```
Welcome to the MySQL monitor. Commands end with ; o
Your MySQL connection id is 9
Server version: 8.0.40 MySQL Community Server - GPL
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 Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> create databse workers
-> create databse workers;
ERROR 1864 (42800): 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 'd atabse workers'
create databse workers' at line 1
mysql> create databse workers;
Query OK, 1 row affected (8.05 sec)
 mysql> use workers;
  ngage use workers,
Database changed
nysql> create table workers(sl\no INT(10) , Name Varchar(15) , Designation Varchar(15), Branch varchar(25));
RROR:
 ERROR:
Unknown command '\n'.
ERROR 1864 (42909): 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 '\
no INI(10) , Name Varchar(15) , Designation Varchar(15), Branch varchar(25))' at line 1
mysql> create table workers(slno INI(10) , Name Varchar(15) , Designation Varchar(15), Branch varchar(25));
Query OK, 0 rows affected, 1 warning (0.03 sec)
               | Type
                             | Null | Key | Default | Extra |
  mysql> alter table workers add column salary int(10);
Query OK, 0 rows affected, 1 warning (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 1
mysql> desc workers;
   Field
                                                                                 Null | Key | Default | Extra
                                          Type
    slno
                                                                                   YES
                                           int
                                                                                                                       NULL
    Name
                                          varchar(15)
                                                                                  YES
                                                                                                                       NULL
                                           varchar(15)
     Designation |
                                                                                   YES
                                                                                                                       NULL
     Branch
                                           varchar(25)
                                                                                   YES
                                                                                                                       NULL
                                                                                   YES
    salarv
                                           int
                                                                                                                       NULL
5 rows in set (0.00 sec)
                               (slno, name, designation, branch) values(1, 'martin','manager','chennai'),(2,'sopna','supervisor','madurai'), (3,'hunter','assit
 nysql> insert into workers (slno, name,
it','trichy');
Query OK, 3 rows affected (0.04 sec)
Records: 3 Duplicates: 0 Warnings: 0
 ysql> desc workers;
                                | Null | Key | Default | Extra |
 Field
                  int
varchar(15)
varchar(15)
varchar(25)
int
                                                 NULL
NULL
NULL
NULL
  slno
Name
```

```
mysql> select * from workers;
        Name
                | Designation | Branch
                                         salarv
 slno |
        martin
                                chennai
                                            NULL
                 manager
     2
         sopna
                  supervisor
                                madurai
                                            NULL
        hunter
                assitant
                                trichy
                                            NULL
3 rows in set (0.00 sec)
mysql> update workers set salary = 1000 where slno=1;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from workers;
                | Designation | Branch
 slno | Name
                                         salary
     1 martin manager
                               chennai
                                            1000
     2
                 supervisor
                               madurai
        sopna
                                            NULL
      hunter
                 assitant
                               trichv
                                            NULL
3 rows in set (0.00 sec)
mysql> update workers set salary = 10000 where slno=2;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> update workers set salary = 10000 where slno=3;
Query OK, 1 row affected (0.04 sec)
Rows matched: 1 Changed: 1 Warnings: 0
mysql> select * from workers;
 slno | Name
                | Designation | Branch
                                        salarv
                               chennai
     1 |
       martin | manager
                                            1000
     2
        sopna
                  supervisor
                               madurai
                                           10000
                               trichy
        hunter
                 assitant
                                           10000
3 rows in set (0.00 sec)
```

```
mysgl> alter table workers change column name Fullname varchar(15);
Query OK, 0 rows affected (0.06 sec)
Records: 0 Duplicates: 0 Warnings: 0
mysql> select * from workers;
 slno | Fullname | Designation |
                                Branch
                                         salary
    1 I
        martin
                                chennai
                                            1000
                   manager
    2
                                madurai
                   supervisor
                                           10000
        sopna
                  assitant
                                           10000
        hunter
                                trichy
3 rows in set (0.00 sec)
mysql> drop table workers;
Query OK, 0 rows affected (0.06 sec)
mysql> select * from workers;
ERROR 1146 (42S02): Table 'workers.workers' doesn't exist
mvsql>
mysql> delete from workers where slno=2;
Query OK, 1 row affected (0.04 sec)
mysql> select * from workers;
 slno | Fullname | Designation | Branch
                                             salarv
                                   chennai
                                                1000
        martin
                    manager
                                               10000
    3
                    assitant
                                   trichv
        hunter
 rows in set (0.00 sec)
```

