INNER JOIN: The INNER JOIN keyword selects records that have matching values in both tables.

SYNTAX:

```
SELECT column_name(s) FROM table1 INNER JOIN table2
ON table1.column_name = table2.column_name;
```

RIGHT JOIN: The RIGHT JOIN keyword returns all records from the right table (table2), and the matched records from the left table (table1). The result is NULL from the left side, when there is no match.

SYNTAX:

```
SELECT column_name(s) FROM table1 RIGHT JOIN table2
ON table1.column_name = table2.column_name;
```

LEFT JOIN: The LEFT JOIN keyword returns all records from the left table (table1), and the matched records from the right table (table2). The result is NULL from the right side, if there is no match.

SYNTAX:

```
SELECT column_name(s) FROM table1 LEFT JOIN table2
ON table1.column_name = table2.column_name;
```

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

SYNTAX:

```
SELECT column_name(s) FROM table1 FULL OUTER JOIN table2
ON table1.column_name = table2.column_name
condition;
```

COMMANDS AND THEIR OUTPUTS:

Select * from user;

+-----+-----+-----+-----+			
---+			
user_id	Name	Email	Address
+-----+-----+-----+-----+			
---+			
1	Junaïd Girkar	UpdatedEmail@gmail.com	221 Bakers Street
2	Harry Potter	harrypotter@gmail.com	4 Private Drive, Surry
3	Percy Jackson	percyjackson@gmail.com	camp Half Blood, Long Island
4	Severus Snape	snape@snapey.com	Hogwards
5	Albus Dumbledore	APWBD@hogwards.com	Hogwards
+-----+-----+-----+-----+			
---+			

Select * from user_mobile_no;

+-----+-----+	
Mobile_No	user_id
+-----+-----+	
12345	1
54321	2
98765	3
+-----+-----+	

```
select user.user_id, user.Name, Bank.Bank_name, Bank.Branch from user
CROSS JOIN Bank;
```

user_id	Name	Bank_name	Branch
1	Junaid Girkar	ICICI	VILE PARLE
2	Harry Potter	ICICI	VILE PARLE
3	Percy Jackson	ICICI	VILE PARLE
1	Junaid Girkar	HDFC	VILE PARLE
2	Harry Potter	HDFC	VILE PARLE
3	Percy Jackson	HDFC	VILE PARLE

```
select * from user_mobile_no NATURAL JOIN user;
```

user_id	Mobile_No	Name	Email	Address
1	12345	Junaid Girkar	junaidgirkar@gmail.com	221 Bakers Street
2	54321	Harry Potter	harrypotter@gmail.com	4 Private Drive, Surry
3	98765	Percy Jackson	percyjackson@gmail.com	camp Half Blood, Long Island

```
select * from user INNER
JOIN user_mobile_no ON user.user_id=user_mobile_no.user_id;
```

user_id	Name	Email	Address	Mobile_No	user_id
1	Junaid Girkar	junaidgirkar@gmail.com	221 Bakers Street	12345	1
2	Harry Potter	harrypotter@gmail.com	4 Private Drive, Surry	54321	2
3	Percy Jackson	percyjackson@gmail.com	camp Half Blood, Long Island	98765	3

```
select * from user LEFT
JOIN user_mobile_no ON user.user_id = user_mobile_no.user_id;
```

user_id	Name	Email	Address	Mobile_No	user_id
---------	------	-------	---------	-----------	---------

user_id	Name	Email	Address	Mobile_No	user_id
1	Junaid Girkar	junaidgirkar@gmail.com	221 Bakers Street	12345	1
2	Harry Potter	harrypotter@gmail.com	4 Private Drive, Surry	54321	2
3	Percy Jackson	percyjackson@gmail.com	camp Half Blood, Long Island	98765	3
4	Severus Snape	snape@snapey.com	Hogwards	NULL	NULL
5	Albus Dumbledore	APWBD@hogwards.com	Hogwards	NULL	NULL

```
select * from user RIGHT
JOIN user_mobile_no ON user.user_id = user_mobile_no.user_id;
```

user_id	Name	Email	Address	Mobile_No	user_id
1	Junaid Girkar	junaidgirkar@gmail.com	221 Bakers Street	12345	1
2	Harry Potter	harrypotter@gmail.com	4 Private Drive, Surry	54321	2
3	Percy Jackson	percyjackson@gmail.com	camp Half Blood, Long Island	98765	3

```
select * from user right outer
join user_mobile_no on user_mobile_no.user_id = user.user_id union select
* from user left outer
join user_mobile_no on user_mobile_no.user_id = user.user_id;
```

user_id	Name	Email	Address	Mobile_No	user_id
1	Junaid Girkar	junaidgirkar@gmail.com	221 Bakers Street	12345	1
2	Harry Potter	harrypotter@gmail.com	4 Private Drive, Surry	54321	2
3	Percy Jackson	percyjackson@gmail.com	camp Half Blood, Long Island	98765	3
4	Severus Snape	snape@snapey.com	Hogwards	NULL	NULL
5	Albus Dumbledore	APWBD@hogwards.com	Hogwards	NULL	NULL

CONCLUSION: Thus, we have executed several different queries using joins and various other operations.