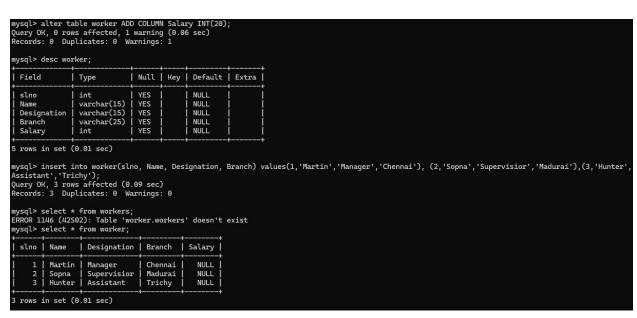
Create a Table as workers and the details are

S.No	Name	Designation	Branch
1	Martin	Manager	Chennai
2	Sopna	Supervisor	Madurai
3	Hunter	Assistant	Trichy

Perform the following:

- Alter the table by adding a column Salary
- Alter the table by modifying the column Name
- Describe the table worker
- Copy the table worker as trainee
- Delete the Second row from the table
- Drop the table

```
mysql> create database worker;
Query OK, 1 row affected (0.03 sec)
mysql> use worker;
Database changed
mysql> create table worker(slno INT(10), Name Varchar(15), Designation Varchar(15), Branch Varchar(25));
Query OK, 0 rows affected, 1 warning (0.09 sec)
mysql> desc worker;
  Field
                              | Null | Key | Default | Extra |
               | Type
  slno
                 int
                                YES
                                              NULL
                 varchar(15)
                                YES
                                              NULL
                                YES
  Designation
                 varchar(15)
                                              NIIII
  Branch
                 varchar(25)
                                YES
                                              NULL
4 rows in set (0.01 sec)
```



```
mysql> update workers set salary=10000 where slno=1;
ERROR 1146 (42S02): Table 'worker.workers' doesn't exist
mysql> update worker set salary=10000 where slno=1;
Query OK, 1 row affected (0.02 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysgl> update worker set salary=20000 where slno=2;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysgl> update worker set salary=10000 where slno=3;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from worker;
 slno | Name
                | Designation | Branch
                                        Salary
     1 | Martin | Manager
                               Chennai
                                           10000
                               Madurai
     2 | Sopna
                 Supervisior
                                           20000
     3 | Hunter | Assistant
                               Trichy
                                          10000
3 rows in set (0.00 sec)
```

```
mysql> alter table worker change column name fullname Varchar(15);
Query OK, 0 rows affected (0.11 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> select *from worker;
 slno | fullname | Designation |
                                  Branch
                                            Salary
                                  Chennai
     1 I
        Martin
                    Manager
                                             10000
                    Supervisior
                                  Madurai
     2
         Sopna
                                             20000
         Hunter
                    Assistant
                                  Trichy
                                             10000
3 rows in set (0.00 sec)
mysql> create table trainee as select *from worker;
Query OK, 3 rows affected (0.08 sec)
Records: 3 Duplicates: 0 Warnings: 0
mysql> select * from worker;
 slno | fullname | Designation | Branch
                                           Salary
        Martin
                    Manager
                                  Chennai
                                             10000
                    Supervisior
                                  Madurai
     2
         Sopna
                                             20000
         Hunter
                   Assistant
                                  Trichy
                                             10000
 rows in set (0.00 sec)
```

```
mysql> delete from worker where slno=2;
Query OK, 1 row affected (0.01 sec)

mysql> select *from worker;

| slno | fullname | Designation | Branch | Salary |

| 1 | Martin | Manager | Chennai | 10000 |

| 3 | Hunter | Assistant | Trichy | 10000 |

2 rows in set (0.00 sec)

mysql> drop worker;

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 'worker' at line 1
```

Create a Table a bank and the details are

S.No	Cust_Name	Acc_no	Balance	Cus_Branch
1	Ramesh	12378	100000	Adyar
2	Samran	12367	152500	Mylapore
3	Hari	12345	250000	Anna Salai

Perform the following:

