

Roll no.: 31145

Assignment no.: 3

```
USE te31145_db;
```

```
CREATE TABLE Dept (  
    dept_id INT PRIMARY KEY,  
    dept_name VARCHAR(50),  
    dept_location VARCHAR(20)  
);
```

```
CREATE TABLE Project (  
    proj_id INT PRIMARY KEY,  
    dept_id INT,  
    proj_name VARCHAR(20),  
    proj_location VARCHAR(20),  
    proj_cost INT,  
    proj_year INT,  
    FOREIGN KEY (dept_id) REFERENCES dept(dept_id) ON DELETE CASCADE  
);
```

```
CREATE TABLE Employee (  
    emp_id INT PRIMARY KEY NOT NULL AUTO_INCREMENT,  
    dept_id INT,  
    emp_fname VARCHAR(20),  
    emp_lname VARCHAR(20),  
    emp_position VARCHAR(50),  
    emp_salary INT,  
    emp_joinDate DATE,  
    FOREIGN KEY (dept_id) REFERENCES dept(dept_id) ON DELETE CASCADE  
);
```

dept_id	dept_name	dept_location
1	HR	Mumbai
2	Finance	Delhi
3	IT	Bangalore
4	Marketing	Hyderabad
5	Sales	Pune

proj_id	dept_id	proj_name	proj_location	proj_cost	proj_year
201	1	HRMS	Mumbai	25000	2015
202	2	Finance Tracker	Delhi	45000	2020
203	3	Website Revamp	Bangalore	35000	2015
204	3	Mobile App	Bangalore	55000	2022
205	4	Ad Campaign	Hyderabad	40000	2020
206	5	Sales Booster	Pune	32000	2018
207	1	Legacy HR	Mumbai	15000	1980
208	2	Old Accounts	Delhi	20000	1990
209	3	Mainframe Upgrade	Bangalore	30000	2000
210	4	Old Campaign	Hyderabad	18000	2005
211	5	Classic Sales	Pune	22000	2010

emp_id	dept_id	emp_fname	emp_lname	emp_position	emp_salary	emp_joinDate
101	1	Amit	Sharma	Manager	75000	2008-03-15
102	1	Priya	Verma	Executive	50000	2012-06-20
103	2	Rahul	Singh	Analyst	60000	2010-08-01
104	2	Sneha	Patil	Manager	80000	2005-01-10
105	3	Karan	Mehta	Developer	55000	2014-11-30
106	3	Neha	Desai	Tester	52000	2016-09-17
107	4	Rohit	Kulkarni	Executive	48000	2021-02-12
108	5	Simran	Kaur	Sales Rep	45000	2019-07-22
109	1	Vikas	Jain	HR Assistant	48000	2013-04-10
110	2	Ritu	Kamble	Finance Clerk	52000	2015-07-15
111	3	Aditya	Rao	Backend Developer	60000	2018-09-20
112	4	Anjali	Pawar	Marketing Intern	30000	2022-02-11
113	5	Sameer	Shetty	Sales Executive	47000	2021-05-05
118	3	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10
119	3	Abhishek	More	QA Engineer	59000	2021-04-18
120	4	Tanvi	Joshi	Marketing Executive	45000	2020-07-09
121	4	Rakesh	Mane	Content Writer	42000	2021-09-23
122	4	Kavita	Pillai	SEO Specialist	47000	2022-02-17

1. Find Employee details and Department details using NATURAL JOIN.

```
SELECT *
FROM Employee
NATURAL JOIN Dept;
```

dept_id	emp_id	emp_fname	emp_lname	emp_position	emp_salary	emp_joinDate	dept_name	dept_location
1	101	Amit	Sharma	Manager	75000	2008-03-15	HR	Mumbai
1	102	Priya	Verma	Executive	50000	2012-06-20	HR	Mumbai
1	109	Vikas	Jain	HR Assistant	48000	2013-04-10	HR	Mumbai
2	103	Rahul	Singh	Analyst	60000	2010-08-01	Finance	Delhi
2	104	Sneha	Patil	Manager	80000	2005-01-10	Finance	Delhi
2	110	Ritu	Kamble	Finance Clerk	52000	2015-07-15	Finance	Delhi
3	105	Karan	Mehta	Developer	55000	2014-11-30	IT	Bangalore
3	106	Neha	Desai	Tester	52000	2016-09-17	IT	Bangalore
3	111	Aditya	Rao	Backend Developer	60000	2018-09-20	IT	Bangalore
3	118	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10	IT	Bangalore
3	119	Abhishek	More	QA Engineer	59000	2021-04-18	IT	Bangalore
4	107	Rohit	Kulkarni	Executive	48000	2021-02-12	Marketing	Hyderabad
4	112	Anjali	Pawar	Marketing Intern	30000	2022-02-11	Marketing	Hyderabad
4	120	Tanvi	Joshi	Marketing Executive	45000	2020-07-09	Marketing	Hyderabad
4	121	Rakesh	Mane	Content Writer	42000	2021-09-23	Marketing	Hyderabad
4	122	Kavita	Pillai	SEO Specialist	47000	2022-02-17	Marketing	Hyderabad
5	108	Simran	Kaur	Sales Rep	45000	2019-07-22	Sales	Pune
5	113	Sameer	Shetty	Sales Executive	47000	2021-05-05	Sales	Pune

