

Assignment No. 3

Assignment Title: SQL Queries all types of Join, Sub-Query and View:

Queries:

```
mysql> CREATE DATABASE TE_B_15;
ERROR 1007 (HY000): Can't create database 'TE_B_15'; database exists
mysql> USE TE_B_15;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
```

Database changed

```
mysql> SHOW TABLES;
```

```
+-----+
| Tables_in_TE_B_15 |
+-----+
| Dependant          |
| Dept               |
| Employees          |
| Project            |
| Works              |
| branch             |
| customer           |
| loan               |
| stud1              |
| student            |
+-----+
```

10 rows in set (0.00 sec)

```
mysql> SELECT * FROM Employee;
ERROR 1146 (42S02): Table 'TE_B_15.Employee' doesn't exist
mysql> SELECT * FROM Employees;
```

```
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| name   | empid | address | city | dob      | date_of_joining | gender | salary | deptno |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Shraddha | 101 | Panchavati | Nashik | 2001-01-13 | 17/01/2021 | F | 30000 | 1 |
| Saish   | 102 | Borivali | Mumbai | 1999-03-11 | 24/07/2021 | M | 40000 | 2 |
| Shreya  | 103 | Bandra | Mumbai | 2002-09-01 | 2023-01-15 | F | 66000 | 3 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

3 rows in set (0.04 sec)

```
mysql> select * from Dept;
```

```
+-----+-----+-----+-----+
| Deptno | Name      | Location | Managerempid |
+-----+-----+-----+-----+
```

1	Development	Building 1	111
2	Testing	Building 1	112
3	Planning	Building 2	113
4	Planning	Building 2	114

4 rows in set (0.01 sec)

mysql> select * from Project;

Projectid	title	city
211	Banking Project	Nashik
212	ERP System	Mumbai
213	Testing Project	Nashik

3 rows in set (0.02 sec)

mysql> select * from Works;

Empty set (0.04 sec)

mysql> select * from Dependant;

Empty set (0.03 sec)

mysql> desc Works;

Field	Type	Null	Key	Default	Extra
empid	int(5)	YES	MUL	NULL	
Projectid	int(5)	YES		NULL	
total_hrs_worked	int(3)	YES		NULL	

3 rows in set (0.01 sec)

mysql> insert into Works (101, 211, 5);

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '101, 211, 5)' at line 1

mysql> insert into Works values (101, 211, 5);

Query OK, 1 row affected (0.05 sec)

mysql> insert into Works values (102, 212, 6);

Query OK, 1 row affected (0.05 sec)

mysql> desc Dependant;

Field	Type	Null	Key	Default	Extra
empid	int(5)	YES	MUL	NULL	

name_of_dependant	varchar(10)	YES		NULL	
age	int(2)	YES		NULL	
relation	varchar(20)	YES		NULL	

4 rows in set (0.00 sec)

mysql> insert into Dependant values (101, 'Sarika', 40,'Mother');
Query OK, 1 row affected (0.03 sec)

mysql> insert into Dependant values (102, 'Rajesh', 44,'Father');
Query OK, 1 row affected (0.04 sec)

mysql> desc Employees;

Field	Type	Null	Key	Default	Extra
name	varchar(20)	YES		NULL	
empid	int(5)	NO	PRI	NULL	
address	varchar(20)	YES		NULL	
city	varchar(20)	YES		NULL	
dob	varchar(25)	YES		NULL	
date_of_joining	varchar(25)	YES		NULL	
gender	varchar(1)	YES		NULL	
salary	int(6)	YES		NULL	
deptno	int(5)	YES	MUL	NULL	

9 rows in set (0.00 sec)

mysql> desc Works;

Field	Type	Null	Key	Default	Extra
empid	int(5)	YES	MUL	NULL	
Projectid	int(5)	YES		NULL	
total_hrs_worked	int(3)	YES		NULL	

3 rows in set (0.00 sec)

mysql> Alter table Works add constraint Foreign Key (Projectid) references
Project(Projectid);

Query OK, 2 rows affected (0.76 sec)

Records: 2 Duplicates: 0 Warnings: 0

mysql> desc Dependant;

Field	Type	Null	Key	Default	Extra
empid	int(5)	YES	MUL	NULL	

name_of_dependant	varchar(10)	YES	NULL
age	int(2)	YES	NULL
relation	varchar(20)	YES	NULL

4 rows in set (0.00 sec)

mysql> update Employees set date_of_joining = '2021-01-17' where empid=101;

Query OK, 1 row affected (0.06 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> update Employees set date_of_joining = '2021-07-24' where empid=102;

Query OK, 1 row affected (0.02 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql>

mysql> select * from Dept;

Deptno	Name	Location	Managerempid
1	Development	Building 1	111
2	Testing	Building 1	112
3	Planning	Building 2	113
4	Planning	Building 2	114

4 rows in set (0.00 sec)

mysql> SELECT * FROM Employees;

name	empid	address	city	dob	date_of_joining	gender	salary	deptno
Shraddha	101	Panchavati	Nashik	2001-01-13	2021-01-17	F	30000	1
Saish	102	Borivali	Mumbai	1999-03-11	2021-07-24	M	40000	2
Shreya	103	Bandra	Mumbai	2002-09-01	2023-01-15	F	66000	3

3 rows in set (0.00 sec)

mysql> SELECT e.ename, e.dob

-> FROM Employees e

-> JOIN Dept d ON e.Deptno=d.Deptno

-> WHERE MONTH(e.dob)=01 AND d.Name='Development';

ERROR 1054 (42S22): Unknown column 'e.ename' in 'field list'

mysql> SELECT e.Name, e.dob FROM Employees e JOIN Dept d ON e.Deptno=d.Deptno
WHERE MONTH(e.dob)=01 AND d.Name='Development';

Name	dob
Shraddha	2001-01-13

1 row in set (0.00 sec)