- Simple Select *Select with where clause *Select with comparison operator >
- Select with **between** in the field **Balance** *Update the Cus_Branchin the second row as Pon * find out the maximum balance * Drop the table

```
ysql> create database bank
Query OK, 1 row affected (0.03 sec)
mysql> use bank;
Database changed
mysql> create table banks(sno int(10), customer varchar(20), account int(20), balance int(20), branch varchar(25));
Query OK, 0 rows affected, 3 warnings (0.07 sec)
mysql> insert into banks(sno, customer, account, balance, branch) values(1,'Ramesh',12378,100000,'Adyar'),(2,'Samran',12367,152500,'Mylapore'),(3,'Hari',12345,250000,'Anna Salai');
Query OK, 3 rows affected (0.02 sec)
Records: 3 Duplicates: 0 Warnings: 0
ysql> select * from banks;
 sno | customer | account | balance | branch
    1 | Ramesh
                            100000 | Adyar
152500 | Mylapore
250000 | Anna Salai
                    12378
    2 | Samran
3 | Hari
                   12367 |
12345 |
 rows in set (0.00 sec)
ysql> select * from banks where customer='Ramesh';
 sno | customer | account | balance | branch |
    1 | Ramesh | 12378 | 100000 | Adyar
 row in set (0.02 sec)
ysql> select * from banks where balance>150000;
 sno | customer | account | balance | branch
                    12367 |
12345 |
                            152500 | Mylapore
250000 | Anna Salai
 rows in set (0.01 sec)
mysql> select * from banks where balance between 100000 and 200000;
                                                            balance
    sno
                  customer
                                        account
                                                                                branch
                  Ramesh
                                             12378
                                                              100000
                                                                                Advar
           1
                                                                                Mylapore
                  Samran
                                             12367
                                                              152500
2 rows in set (0.02 sec)
```

Create a Table as **trainee** and the details are

S.No	Name	Designation	Branch
1	Ramesh	Manager	Hyderabad
2	Suman	Advisor	Mumbai
3	Sekar	Asst. Manager	Trichy

Perform the following:

- Alter the table by adding a column Salary
- Alter the table by modifying the column **Designation**
- Describe the table trainee
- Copy the table worker as Networkers
- Delete the Second row from the table
- Drop the table

```
mysql> create database trainer;
Query OK, 1 row affected (0.09 sec)
mysql> use trainer;
Database changed
mysql> create table trainer(sno int(10), name varchar(20), designation varchar(25), branch varchar(25));
Query OK, 0 rows affected, 1 warning (0.12 sec)
mysql> insert into trainer(sno, name, designation, branch) values (1,'ramesh','manager','Hyderabad'),(2,'suman','advisor','mumbai'),(3,'sekhar','asst manager','trichy');
Query OK, 3 rows affected (0.04 sec)
Records: 3 Duplicates: 0 Warnings: 0
mysql> select * from trainer;
                   designation
                                    | branch
  sno
        Iname
          ramesh
                     manager
                                      Hyderabad
      2 | 3 |
          suman
                     advisor
                                      mumbai
          sekhar
                     asst manager | trichy
3 rows in set (0.01 sec)
mysql> alter table trainer add column salary decimal(10,2);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> desc trainer;
  Field
                                   | Null | Key | Default | Extra |
                | Type
  sno
                   int
                                                    NULL
                   varchar(20)
                                     YES
                                                    NULL
  designation
                   varchar(25)
                                     YES
                                                    NULL
                   varchar(25)
                                     YES
                                                    NULL
  branch
                   decimal(10,2)
                                     YES
                                                    NULL
  salary
5 rows in set (0.06 sec)
```

```
mysql> delete from trainer where sno=2;
Query OK, 1 row affected (0.01 sec)
mysql> select * from trainer;
                                 branch
                                              salary
                designation
         name
         ramesh
                                 Hyderabad
                                                NULL
                  manager
         sekhar
                                 trichy
                  asst manager
                                                NULL
2 rows in set (0.00 sec)
mysql> drop table trainer;
Query OK, 0 rows affected (0.04 sec)
mysql> desc trainer;
ERROR 1146 (42S02): Table 'trainer.trainer' doesn't exist
mysql>
```

Create an Emp table with the following fields: (EmpNo, EmpName, Job,Basic, DA, HRA,PF, GrossPay, NetPay) (Calculate DA as 30% of Basic and HRA as 40% of Basic)

- (a) Insert Five Records and calculate GrossPay and NetPay.
- (b) Display the employees whose Basic is lowest in each department .
- (c) If NetPay is less than <Rs. 10,000 add Rs. 1200 as special allowances.

