

LAB 4

Microsoft Windows [Version 10.0.22631.3880]

(c) Microsoft Corporation. All rights reserved.

C:\Users\user>mysql -u root -p

Enter password: ****

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 9

Server version: 8.0.38 MySQL Community Server - GPL

Copyright (c) 2000, 2024, Oracle and/or its affiliates.

Oracle is a registered trademark of Oracle Corporation and/or its
affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;

+-----+

| Database |

+-----+

| information_schema |

| mysql |

| performance_schema |

| gaurav |

| sys |

+-----+

5 rows in set (0.01 sec)

```
mysql> drop database gaurav;
```

Query OK, 1 row affected (0.02 sec)

```
mysql> create database gaurav;
```

Query OK, 1 row affected (0.00 sec)

```
mysql> use gaurav;
```

Database changed

```
mysql> create table dept(deptid int primary key,depname varchar(50));
```

Query OK, 0 rows affected (0.03 sec)

```
mysql> create table emp(eno int primary key,ename nvarchar(30),deptid int,foreign key(Deptid) REFERENCES dept(deptid));
```

Query OK, 0 rows affected, 1 warning (0.04 sec)

```
mysql> insert into dept(deptid,depname) VALUES (1,'cmp'),(2,'elx'),(3,'civil'),(4,'mechanical');
```

Query OK, 4 rows affected (0.02 sec)

Records: 4 Duplicates: 0 Warnings: 0

```
mysql> select * from dept;
```

```
+-----+-----+
| deptid | depname |
+-----+-----+
| 1 | cmp |
| 2 | elx |
| 3 | civil |
| 4 | mechanical |
+-----+-----+
```

4 rows in set (0.01 sec)

```
mysql> insert into emp(eno,ename,Deptid) VALUES (1,'Ram Thapa',1),(2,'Hari K
c',1),(3,'Sita Dwa',2),(4,'Shyam Nepal',2),(5,'Rita Rimal',3);
```

Query OK, 5 rows affected (0.01 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
mysql> select * from emp;
```

```
+----+-----+-----+
| eno | ename   | deptid |
+----+-----+-----+
|  1  | Ram Thapa |    1   |
|  2  | Hari Kc   |    1   |
|  3  | Sita Dwa  |    2   |
|  4  | Shyam Nepal |    2   |
|  5  | Rita Rimal |    3   |
+----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from emp natural join dept;
```

```
+-----+----+-----+-----+
| deptid | eno | ename   | depname |
+-----+----+-----+-----+
|    1   |  1  | Ram Thapa | cmp     |
|    1   |  2  | Hari Kc   | cmp     |
|    2   |  3  | Sita Dwa  | elx     |
|    2   |  4  | Shyam Nepal | elx    |
|    3   |  5  | Rita Rimal | civil   |
+-----+----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select emp.eno,emp.ename,emp.deptid,dept.depname from emp inner join
```

```
dept on emp.deptid = dept.deptid;
```

```
+----+-----+-----+-----+
| eno | ename   | deptid | depname |
+----+-----+-----+-----+
|  1 | Ram Thapa |    1 | cmp    |
|  2 | Hari Kc   |    1 | cmp    |
|  3 | Sita Dwa  |    2 | elx    |
|  4 | Shyam Nepal |    2 | elx    |
|  5 | Rita Rimal |    3 | civil   |
+----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from emp left outer join dept on emp.deptid = dept.deptid;
```

```
+----+-----+-----+-----+-----+
| eno | ename   | deptid | deptid | depname |
+----+-----+-----+-----+-----+
|  1 | Ram Thapa |    1 |    1 | cmp    |
|  2 | Hari Kc   |    1 |    1 | cmp    |
|  3 | Sita Dwa  |    2 |    2 | elx    |
|  4 | Shyam Nepal |    2 |    2 | elx    |
|  5 | Rita Rimal |    3 |    3 | civil   |
+----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from emp right outer join dept on emp.deptid = dept.deptid;
```

```
+----+-----+-----+-----+-----+
| eno | ename   | deptid | deptid | depname |
+----+-----+-----+-----+-----+
|  1 | Ram Thapa |    1 |    1 | cmp    |
|  2 | Hari Kc   |    1 |    1 | cmp    |
|  3 | Sita Dwa  |    2 |    2 | elx    |
+----+-----+-----+-----+-----+
```

4	Shyam Nepal	2	2	elx
5	Rita Rimal	3	3	civil
NULL	NULL	NULL	4	mechanical