```
mysql> select * from Project;
```

Projectid	title	city
211	Banking Project	Nashik
212	ERP System	Mumbai
213	Testing Project	Nashik

3 rows in set (0.00 sec)

```
mysql> SELECT e.Name
```

```
-> FROM Employees e
```

```
-> JOIN Works w
```

```
-> ON e.empid = w.empid
```

```
-> JOIN Project p
```

```
-> ON w.Projectid=p.Projectid
```

```
-> WHERE P.title='ERP System';
```

ERROR 1054 (42S22): Unknown column 'P.title' in 'where clause'

```
mysql> SELECT e.Name
```

```
-> FROM Employees e
```

```
-> ON e.empid = w.empid
```

```
-> ;
```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'ON e.empid = w.empid' at line 3

```
mysql> SELECT e.Name
```

```
-> FROM Employees e
```

```
-> JOIN Works w
```

```
-> ON e.empid = w.empid
```

```
-> JOIN Project p
```

```
-> ON w.Projectid=p.Projectid
```

```
-> WHERE p.title='ERP System';
```

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

```
| Name |
```

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

```
| Saish |
```

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

1 row in set (0.00 sec)

```
mysql> ^C
```

```
mysql> SELECT e.Name, e.city
```

```
-> FROM Employees e
```

```
-> JOIN Works w ON e.empid = w.empid
```

```
-> JOIN Project p ON w.Projectid = p.Projectid
```

```

-> WHERE p.title='Banking Project';
+-----+-----+
| Name   | city   |
+-----+-----+
| Shraddha | Nashik |
+-----+-----+
1 row in set (0.00 sec)

```

```

mysql> SELECT SUM(w.total_hrs_worked) AS Total_Hrs
-> FROM Works w
-> JOIN Project p ON w.Projectid = p.Projectid
-> WHERE P.title = 'Banking Project';
ERROR 1054 (42S22): Unknown column 'P.title' in 'where clause'
mysql> SELECT SUM(w.total_hrs_worked) AS Total_Hrs FROM Works w JOIN Project p
ON w.Projectid = p.Projectid WHERE p.title = 'Banking Project';
+-----+
| Total_Hrs |
+-----+
|      5 |
+-----+
1 row in set (0.00 sec)

```

