

1. Create a view to store empno, name, salary and job.

```
CREATE VIEW EMP_DETAILS AS (SELECT EMPNO, ENAME, SAL, JOB FROM EMPLOYEE);
```

```
mysql> CREATE VIEW EMP_DETAILS AS (SELECT EMPNO, ENAME, SALARY, JOB FROM EMPLOYEE);
ERROR 1054 (42S22): Unknown column 'SALARY' in 'field list'
mysql> CREATE VIEW EMP_DETAILS AS (SELECT EMPNO, ENAME, SAL, JOB FROM EMPLOYEE);
Query OK, 0 rows affected (0.15 sec)
```

```
mysql> SELECT * FROM EMP_DETAILS;
```

EMPNO	ENAME	SAL	JOB
7369	SMITH	800.00	CLERK
7499	ALLEN	1600.00	SALESMAN
7521	WARD	1250.00	SALESMAN
7566	JONES	2976.00	MANAGER
7654	MARTIN	1250.00	SALESMAN
7698	BLAKE	2850.00	MANAGER
7782	CLARK	2450.00	MANAGER
7788	SCOTT	3000.00	ANLYST
7839	KING	5000.00	PRESIDENT
7844	TURNER	1500.00	SALESMAN
7876	ADAMS	1100.00	CLERK
7900	JAMES	950.00	CLERK
7902	FORD	3000.00	ANALYST
7934	MILLER	1300.00	CLERK

14 rows in set (0.02 sec)

2. Construct a view to store about empno, ename, manager name and dname.

```
CREATE VIEW DEP_DETAILS AS
(
    SELECT EMPLOYEE.EMPNO, EMPLOYEE.ENAME, MANAGER.MANAGER, DEPARTMENT.DNAME
    FROM MANAGER INNER JOIN EMPLOYEE INNER JOIN DEPARTMENT ON EMPLOYEE.DEPATNO
    = DEPARTMENT.DEPATNO ON EMPLOYEE.ENAME = MANAGER.EMPNAME
);
```

```
mysql> CREATE VIEW DEP_DETAILS AS
-> (
->     SELECT EMPLOYEE.EMPNO, EMPLOYEE.ENAME, MANAGER.MANAGER, DEPARTMENT.DNAME
->     FROM MANAGER INNER JOIN EMPLOYEE INNER JOIN DEPARTMENT ON EMPLOYEE.DEPATNO = DEPARTMENT.DEPATNO ON EMPLOYEE.ENAME = MANAGER.EMPNAME
-> );
Query OK, 0 rows affected (0.19 sec)

mysql> SELECT * FROM DEP_DETAILS;
+-----+-----+-----+-----+
| EMPNO | ENAME | MANAGER | DNAME |
+-----+-----+-----+-----+
| 7369 | SMITH | FORD | Reasearch |
| 7499 | ALLEN | BLAKE | Sales |
| 7521 | WARD | BLAKE | Sales |
| 7566 | JONES | KING | Reasearch |
| 7654 | MARTIN | BLAKE | Sales |
| 7698 | BLAKE | KING | Sales |
| 7782 | CLARK | KING | Accounting |
| 7788 | SCOTT | JONES | Reasearch |
| 7844 | TURNER | BLAKE | Sales |
| 7876 | ADAMS | SCOTT | Reasearch |
| 7900 | JAMES | BLAKE | Sales |
| 7902 | FORD | JONES | Reasearch |
| 7934 | MILLER | CLARK | Accounting |
+-----+-----+-----+-----+
13 rows in set (0.08 sec)
```

3. Create EmpDept View to have information on Empno, ename, dept num, dept name.

```
CREATE VIEW EMPDEPT AS
(
    SELECT EMPLOYEE.EMPNO, EMPLOYEE.ENAME, EMPLOYEE.DEPATNO, DEPARTMENT.DNAME
    FROM EMPLOYEE INNER JOIN DEPARTMENT ON EMPLOYEE.DEPATNO = DEPARTMENT.DEPATNO
);
```

```
mysql> CREATE VIEW EMPDEPT AS
-> (
->     SELECT EMPLOYEE.EMPNO, EMPLOYEE.ENAME, EMPLOYEE.DEPATNO, DEPARTMENT.DNAME
->     FROM EMPLOYEE INNER JOIN DEPARTMENT ON EMPLOYEE.DEPATNO = DEPARTMENT.DEPATNO
-> );
Query OK, 0 rows affected (0.14 sec)

mysql> SELECT * FROM EMPDEPT;
+-----+-----+-----+-----+
| EMPNO | ENAME | DEPATNO | DNAME |
+-----+-----+-----+-----+
| 7782 | CLARK | 10 | Accounting |
| 7839 | KING | 10 | Accounting |
| 7934 | MILLER | 10 | Accounting |
| 7369 | SMITH | 20 | Reasearch |
| 7566 | JONES | 20 | Reasearch |
| 7788 | SCOTT | 20 | Reasearch |
| 7876 | ADAMS | 20 | Reasearch |
| 7902 | FORD | 20 | Reasearch |
| 7499 | ALLEN | 30 | Sales |
| 7521 | WARD | 30 | Sales |
| 7654 | MARTIN | 30 | Sales |
| 7698 | BLAKE | 30 | Sales |
| 7844 | TURNER | 30 | Sales |
| 7900 | JAMES | 30 | Sales |
+-----+-----+-----+-----+
14 rows in set (0.00 sec)
```