```
+-----+-----+-----+-----+-----+
```

6 rows in set (0.00 sec)

```
mysql> select * from emp left outer join dept on emp.deptid = dept.deptid un
ion select * from emp right outer join dept on emp.deptid = dept.deptid;
```

```
+-----+-----+-----+-----+-----+
```

eno	ename	deptid	deptid	depname
-----	-------	--------	--------	---------

```
+-----+-----+-----+-----+-----+
```

1	Ram Thapa	1	1	cmp
2	Hari Kc	1	1	cmp
3	Sita Dwa	2	2	elx
4	Shyam Nepal	2	2	elx
5	Rita Rimal	3	3	civil
NULL	NULL	NULL	4	mechanical

```
+-----+-----+-----+-----+-----+
```

6 rows in set (0.01 sec)

```
mysql> select * from emp;
```

```
+-----+-----+-----+
```

eno	ename	deptid
-----	-------	--------

```
+-----+-----+-----+
```

1	Ram Thapa	1
2	Hari Kc	1
3	Sita Dwa	2
4	Shyam Nepal	2
5	Rita Rimal	3

```
+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from dept;
```

deptid	depname
1	cmp
2	elx
3	civil
4	mechanical

4 rows in set (0.00 sec)

```
mysql> create table empinfo(eno int primary key,addr varchar(100),DOB date,phone varchar(20),foreign key(eno) references emp(eno));
```

Query OK, 0 rows affected (0.04 sec)

```
mysql> insert into empinfo(eno,addr,DOB,phone) VALUES (1,'Kathmandu','2000-02-01','1234567890'),(2,'Pokhara','1995-05-10','9812435632'),(3,'Biratnagar','1998-02-14','9573209489'),(4,'Lalitpur','1992-02-20','9845325609'),(5,'Bhaktapur','1990-03-18','9732145609');
```

Query OK, 5 rows affected (0.00 sec)

Records: 5 Duplicates: 0 Warnings: 0

```
mysql> select * from empinfo;
```

eno	addr	DOB	phone
1	Kathmandu	2000-02-01	1234567890
2	Pokhara	1995-05-10	9812435632
3	Biratnagar	1998-02-14	9573209489
4	Lalitpur	1992-02-20	9845325609

```
| 5 | Bhaktapur | 1990-03-18 | 9732145609 |
```

```
+-----+-----+-----+-----+
```

5 rows in set (0.01 sec)

```
mysql> select * from emp inner join empinfo on emp.eno = empinfo.eno;
```

```
+-----+-----+-----+-----+-----+-----+
```

```
| eno | ename    | deptid | eno | addr    | DOB    | phone    |
```

```
+-----+-----+-----+-----+-----+-----+
```

```
| 1 | Ram Thapa | 1 | 1 | Kathmandu | 2000-02-01 | 1234567890 |
```

```
| 2 | Hari Kc   | 1 | 2 | Pokhara   | 1995-05-10 | 9812435632 |
```

```
| 3 | Sita Dwa  | 2 | 3 | Biratnagar | 1998-02-14 | 9573209489 |
```

```
| 4 | Shyam Nepal | 2 | 4 | Lalitpur   | 1992-02-20 | 9845325609 |
```

```
| 5 | Rita Rimal | 3 | 5 | Bhaktapur  | 1990-03-18 | 9732145609 |
```

```
+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from emp natural join empinfo;
```

```
+-----+-----+-----+-----+-----+-----+
```

```
| eno | ename    | deptid | addr    | DOB    | phone    |
```

```
+-----+-----+-----+-----+-----+-----+
```

```
| 1 | Ram Thapa | 1 | Kathmandu | 2000-02-01 | 1234567890 |
```

```
| 2 | Hari Kc   | 1 | Pokhara   | 1995-05-10 | 9812435632 |
```

```
| 3 | Sita Dwa  | 2 | Biratnagar | 1998-02-14 | 9573209489 |
```

```
| 4 | Shyam Nepal | 2 | Lalitpur   | 1992-02-20 | 9845325609 |
```

```
| 5 | Rita Rimal | 3 | Bhaktapur  | 1990-03-18 | 9732145609 |
```

```
+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from emp join empinfo on emp.eno = empinfo.eno;
```