```

mysql> SELECT e.Name
-> FROM Employees e
-> JOIN Works w ON e.empid = w.empid
-> JOIN Project p ON w.Projectid = p.Projectid
-> WHERE e.city = p.city;
+-----+
| Name   |
+-----+
| Shraddha |
| Saish   |
+-----+
2 rows in set (0.00 sec)

```

```

mysql> SELECT e.Name
-> FROM Employees e
-> JOIN Dept d ON e.Deptno=d.Deptno
-> JOIN Employees manager ON d.Managerempid=manager.empid
-> WHERE e.city=manager.city AND e.address=manager.address;
Empty set (0.01 sec)

```

```

mysql> SELECT e.Name
-> FROM Employees e
-> LEFT JOIN Works w ON e.empid=w.empid AND w.Projectid=(SELECT Projectid FROM
Project WHERE title='Banking Project')
-> WHERE w.Projectid IS NULL;
+-----+

```

```
| Name |
+-----+
| Saish |
| Shreya |
+-----+
2 rows in set (0.00 sec)
```

```
mysql> SELECT d.Name AS DeptName, AVG(e.salary) AS AvgSalary
-> FROM Dept d
-> JOIN Employees e ON d.Deptno
-> GROUP BY d.Name;
+-----+-----+
| DeptName | AvgSalary |
+-----+-----+
| Development | 45333.3333 |
| Planning | 45333.3333 |
| Testing | 45333.3333 |
+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> SELECT e1.Name
-> FROM Employees e1
-> WHERE e1.salary > ALL(SELECT e2.salary FROM Employees e2 WHERE e2.Deptno
= (SELECT Deptno FROM Dept WHERE Name ='Testing'));
+-----+
| Name |
+-----+
| Shreya |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT e.Name
-> FROM Employees e
-> JOIN Dept d ON e.deptno=d.Deptno
-> WHERE e.salary>(SELECT AVG(salary) FROM Employees WHERE deptno =
d.Deptno);
Empty set (0.00 sec)
```

```
mysql> SELECT d.Name AS DeptName, COUNT(e.empid) AS EmpCount
-> FROM Dept d
-> JOIN Employees e ON d.Deptno = e.deptno
-> GROUP BY d.Name ORDER BY EmpCount DESC
-> LIMIT 1;
+-----+-----+
| DeptName | EmpCount |
+-----+-----+
| Testing | 1 |
+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT d.Name AS DeptName, SUM(e.salary) AS TotalSalary
-> FROM Dept d
-> JOIN Employees e ON d.Deptno = e.deptno
-> GROUP BY d.Name ORDER BY TotalSalary ASC LIMIT 1;
```

```
+-----+-----+
| DeptName | TotalSalary |
+-----+-----+
| Development | 30000 |
+-----+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT p.title AS ProjectTitle, Group_Count(e.Name)
-> ;
```

ERROR 1109 (42S02): Unknown table 'p' in field list

```
mysql> SELECT p.title AS ProjectTitle, Group_Count(e.Name) AS Employees
-> FROM Project p
-> LEFT JOIN Works w ON p.Projectid = w.Projectid
-> LEFT JOIN Employees e ON w.empid = e.empid
-> GROUP BY p.title;
```

ERROR 1305 (42000): FUNCTION TE_B_15.Group_Count does not exist

```
mysql> SELECT p.title AS ProjectTitle, Group_Concat(e.Name) AS Employees FROM
Project p LEFT JOIN Works w ON p.Projectid = w.Projectid LEFT JOIN
Employees e ON w.empid = e.empid GROUP BY p.title;
```

```
+-----+-----+
| ProjectTitle | Employees |
+-----+-----+
| Banking Project | Shraddha |
| ERP System | Saish |
| Testing Project | NULL |
+-----+-----+
```

3 rows in set (0.00 sec)

```
mysql> SELECT e.Name
-> FROM Employees e
-> LEFT JOIN Works w ON e.empid = w.empid
-> WHERE w.empid IS NULL;
```

```
+-----+
| Name |
+-----+
| Shreya |
+-----+
```

1 row in set (0.00 sec)