- (d) Display the employees whose GrossPay lies between 10,000 & 20,000
- (e) Display all the employees who earn maximum salary

```
mysql> create database empl;
Query OK, 1 row affected (0.01 sec)

mysql> use empl;
Database changed
mysql> cREARTE TABLE Emp (

-> EmpNo INT PRIMARY KEY,
-> EmpName VARCHAR(50),
-> Job VARCHAR(50),
-> Job VARCHAR(50),
-> Dept VARCHAR(50),
-> DESTABLE (10, 2),
-> PA DECIMAL(10, 2),
-> PA DECIMAL(10, 2),
-> PF DECIMAL(10, 2),
-> PF DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> NotPay DECIMAL(10, 2),
-> (1, 'Alice', 'Manager', 'HR', 20000, 0.3 * 20000, 0.4 * 20000, 0.12 * 20000,
-> 20000 + 0.3 * 20000 + 0.4 * 20000 - 0.12 * 20000,
-> (2, 'Bob', 'Analyst', 'Finance', 18000, 0.3 * 18000, 0.4 * 18000, 0.12 * 18000,
-> 18000 + 0.3 * 18000 + 0.4 * 18000,
-> 18000 + 0.3 * 18000 + 0.4 * 18000
-> 12000 + 0.3 * 12000 + 0.4 * 12000,
-> (3, 'Charlie', 'Clerk', 'Admin', 12000, 0.3 * 18000, 0.4 * 12000, 0.12 * 12000,
-> (4, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 12000, 0.12 * 12000,
-> (1, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (1, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (1, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (1, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (1, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (1, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (5, 'Eve', 'Assistant', 'Finance', 9500, 0.3 * 9500, 0.4 * 9500, 0.12 * 9500,
-> 9500 + 0.3 * 9500 + 0.4 * 9500, 0.3 * 9500, 0.4 * 9500, 0.12 * 9500,
-> 9500 + 0.3 * 9500 + 0.4 * 9500, 0.12 * 9500);
Query OK, 5 rows affected (0.05 sec)
Records: 5 Duplicates: 0 Marnings: 0
```

ysql> select * from emp;									
EmpNo	EmpName	Job	Dept	Basic	DA	HRA	PF	GrossPay	NetPay
1	Alice	Manager	HR	20000.00	6000.00	8000.00	2400.00	34000.00	31600.00
2	Bob	Analyst	Finance	18000.00	5400.00	7200.00	2169.00	30600.00	28440.00
3	Charlie	Clerk	Admin	12000.00	3600.00	4800.00	1440.00	28488.88	18960.00
4	Diana	Supervisor	HR	15000.00	4500.00	6000.00	1800.00	25500.00	23788.88
5	Eve	Assistant	Finance	9500.00	2850.00	3800.00	1140.00	16150.00	15010.00

```
FROM Emp
       WHERE Basic IN (
            SELECT MIN(Basic)
            FROM Emp
GROUP BY Dept
    -> );
  Dept
             EmpName |
                         Basic
             Charlie
  Admin
                         12600.00
  HR
             Diana
                         15800.00
  Finance
             Eve
                          9500.00
  rows in set (0.01 sec)
mysql> UPDATE Emp
-> SET NetPay = NetPay + 1200

-> WHERE NetPay < 10000;

Query OK, 0 rows affected (0.04 sec)

Rows matched: 0 Changed: 0 Warnings: 0
mysql> select * from emp;
                                                                                                            NetPay
  EmpNo | EmpName | Job
                                     Dept
                                                 Basic
                                                             DA
                                                                        HRA
                                                                                    DF
                                                                                               GrossPay |
           Alice
                       Manager
                                     HR
                                                 20000.00
                                                             6000.00
                                                                         8000.00
                                                                                    2400.00
                                                                                                34000.00
                                                                                                             31600.00
                                                                                                            28440.00
18960.00
           Bob
                       Analyst
                                     Finance
                                                 18000.00
                                                             5400.00
                                                                         7200.00
                                                                                    2160.00
                                                                                                30600.00
           Charlie
                                                                                    1440.00
                       Clerk
                                     Admin
                                                 12000.00
                                                              3600.00
                                                                         4800.00
                                                                                                28489.88
                                                                                                25500.00
           Diana
                       Supervisor
                                      HR.
                                                 15000.00
                                                             4500.00
                                                                         6000.00
                                                                                    1800.00
                                                                                                             23780.00
           Eve
                       Assistant
                                     Finance
                                                  9500.00
                                                             2850.00
                                                                         3800.00
                                                                                    1149.00
                                                                                                16150.00
                                                                                                             15010.00
  rows in set (0.00 sec)
mysql> SELECT *
     -> FROM Emp
     -> WHERE GrossPay BETWEEN 10000 AND 20000;
                                     Dept
                                                Basic
                                                            DA
                                                                      I HRA
                                                                                  PF
                                                                                             GrossPay
                                                                                                           NetPay
           EmpName
                     | Job
                                                9500.00
                                                            2850.00
                                                                       3800.00
                                                                                 1149.68
       5 | Eve
                       Assistant
                                     Finance
                                                                                              16150.00
                                                                                                           15010.00
  row in set (0.04 sec)
mysql> SELECT *
     -> FROM Emp
     -> WHERE GrossPay = (SELECT MAX(GrossPay) FROM Emp);
  EmpNo | EmpName
                       Job
                                  Dept
                                          Basic
                                                       DA
                                                                 HRA
                                                                              PF
                                                                                         GrossPay
                                                                                                      NetPay
                                                                              2400.00 |
       1 | Alice
                       Manager | HR
                                          20000.00 | 6000.00
                                                                   8000.00 |
                                                                                          34000.00 |
                                                                                                      31600.00
  row in set (0.04 sec)
```