```
+-----+-----+-----+-----+-----+-----+
```

```
| eno | ename    | deptid | eno | addr    | DOB    | phone    |
```

```

+----+-----+-----+----+-----+-----+-----+
| 1 | Ram Thapa | 1 | 1 | Kathmandu | 2000-02-01 | 1234567890 |
| 2 | Hari Kc | 1 | 2 | Pokhara | 1995-05-10 | 9812435632 |
| 3 | Sita Dwa | 2 | 3 | Biratnagar | 1998-02-14 | 9573209489 |
| 4 | Shyam Nepal | 2 | 4 | Lalitpur | 1992-02-20 | 9845325609 |
| 5 | Rita Rimal | 3 | 5 | Bhaktapur | 1990-03-18 | 9732145609 |
+----+-----+-----+----+-----+-----+-----+
5 rows in set (0.00 sec)

```

```
mysql> select * from emp,empinfo where emp.eno < empinfo.eno;
```

```

+----+-----+-----+----+-----+-----+-----+
| eno | ename | deptid | eno | addr | DOB | phone |
+----+-----+-----+----+-----+-----+-----+
| 1 | Ram Thapa | 1 | 2 | Pokhara | 1995-05-10 | 9812435632 |
| 1 | Ram Thapa | 1 | 3 | Biratnagar | 1998-02-14 | 9573209489 |
| 1 | Ram Thapa | 1 | 4 | Lalitpur | 1992-02-20 | 9845325609 |
| 1 | Ram Thapa | 1 | 5 | Bhaktapur | 1990-03-18 | 9732145609 |
| 2 | Hari Kc | 1 | 3 | Biratnagar | 1998-02-14 | 9573209489 |
| 2 | Hari Kc | 1 | 4 | Lalitpur | 1992-02-20 | 9845325609 |
| 2 | Hari Kc | 1 | 5 | Bhaktapur | 1990-03-18 | 9732145609 |
| 3 | Sita Dwa | 2 | 4 | Lalitpur | 1992-02-20 | 9845325609 |
| 3 | Sita Dwa | 2 | 5 | Bhaktapur | 1990-03-18 | 9732145609 |
| 4 | Shyam Nepal | 2 | 5 | Bhaktapur | 1990-03-18 | 9732145609 |
+----+-----+-----+----+-----+-----+-----+
10 rows in set (0.00 sec)

```

```
mysql> select * from emp left outer join empinfo on emp.eno = empinfo.eno;
```

```

+----+-----+-----+----+-----+-----+-----+
| eno | ename | deptid | eno | addr | DOB | phone |
+----+-----+-----+----+-----+-----+-----+
| 1 | Ram Thapa | 1 | 1 | Kathmandu | 2000-02-01 | 1234567890 |

```


	2		Hari Kc		1		2		Pokhara		1995-05-10		9812435632	
	3		Sita Dwa		2		3		Biratnagar		1998-02-14		9573209489	
	4		Shyam Nepal		2		4		Lalitpur		1992-02-20		9845325609	
	5		Rita Rimal		3		5		Bhaktapur		1990-03-18		9732145609	

```
+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> select * from emp right outer join empinfo on emp.eno = empinfo.eno;
```

	eno		ename		deptid		eno		addr		DOB		phone	
	1		Ram Thapa		1		1		Kathmandu		2000-02-01		1234567890	
	2		Hari Kc		1		2		Pokhara		1995-05-10		9812435632	
	3		Sita Dwa		2		3		Biratnagar		1998-02-14		9573209489	
	4		Shyam Nepal		2		4		Lalitpur		1992-02-20		9845325609	
	5		Rita Rimal		3		5		Bhaktapur		1990-03-18		9732145609	

```
+-----+-----+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> update empinfo set addr = 'Pokhara' where eno = 3;
```

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from empinfo;
```

	eno		addr		DOB		phone	
	1		Kathmandu		2000-02-01		1234567890	
	2		Pokhara		1995-05-10		9812435632	
	3		Pokhara		1998-02-14		9573209489	
	4		Lalitpur		1992-02-20		9845325609	

```
| 5 | Bhaktapur | 1990-03-18 | 9732145609 |
```

```
+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> alter table emp add column salary int;
```