```
mysql> SELECT * FROM Works;
```

```
+-----+-----+-----+
| empid | Projectid | total_hrs_worked |
+-----+-----+-----+
```


101	211	5
102	212	6

2 rows in set (0.00 sec)

```
mysql> SELECT e.Name AS EmpName, 'No Project' AS Project
-> FROM Employees e
-> LEFT JOIN Works w ON e.empid=w.empid
-> WHERE w.empid IS NULL
-> UNION ALL SELECT 'No Employee' AS Employee, p.title AS Project FROM Project p
-> LEFT JOIN Works w ON p.Projectid = w.Projectid WHERE w.Projectid IS NULL;
```

EmpName	Project
Shreya	No Project
No Employee	Testing Project

2 rows in set (0.00 sec)

```
mysql> SELECT e.Name
-> FROM Employees e
-> JOIN Dept d ON e.deptno = d.Deptno
-> WHERE d.Location ='Building 1';
```

Name
Shraddha
Saish

2 rows in set (0.00 sec)

```
mysql> SELECT e.Name
-> FROM Employees e
-> JOIN Works w ON e.empid=w.empid
-> JOIN Project p ON w.Projectid = P.Projectid
-> JOIN Dept d ON e.deptno =d.Deptno
-> WHERE d.Name='Development'
-> GROUP BY e.empid HAVING COUNT(w.Projectid) >2;
```

ERROR 1054 (42S22): Unknown column 'P.Projectid' in 'on clause'

```
mysql> SELECT e.Name FROM Employees e JOIN Works w ON e.empid=w.empid JOIN
Project p ON w.Projectid = p.Projectid JOIN Dept d ON e.deptno =d.Deptno WHERE
d.Name='Development' GROUP BY e.empid HAVING COUNT(w.Projectid) >2;
Empty set (0.00 sec)
```

```
mysql> SELECT e.Name
-> FROM Employees e
-> JOIN Dept d ON e.deptno=d.Deptno
```

```

    -> WHERE d.Name='Testing' ORDER BY e.date_of_joining ASC
\ ->LIMIT 1;
+-----+
| Name |
+-----+
| Saish |
+-----+
1 row in set (0.00 sec)

```

```

mysql> CREATE VIEW Emp_in_Pune AS
    -> SELECT p.title AS ProjectTitle, COUNT(e.empid) AS ECount
    -> FROM Project p
    -> JOIN Works w ON p.Projectid = w.Projectid
    -> JOIN Employees e ON w.empid=e.empid WHERE p.city='Pune'
    -> GROUP BY p.title;
Query OK, 0 rows affected (0.04 sec)

```

```

mysql> select * from Emp_in_Pune;
Empty set (0.00 sec)

```

```

mysql> update Employees set city='Pune' where empid=103;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> update Employees set city='Pune' where empid=101;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> update Project set city='Pune' where Projectid =211;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1  Changed: 1  Warnings: 0

```

```

mysql> drop view Emp_in_Pune;
Query OK, 0 rows affected (0.00 sec)

```

```

mysql> CREATE VIEW Emp_in_Pune AS SELECT p.title AS ProjectTitle, COUNT(e.empid)
AS ECount FROM Project p JOIN Works w ON p.Projectid = w.Projectid JOIN Employees e
ON w.empid=e.empid WHERE p.city='Pune' GROUP BY p.title;
Query OK, 0 rows affected (0.02 sec)

```

```

mysql> select * from Emp_in_Pune;
+-----+-----+
| ProjectTitle | ECount |
+-----+-----+
| Banking Project | 1 |
+-----+-----+
1 row in set (0.00 sec)

```

```
mysql> SELECT SUM(EmpCount * 1000) AS Total_Travelling-Allowance  
-> FROM Emp_in_Pune;
```

ERROR 1054 (42S22): Unknown column 'EmpCount' in 'field list'

```
mysql> SELECT SUM(EMount * 1000) AS Total_Travelling-Allowance FROM  
Emp_in_Pune;
```

```
+-----+  
| Total_Travelling-Allowance |  
+-----+  
|           1000 |  
+-----+  
1 row in set (0.00 sec)
```

```
mysql>
```