An Enterprise wishes to maintain a database to automate its operations. Enterprise is divided into certain departments and each department consists of employees. The following two tables describes the automation schemas

Dept (deptno, dname, loc)

Emp (empno, ename, job, mgr, hiredate, sal, comm, deptno)

- a) Update the employee salary by 15%, whose experience is greater than 10 years.
- b) Delete the employees, who completed 30 years of service.
- c) Display the manager who is having maximum number of employees working under him?

```
mysql> CREATE DATABASE company;
Query OK, 1 row affected (0.06 sec)
mysql> use company;
Database changed
 mysql> CREATE TABLE Dept (
                    DeptNo INT PRIMARY KEY,
                     DName VARCHAR(50),
                    Loc VARCHAR(50)
        ->
        -> );
 Query OK, 0 rows affected (0.07 sec)
mysql>
 mysql> CREATE TABLE Emp (
                    EmpNo INT PRIMARY KEY,
        ->
        ->
                     EName VARCHAR(50),
                     Job VARCHAR(50),
        ->
                    Mgr INT,
HireDate DATE,
        ->
                     Sal DECIMAL(10, 2),
Comm DECIMAL(10, 2),
        ->
                     DeptNo INT,
        ->
                     FOREIGN KEY (DeptNo) REFERENCES Dept(DeptNo)
        ->
       -> );
 Query OK, 0 rows affected (0.08 sec)
mysql> INSERT INTO Dept (DeptNo, DName, Loc)
         -> VALUES
-> (10, 'HR', 'New York'),
-> (20, 'Finance', 'Chicago'),
-> (30, 'IT', 'San Francisco'),
-> (40, 'Admin', 'Los Angeles');
Query OK, 4 rows affected (0.04 sec)
Records: 4 Duplicates: 0 Warnings: 0
mysql> INSERT INTO Emp (EmpNo, EName, Job, Mgr, HireDate, Sal, Comm, DeptNo)
         -> VALUES
-> VALUES
-> (1, 'Alice', 'Manager', NULL, '1995-06-15', 70000, 5000, 10),
-> (2, 'Bob', 'Analyst', 1, '2005-09-25', 50000, 3000, 20),
-> (3, 'Charlie', 'Clerk', 2, '2010-12-01', 30000, 1500, 30),
-> (4, 'Diana', 'Supervisor', 1, '1990-03-10', 60000, 4000, 40),
-> (5, 'Eve', 'Assistant', 3, '2015-05-20', 25000, 1000, 30),
-> (6, 'Frank', 'Developer', 4, '2018-08-15', 45000, 2000, 30);
Query OK, 6 rows affected (0.04 sec)
Records: 6 Duplicates: 0 Warnings: 0
 mysql> select * from dept;
   DeptNo | DName | Loc
              Finance
        28 | Finance | Chicago
30 | IT | San Francisco
48 | Admin | Los Angeles
 4 rows in set (0.00 sec)
 mysql> select * from emp;
 | EmpNo | EName | Job
                                        | Mgr | HireDate | Sal
                                                                               | Comm | DeptNo |
                                             LL | 1995-86-15 | 79068.66 | 5808.88

1 | 2905-89-25 | 58086.88 | 3888.89

2 | 2010-12-01 | 38086.00 | 1580.88

1 | 1990-93-18 | 68086.00 | 48080.98

3 | 2815-85-26 | 25886.88 | 1888.88

4 | 2018-88-15 | 45888.88 | 2888.88
                                                                                 5000.00
                          Manager.
                                          NULL
                                                                                                   18
28
38
                        Analyst
Clerk
            Bob
Charlie
                         Supervisor
Assistant
                                                                                                   40
30
30
            Eve
           Frank
                         Developer
```