2. Find the emp_fname,Emp_position,location,Emp_JoinDate who have same Dept id.

```
SELECT E.emp_fname, E.emp_position, D.dept_location, E.emp_joinDate
FROM Employee E
INNER JOIN Dept D ON E.dept_id = D.dept_id;
```

emp_fname	emp_position	dept_location	emp_joinDate
Amit	Manager	Mumbai	2008-03-15
Priya	Executive	Mumbai	2012-06-20
Vikas	HR Assistant	Mumbai	2013-04-10
Rahul	Analyst	Delhi	2010-08-01
Sneha	Manager	Delhi	2005-01-10
Ritu	Finance Clerk	Delhi	2015-07-15
Karan	Developer	Bangalore	2014-11-30
Neha	Tester	Bangalore	2016-09-17
Aditya	Backend Developer	Bangalore	2018-09-20
Pooja	Frontend Developer	Bangalore	2020-01-10
Abhishek	QA Engineer	Bangalore	2021-04-18
Rohit	Executive	Hyderabad	2021-02-12
Anjali	Marketing Intern	Hyderabad	2022-02-11
Tanvi	Marketing Executive	Hyderabad	2020-07-09
Rakesh	Content Writer	Hyderabad	2021-09-23
Kavita	SEO Specialist	Hyderabad	2022-02-17
Simran	Sales Rep	Pune	2019-07-22
Sameer	Sales Executive	Pune	2021-05-05

3. Find the Employee details ,Proj_id,Project cost who does not have Project location as 'Hyderabad'.

```
SELECT E.*, P.proj_id, P.proj_cost
FROM Employee E
LEFT JOIN Project P ON E.dept_id = P.dept_id
WHERE P.Proj_location <> "Hyderabad";
```

emp_id	dept_id	emp_fname	emp_lname	emp_position	emp_salary	emp_joinDate	proj_id	proj_cost
101	1	Amit	Sharma	Manager	75000	2008-03-15	201	25000
102	1	Priya	Verma	Executive	50000	2012-06-20	201	25000
109	1	Vikas	Jain	HR Assistant	48000	2013-04-10	201	25000
103	2	Rahul	Singh	Analyst	60000	2010-08-01	202	45000
104	2	Sneha	Patil	Manager	80000	2005-01-10	202	45000
110	2	Ritu	Kamble	Finance Clerk	52000	2015-07-15	202	45000
105	3	Karan	Mehta	Developer	55000	2014-11-30	203	35000
106	3	Neha	Desai	Tester	52000	2016-09-17	203	35000
111	3	Aditya	Rao	Backend Developer	60000	2018-09-20	203	35000
118	3	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10	203	35000
119	3	Abhishek	More	QA Engineer	59000	2021-04-18	203	35000
105	3	Karan	Mehta	Developer	55000	2014-11-30	204	55000
106	3	Neha	Desai	Tester	52000	2016-09-17	204	55000
111	3	Aditya	Rao	Backend Developer	60000	2018-09-20	204	55000
118	3	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10	204	55000
119	3	Abhishek	More	QA Engineer	59000	2021-04-18	204	55000
108	5	Simran	Kaur	Sales Rep	45000	2019-07-22	206	32000
113	5	Sameer	Shetty	Sales Executive	47000	2021-05-05	206	32000
101	1	Amit	Sharma	Manager	75000	2008-03-15	207	15000
102	1	Priya	Verma	Executive	50000	2012-06-20	207	15000
109	1	Vikas	Jain	HR Assistant	48000	2013-04-10	207	15000
103	2	Rahul	Singh	Analyst	60000	2010-08-01	208	20000
104	2	Sneha	Patil	Manager	80000	2005-01-10	208	20000
110	2	Ritu	Kamble	Finance Clerk	52000	2015-07-15	208	20000
105	3	Karan	Mehta	Developer	55000	2014-11-30	209	30000
106	3	Neha	Desai	Tester	52000	2016-09-17	209	30000
111	3	Aditya	Rao	Backend Developer	60000	2018-09-20	209	30000
118	3	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10	209	30000
119	3	Abhishek	More	QA Engineer	59000	2021-04-18	209	30000
108	5	Simran	Kaur	Sales Rep	45000	2019-07-22	211	22000
113	5	Sameer	Shetty	Sales Executive	47000	2021-05-05	211	22000