## Question 2:

```
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

mysql> select * from banks;

| sno | customer | account | balance | branch |

| 1 | Ramesh | 12378 | 100000 | Adyar |
| 2 | Samran | 12367 | 152500 | Mylapore |
| 3 | Hari | 12345 | 250000 | Anna Salai |
| sno | customer | account | balance | branch |

| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 1 | Ramesh | 12378 | 100000 | Adyar |
| 2 | Samran | 12367 | 152500 | Mylapore |
| 3 | Hari | 12345 | 250000 | Anna Salai |
| 2 | Samran | 12367 | 152500 | Mylapore |
| 3 | Hari | 12345 | 250000 | Anna Salai |
| 2 | Tows in set (0.01 sec)
```

```
mysql> 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)
```

## Question 3:

```
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;
 | sno | name | designation | branch
            ramesh | manager
                                              Hyderabad
       3 | 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
                                                               NULL
                       int
                                            YES
   sno
                       varchar(20)
                                             YES
                                                               NULL
   designation
                       varchar(25)
                                             YES
                                                               NULL
   branch
                      varchar(25)
                                            YES
                                                               NULL
                      decimal(10,2)
                                                               NULL
                                            YES
   salary
   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;
                                             salary
  sno
         name
                | designation
                                 branch
                                  Hyderabad
                                                NULL
         ramesh
                  manager
     3
                                 trichy
         sekhar
                  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> |
```

```
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)
```

## Question 4:

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

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

-> EmpNo INT PRIMARY KEY,
-> EmpName VARCHAR(50),
-> Dept VARCHAR(50),
-> Dept VARCHAR(50), -- Assuming department is needed for part (b)
-> Basic DECIMAL(10, 2),
-> DA DECIMAL(10, 2),
-> PF DECIMAL(10, 2),
-> PF DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> NetPay DECIMAL(10, 2),
-> Not Pay DECIMAL(10, 2),
-> 1, 'Alice', 'Manager', 'HR', 20000, 0.3 * 20000, 0.4 * 20000, 0.12 * 20000,
-> 20000 + 0.3 * 20000 + 0.4 * 20000,
-> 20000 + 0.3 * 20000 + 0.4 * 20000,
-> 20000 + 0.3 * 20000 + 0.4 * 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 * 18000 + 0.4 * 18000,
-> 12000 + 0.3 * 12000 + 0.4 * 12000,
-> (4, 'Diana', 'Supervisor', 'HR', 15000, 0.3 * 15000, 0.4 * 15000, 0.12 * 15000,
-> (5, 'Eve', 'Assistant', 'Finance', 9500, 0.3 * 15000, 0.4 * 9500, 0.12 * 9500,
-> 9500 + 0.3 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.4 * 9500, 0.12 * 9500, 0.9500, 0.13 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.9500, 0.13 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.9500, 0.13 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.13 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.13 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.13 * 9500 + 0.4 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.13 * 9500 + 0.14 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500, 0.12 * 9500,
```

```
mysql> select * from empl;
ERROR 1146 (42502): Table 'empl.empl' doesn't exist
mysql> select * from emp;
   EmpNo | EmpName |
                                                  Dept
                                                                                                  HRA
                                                                                                                                 GrossPay
                                                                                                                                                  NetPay
               Alice
                                                                   20000.00
                                                                                   6000.00
                                                                                                   8000.00
                                                                                                                  2400.00
                                                                                                                                  34000.00
                                                                                                                                                   31600.00
                               Manager
         1
2
3
                                                                  18000.00
12000.00
15000.00
9500.00
                                                                                   5400.00
3600.00
4500.00
2850.00
                                                                                                                                 30600.00
20400.00
25500.00
16150.00
                                                                                                                                                  28440.00
18960.00
23700.00
15010.00
                                                  Finance
Admin
                                                                                                  7200.00
4800.00
                                                                                                                  2160.00
1440.00
               Bob
                               Analyst
               Charlie
                               Clerk
               Diana
         4
                               Supervisor
                                                                                                  6000.00
3800.00
                                                                                                                 1800.00
1140.00
                                                  HR
                                                  Finance
                               Assistant
               Eve
  rows in set (0.04 sec)
```