rows in set (0.00 sec)

```
mysql> UPDATE Emp
    -> SET Sal = Sal * 1.15
    -> WHERE TIMESTAMPDIFF(YEAR, HireDate, CURDATE()) > 10;
Query OK, 4 rows affected (0.01 sec)
Rows matched: 4 Changed: 4 Warnings: 0
mysql> SELECT * FROM EMP;
  EmpNo
          EName
                    Job
                                  Mgr
                                         HireDate
                                                       Sal
                                                                  Comm
                                                                             DeptNo
          Alice
                                  NULL
                                          1995-06-15
                                                       80500.00
                                                                   5000.00
      1
                     Manager
                                                                                 10
                                          2005-09-25
                                                       57500.00
                                                                   3000.00
      2
          Bob
                     Analyst
                                                                                 20
                                     1
      3
          Charlie
                     Clerk
                                     2
                                          2010-12-01
                                                       34500.00
                                                                   1500.00
                                                                                 30
      4
          Diana
                     Supervisor
                                     1
                                          1990-03-10
                                                       69000.00
                                                                   4000.00
                                                                                 40
                                                       25000.00
      5
          Eve
                     Assistant
                                     3
                                          2015-05-20
                                                                   1000.00
                                                                                 30
                                                       45000.00
      6
          Frank
                    Developer
                                     4
                                         2018-08-15
                                                                   2000.00
                                                                                 30
6 rows in set (0.00 sec)
    -> WHERE TIMESTAMPDIFF(YEAR, HireDate, CURDATE()) >= 30;
```

```
mysql> DELETE FROM Emp
Query OK, 1 row affected (0.01 sec)
mysql> SELECT * FROM EMP;
  EmpNo
        | EName
                    Job
                                Mgr
                                        HireDate
                                                      Sal
                                                                 Comm
                                                                            DeptNo
          Alice
                     Manager
                                 NULL
                                         1995-06-15
                                                      80500.00
                                                                  5000.00
                                                                                 10
      2
                                                      57500.00
                                                                  3000.00
                                                                                 20
          Bob
                     Analyst
                                    1
                                         2005-09-25
      3
          Charlie
                                    2
                                                      34500.00
                                                                  1500.00
                                                                                 30
                     Clerk
                                         2010-12-01
                                                                  1000.00
      5
          Eve
                     Assistant
                                    3
                                         2015-05-20
                                                      25000.00
                                                                                 30
                                                                  2000.00
      6
          Frank
                     Developer
                                         2018-08-15
                                                      45000.00
                                                                                 30
5 rows in set (0.00 sec)
mysql> SELECT Mgr AS ManagerID, COUNT(*) AS EmployeeCount
    -> FROM Emp
    -> WHERE Mgr IS NOT NULL
    -> GROUP BY Mgr
    -> ORDER BY EmployeeCount DESC
    -> LIMIT 1;
  ManagerID
              EmployeeCount
          1
                           1 |
 row in set (0.00 sec)
```