4. Create a view to store all employee details whose salary is greater than average salary of employees

```
CREATE VIEW AVGSAL AS
(
    SELECT *
    FROM EMPLOYEE WHERE SAL > (SELECT AVG(SAL) FROM EMPLOYEE)
);
```

```
mysql> SELECT * FROM AVGSAL;
```

EmpNo	Ename	job	MGR	SAL	DepatNo
7566	JONES	MANAGER	7839	2976.00	20
7698	BLAKE	MANAGER	7839	2850.00	30
7782	CLARK	MANAGER	7839	2450.00	10
7788	SCOTT	ANLYST	7566	3000.00	20
7839	KING	PRESIDENT	NULL	5000.00	10
7902	FORD	ANALYST	7566	3000.00	20

```
6 rows in set (0.03 sec)
```

5. Insert to the view created in Question 1

```
INSERT INTO EMP_DETAILS(EMPNO,ENAME,SAL,JOB) VALUES ('7935', 'CORD', '2700.00', 'ANALYST');
```

```
mysql> INSERT INTO EMP_DETAILS(EMPNO,ENAME,SAL,JOB) VALUES ('7935', 'CORD', '2700.00', 'ANALYST');
Query OK, 1 row affected (0.14 sec)
```

```
mysql> SELECT * FROM EMP_DETAILS;
```

EMPNO	ENAME	SAL	JOB
7369	SMITH	800.00	CLERK
7499	ALLEN	1600.00	SALESMAN
7521	WARD	1250.00	SALESMAN
7566	JONES	2976.00	MANAGER
7654	MARTIN	1250.00	SALESMAN
7698	BLAKE	2850.00	MANAGER
7782	CLARK	2450.00	MANAGER
7788	SCOTT	3000.00	ANLYST
7839	KING	5000.00	PRESIDENT
7844	TURNER	1500.00	SALESMAN
7876	ADAMS	1100.00	CLERK
7900	JAMES	950.00	CLERK
7902	FORD	3000.00	ANALYST
7934	MILLER	1300.00	CLERK
7935	CORD	2700.00	ANALYST

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

## 6. Update the salary of Jones to 2000 through views

```
UPDATE EMP_DETAILS SET SAL = '2000.00' WHERE ENAME = 'JAMES';
```

```
mysql> UPDATE EMP_DETAILS SET SAL = '2000.00' WHERE ENAME = 'JAMES';
Query OK, 1 row affected (0.15 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> SELECT * FROM EMP_DETAILS;
+-----+-----+-----+-----+
| EMPNO | ENAME  | SAL      | JOB      |
+-----+-----+-----+-----+
| 7369  | SMITH  | 800.00   | CLERK    |
| 7499  | ALLEN  | 1600.00  | SALESMAN |
| 7521  | WARD   | 1250.00  | SALESMAN |
| 7566  | JONES  | 2976.00  | MANAGER  |
| 7654  | MARTIN | 1250.00  | SALESMAN |
| 7698  | BLAKE  | 2850.00  | MANAGER  |
| 7782  | CLARK  | 2450.00  | MANAGER  |
| 7788  | SCOTT  | 3000.00  | ANALYST  |
| 7839  | KING   | 5000.00  | PRESIDENT|
| 7844  | TURNER | 1500.00  | SALESMAN |
| 7876  | ADAMS  | 1100.00  | CLERK    |
| 7900  | JAMES  | 2000.00  | CLERK    |
| 7902  | FORD   | 3000.00  | ANALYST  |
| 7934  | MILLER | 1300.00  | CLERK    |
| 7935  | CORD   | 2700.00  | ANALYST  |
+-----+-----+-----+-----+
15 rows in set (0.00 sec)
```

## 7. Drop the views EmpDept

```
DROP VIEW EMPDEPT;
```

```
mysql> DROP VIEW EMPDEPT;
Query OK, 0 rows affected (0.17 sec)

mysql> SHOW TABLES;
+-----+
| Tables_in_lab3 |
+-----+
| avgsal          |
| book            |
| dep_details     |
| department      |
| emp_details     |
| employee        |
| manager         |
| movie           |
| salary_grade    |
+-----+
9 rows in set (0.00 sec)
```

8. Create an unique index on empno and display the structure

```
create unique index emp_index on employee(empno);
```

```
mysql> create unique index emp_index on employee(empno);
Query OK, 0 rows affected (1.25 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> show indexes from employee;
```

Table	Non-unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
employee	0	PRIMARY	1	EmpNo	A	14	NULL	NULL		BTREE			YES	NULL
employee	0	emp_index	1	EmpNo	A	15	NULL	NULL		BTREE			YES	NULL
employee	1	DepatNo	1	DepatNo	A	3	NULL	NULL	YES	BTREE			YES	NULL

```
3 rows in set (0.32 sec)
```

9. Create an index on deptno and location on dept relation

```
create index emp1_index on department(depatno,location);
```

```
mysql> create index emp1_index on department(depatno,location);
Query OK, 0 rows affected (1.39 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql> show indexes from department;
```

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part	Packed	Null	Index_type	Comment	Index_comment	Visible	Expression
department	0	PRIMARY	1	DepatNo	A	4	NULL	NULL		BTREE			YES	NULL
department	1	emp1_index	1	DepatNo	A	4	NULL	NULL		BTREE			YES	NULL
department	1	emp1_index	2	Location	A	4	NULL	NULL	YES	BTREE			YES	NULL

```
3 rows in set (0.18 sec)
```

#### 10. Drop the index created on empno

```
drop index emp_index on employee;
```

```
mysql> drop index emp_index on employee;  
Query OK, 0 rows affected (0.41 sec)  
Records: 0 Duplicates: 0 Warnings: 0
```