4. Find Department Name ,employee name, Emp_position for which project year is 2020

```
SELECT D.dept_name, CONCAT(E.emp_fname, ' ', E.emp_Lname) AS emp_name, E.emp_position
FROM Employee E
RIGHT JOIN Dept D ON E.dept_id = D.dept_id
INNER JOIN Project P ON D.dept_id = P.dept_id
WHERE P.proj_year = 2020;
```

dept_name	emp_name	emp_position
Finance	Rahul Singh	Analyst
Finance	Sneha Patil	Manager
Finance	Ritu Kamble	Finance Clerk
Marketing	Rohit Kulkarni	Executive
Marketing	Anjali Pawar	Marketing Intern
Marketing	Tanvi Joshi	Marketing Executive
Marketing	Rakesh Mane	Content Writer
Marketing	Kavita Pillai	SEO Specialist

5. Display emp_position, D_name who have Project cost >30000

```
SELECT DISTINCT E.emp_position, D.dept_name
FROM Employee E
INNER JOIN Dept D ON E.dept_id = D.dept_id
INNER JOIN Project P ON D.dept_id = P.dept_id
WHERE P.proj_cost > 30000;
```

emp_position	dept_name
Analyst	Finance
Manager	Finance
Finance Clerk	Finance
Developer	IT
Tester	IT
Backend Developer	IT
Frontend Developer	IT
QA Engineer	IT
Executive	Marketing
Marketing Intern	Marketing
Marketing Executive	Marketing
Content Writer	Marketing
SEO Specialist	Marketing
Sales Rep	Sales
Sales Executive	Sales

6. Find the names of all the Projects that started in the year 2015.

```
SELECT proj_name FROM Project
WHERE proj_year = 2015;
```

proj_name
HRMS
Website Revamp

7. List the Dept_name having no_of_emp=5

```
SELECT D.dept_name FROM Dept
WHERE dept_id IN (
    SELECT dept_id
    FROM Employee
    GROUP BY dept_id
    HAVING COUNT(emp_id) = 5
);
```

dept_name
IT
Marketing

8. Display the total number of employee who have joined any project before 2009

```
SELECT COUNT(E.emp_id) AS no_of_emp_joined_pro_before_2009
FROM Employee E
JOIN Project P ON P.dept_id = E.dept_id
WHERE YEAR(E.emp_joinDate) < 2009 AND P.proj_year < 2009;
```

no_of_emp_joined_pro_before_2009
2

9. Create a view showing the employee and Department details.

```
CREATE VIEW emp_dept_view AS
SELECT CONCAT(E.emp_fname, ' ', E.emp_lname) AS emp_name, E.emp_position, E.emp_salary, E.emp_joinDate,
D.dept_name, D.dept_location
FROM Employee E, Dept D
WHERE E.dept_id = D.dept_id;
```

```
SELECT * FROM emp_dept_view;
```

emp_name	emp_position	emp_salary	emp_joinDate	dept_name	dept_location
Amit Sharma	Manager	75000	2008-03-15	HR	Mumbai
Priya Verma	Executive	50000	2012-06-20	HR	Mumbai
Vikas Jain	HR Assistant	48000	2013-04-10	HR	Mumbai
Rahul Singh	Analyst	60000	2010-08-01	Finance	Delhi
Sneha Patil	Manager	80000	2005-01-10	Finance	Delhi
Ritu Kamble	Finance Clerk	52000	2015-07-15	Finance	Delhi
Karan Mehta	Developer	55000	2014-11-30	IT	Bangalore
Neha Desai	Tester	52000	2016-09-17	IT	Bangalore
Aditya Rao	Backend Developer	60000	2018-09-20	IT	Bangalore
Pooja Deshmukh	Frontend Developer	62000	2020-01-10	IT	Bangalore
Abhishek More	QA Engineer	59000	2021-04-18	IT	Bangalore
Rohit Kulkarni	Executive	48000	2021-02-12	Marketing	Hyderabad
Anjali Pawar	Marketing Intern	30000	2022-02-11	Marketing	Hyderabad
Tanvi Joshi	Marketing Executive	45000	2020-07-09	Marketing	Hyderabad
Rakesh Mane	Content Writer	42000	2021-09-23	Marketing	Hyderabad
Kavita Pillai	SEO Specialist	47000	2022-02-17	Marketing	Hyderabad
Simran Kaur	Sales Rep	45000	2019-07-22	Sales	Pune
Sameer Shetty	Sales Executive	47000	2021-05-05	Sales	Pune