Query OK, 0 rows affected (0.02 sec)

Records: 0 Duplicates: 0 Warnings: 0

```
mysql> select * from emp;
```

```
+-----+-----+-----+-----+
```

```
| eno | ename      | deptid | salary |
```

```
+-----+-----+-----+-----+
```

```
| 1 | Ram Thapa | 1 | NULL |
```

```
| 2 | Hari Kc   | 1 | NULL |
```

```
| 3 | Sita Dwa  | 2 | NULL |
```

```
| 4 | Shyam Nepal | 2 | NULL |
```

```
| 5 | Rita Rimal | 3 | NULL |
```

```
+-----+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
mysql> update emp set salary = 50000 where eno = 1;
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> update emp set salary = 60000 where eno = 2;
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> update emp set salary = 70000 where eno = 3;
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> update emp set salary = 56000 where eno = 4;
```

```
Query OK, 1 row affected (0.01 sec)
```

```
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> update emp set salary = 49000 where eno = 5;
```

```
Query OK, 1 row affected (0.00 sec)
```

```
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> update emp set salary = 35000 where eno = 6;
```

```
Query OK, 0 rows affected (0.00 sec)
```

```
Rows matched: 0  Changed: 0  Warnings: 0
```

```
mysql> select * from emp;
```

```
+----+-----+-----+-----+
| eno | ename   | deptid | salary |
+----+-----+-----+-----+
|  1  | Ram Thapa |    1   | 50000 |
|  2  | Hari Kc   |    1   | 60000 |
|  3  | Sita Dwa  |    2   | 70000 |
|  4  | Shyam Nepal |    2   | 56000 |
|  5  | Rita Rimal |    3   | 49000 |
+----+-----+-----+-----+
```

```
5 rows in set (0.00 sec)
```

```
mysql> select deptid,Max(salary) AS max_salary from EMP GROUP BY deptid ORDER BY max_salary DESC LIMIT 1;
```

```
+-----+-----+
| deptid | max_salary |
+-----+-----+
|    2   |    70000   |
```

```
+-----+-----+
```

1 row in set (0.01 sec)

```
mysql> select dept.deptid, dept.depname from dept inner join emp on dept.deptid = emp.deptid where emp.salary = (select MAX(salary) from emp);
```

```
+-----+-----+
```

```
| deptid | depname |
```

```
+-----+-----+
```

```
| 2 | elx |
```

```
+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> select * from dept;
```

```
+-----+-----+
```

```
| deptid | depname |
```

```
+-----+-----+
```

```
| 1 | cmp |
```

```
| 2 | elx |
```

```
| 3 | civil |
```

```
| 4 | mechanical |
```

```
+-----+-----+
```

4 rows in set (0.00 sec)

```
mysql> select * from emp;
```

```
+----+-----+-----+-----+
```

```
| eno | ename | deptid | salary |
```

```
+----+-----+-----+-----+
```

```
| 1 | Ram Thapa | 1 | 50000 |
```

```
| 2 | Hari Kc | 1 | 60000 |
```

```
| 3 | Sita Dwa | 2 | 70000 |
```

```
| 4 | Shyam Nepal | 2 | 56000 |
```

	5		Rita Rimal		3		49000	
--	---	--	------------	--	---	--	-------	--

+-----+	+-----+	+-----+	+-----+
---------	---------	---------	---------

5 rows in set (0.00 sec)

```
mysql> select emp.eno,empinfo.addr,empinfo.DOB,empinfo.phone from emp inner
join empinfo on emp.eno = empinfo.eno where emp.deptid = (select deptid from
dept where depname = 'cmp');
```

+-----+	+-----+	+-----+	+-----+
---------	---------	---------	---------

	eno		addr		DOB		phone	
--	-----	--	------	--	-----	--	-------	--

+-----+	+-----+	+-----+	+-----+
---------	---------	---------	---------

	1		Kathmandu		2000-02-01		1234567890	
--	---	--	-----------	--	------------	--	------------	--

	2		Pokhara		1995-05-10		9812435632	
--	---	--	---------	--	------------	--	------------	--

+-----+	+-----+	+-----+	+-----+
---------	---------	---------	---------

2 rows in set (0.00 sec)

mysql>