```
SELECT Dept, EmpName, Basic
          FROM Emp
         WHERE Basic IN (
SELECT MIN(Basic)
FROM Emp
GROUP BY Dept
      ->
      ->
      ->
   Dept
                EmpName |
                               Basic
   Admin
                 Charlie
                               12000.00
                 Diana
                               15000.00
   Finance
                 Eve
                                9500.00
3 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;
                                                                                                                     GrossPay
   EmpNo | EmpName
                                                                            DA
                                                                                          HRA
                                                                                                         ΡF
                            Job
                                               Dept
                                                             Basic
                                                                                                                                       NetPav
              Alice
                                               HR
                                                             20000.00
                                                                             6000.00
                                                                                           8000.00
                                                                                                         2400.00
                                                                                                                        34000.00
                                                                                                                                       31600.00
                            Manager
         1
2
3
                                                                            5400.00
3600.00
4500.00
2850.00
                                                                                                                                       28440.00
18960.00
              Bob
                            Analyst
                                               Finance
                                                             18000.00
                                                                                           7200.00
                                                                                                         2160.00
                                                                                                                        30600.00
              Charlie
                                                                                                         1440.00
1800.00
1140.00
                                                                                                                       20400.00
25500.00
                            Clerk
                                               Admin
                                                             12000.00
                                                                                           4800.00
                                                                                                                                       23700.00
15010.00
              Diana
                            Supervisor
                                                             15000.00
                                                                                           6000.00
                                               Finance
                                                                                                                       16150.00
        5
              Eve
                            Assistant
                                                              9500.00
                                                                                           3800.00
   rows in set (0.00 sec)
```

	ROM Emp	Pay BETWEEN	10000	AND 20000;										
EmpNo	EmpName	Job	Dept	:   Basi	c DA		HRA	<del> </del>	PF		GrossF	Pay	NetP	 'ay
5	Eve	Assistant	Fina	nce   9500	.00   2850	0.00	3800.	. 00	1140.	00	16150	. 00	1501	0.00
mysql> SE -> FR	ROM Emp	sec) Pay = (SELEC	T MAX(	GrossPay)	FROM Emp)									
EmpNo	EmpName	Job	Dept	Basic	DA	HR/	١	PF	į	Gro	ssPay	Net	Pay	į
1	Alice	Manager	HR	20000.00	6000.00	800	00.00	2400	0.00	340	00.00	316	500.00	İ
1 row in	set (0.04	sec)												·

## Question 5

```
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> 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
```

DeptNo	DName	Loc	!				
10	HR	New York	<del>-</del>				
20	Finance	Chicago					
30	IT	San Francis	sco				
40	Admin	Los Angeles	5				
sql> se	set (0.00	om emp;	· !	!		!	+
	elect * fro		   Mgr	HireDate	Sal		+   DeptNo +
sql> se	elect * fro	om emp; +   Job +   Manager	NULL	   1995-06-15	70000.00	5000.00	   10
rsql> se + EmpNo   + 1   2	elect * fro  EName  Alice Bob	om emp; 	NULL 1	   1995-06-15   2005-09-25	70000.00 50000.00	5000.00 3000.00	10   20
rsql> se + EmpNo   + 1	Elect * fro EName Alice Bob Charlie	om emp;      Job   Manager   Analyst   Clerk	NULL 1 2	   1995-06-15   2005-09-25   2010-12-01	70000.00 50000.00 30000.00	5000.00 3000.00 1500.00	10 20 30
sql> se + EmpNo   + 1   2   3   4	Elect * fro EName Alice Bob Charlie Diana	om emp; Job Manager Analyst Clerk Supervisor	NULL   1   2   1	1995-06-15   2005-09-25   2010-12-01   1990-03-10	70000.00 50000.00 30000.00 60000.00	5000.00 3000.00 1500.00 4000.00	10   20   30   40
zsql> se + EmpNo   + 1   2   3	Elect * fro EName Alice Bob Charlie	om emp;      Job   Manager   Analyst   Clerk	NULL 1 2	1995-06-15   2005-09-25   2010-12-01   1990-03-10   2015-05-20	70000.00 50000.00 30000.00	5000.00 3000.00 1500.00	10 20 30

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