10. Perform Manipulation on simple view-Insert, update, delete, drop view.

```
CREATE VIEW simple_emp_view AS
SELECT
  emp_id,
  dept_id,
  emp_fname,
  emp_lname,
  emp_position,
  emp_salary,
  emp_joinDate
FROM Employee;
```

```
SELECT * FROM simple_emp_view;
```

emp_id	dept_id	emp_fname	emp_lname	emp_position	emp_salary	emp_joinDate
101	1	Amit	Sharma	Manager	75000	2008-03-15
102	1	Priya	Verma	Executive	50000	2012-06-20
103	2	Rahul	Singh	Analyst	60000	2010-08-01
104	2	Sneha	Patil	Manager	80000	2005-01-10
105	3	Karan	Mehta	Developer	55000	2014-11-30
106	3	Neha	Desai	Tester	52000	2016-09-17
107	4	Rohit	Kulkarni	Executive	48000	2021-02-12
108	5	Simran	Kaur	Sales Rep	45000	2019-07-22
109	1	Vikas	Jain	HR Assistant	48000	2013-04-10
110	2	Ritu	Kamble	Finance Clerk	52000	2015-07-15
111	3	Aditya	Rao	Backend Developer	60000	2018-09-20
112	4	Anjali	Pawar	Marketing Intern	30000	2022-02-11
113	5	Sameer	Shetty	Sales Executive	47000	2021-05-05
118	3	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10
119	3	Abhishek	More	QA Engineer	59000	2021-04-18
120	4	Tanvi	Joshi	Marketing Executive	45000	2020-07-09
121	4	Rakesh	Mane	Content Writer	42000	2021-09-23
122	4	Kavita	Pillai	SEO Specialist	47000	2022-02-17

Insert:

```
INSERT INTO simple_emp_view (dept_id, emp_fname, emp_lname, emp_position, emp_salary, emp_joinDate)
VALUES (1, 'Ravi', 'Sharma', 'Manager', 50000, '2023-06-01');
```

```
SELECT * FROM simple_emp_view;
```

emp_id	dept_id	emp_fname	emp_lname	emp_position	emp_salary	emp_joinDate
101	1	Amit	Sharma	Manager	75000	2008-03-15
102	1	Priya	Verma	Executive	50000	2012-06-20
103	2	Rahul	Singh	Analyst	60000	2010-08-01
104	2	Sneha	Patil	Manager	80000	2005-01-10
105	3	Karan	Mehta	Developer	55000	2014-11-30
106	3	Neha	Desai	Tester	52000	2016-09-17
107	4	Rohit	Kulkarni	Executive	48000	2021-02-12
108	5	Simran	Kaur	Sales Rep	45000	2019-07-22
109	1	Vikas	Jain	HR Assistant	48000	2013-04-10
110	2	Ritu	Kamble	Finance Clerk	52000	2015-07-15
111	3	Aditya	Rao	Backend Developer	60000	2018-09-20
112	4	Anjali	Pawar	Marketing Intern	30000	2022-02-11
113	5	Sameer	Shetty	Sales Executive	47000	2021-05-05
118	3	Pooja	Deshmukh	Frontend Developer	62000	2020-01-10
119	3	Abhishek	More	QA Engineer	59000	2021-04-18
120	4	Tanvi	Joshi	Marketing Executive	45000	2020-07-09
121	4	Rakesh	Mane	Content Writer	42000	2021-09-23
122	4	Kavita	Pillai	SEO Specialist	47000	2022-02-17
123	1	Ravi	Sharma	Manager	50000	2023-06-01

Update:

```
UPDATE simple_emp_view  
SET emp_salary = 65000  
WHERE emp_fname = 'Rahul' AND emp_lname = 'Singh';
```

Delete:

```
DELETE FROM simple_emp_view  
WHERE emp_fname = 'Ritu' AND emp_lname = 'Kamble';
```

```
SELECT * FROM Employee WHERE emp_fname IN ('Rahul', 'Ritu');
```

emp_id	dept_id	emp_fname	emp_lname	emp_position	emp_salary	emp_joinDate
103	2	Rahul	Singh	Analyst	65000	2010-08-01

Drop:

```
DROP VIEW simple_emp_view;
```

```
SELECT * FROM simple_emp_view;
```

```
mysql> DROP VIEW simple_emp_view;  
Query OK, 0 rows affected (0.00 sec)  
  
mysql> SELECT * FROM simple_emp_view;  
ERROR 1146 (42S02): Table 'te31145_db.simple_emp_view' doesn't exist
```