DBMS Assignment A2 and A3

create table Customer (cust_name varchar(15), cust_street varchar(15) , cust_city varchar(15));

create table Branch (branch_name varchar(20) , branch_city varchar(15) , assets int);

create table Account (acc_no int not NULL primary key , branch_name varchar(20) , balance int);

create table Depositer (cust_name varchar(15) , acc_no int , foreign key(acc_no) references Account(acc_no) on delete cascade on update cascade);

create table Loan (loan_no varchar(10) primary key , branch_name varchar(20) , amount int);

create table Borrower (cust_name varchar(15) , loan_no varchar(10) , foreign key(loan_no) references
Loan(loan_no) on delete cascade on update cascade);

Q1. Find the names of all branches in loan relation.

mysql> select branch_name from Loan;

```
+-------------+
| branch_name |
+-------------+
| mumbai      |
| pune        |
| pune        |
| nagpur      |
| indore      |
+-------------+
```

Q2.Find all loan numbers for loans made at Camp Branch with loan amount > 1200.

mysql> select loan_no from Loan where branch_name="pune" and amount > 1200;

```
+---------+
| loan_no |
+---------+
| 22156   |
| 22658   |
+---------+
```

Q3.Find all customers who have a loan from bank.

mysql> select B.cust_name from Borrower B,Loan L where B.loan_no=L.loan_no;

```
+-----------+
| cust_name |
+-----------+
| Dhruvil   |
| Gaurav    |
| Soham     |
+-----------+
```

Q4.Find their names,loan_no and loan amount.

mysql> select B.cust_name,B.loan_no,L.amount from Borrower B, Loan L where B.loan_no=L.loan_no;

```
+-----------+---------+--------+
| cust_name | loan_no | amount |
+-----------+---------+--------+
| Dhruvil   | 22156   |  25000 |
| Gaurav    | 11235   |  26000 |
| Soham     | 55457   |   9000 |
+-----------+---------+--------+
```

Q4. List all customers in alphabetical order who have loan from Camp branch.

mysql> select cust_name from Borrower where loan_no in(select loan_no from Loan where branch_name="Camp") order by cust_name;

```
+-----------+
| cust_name |
+-----------+
| Soham     |
+-----------+
```

Q5. Find all customers who have an account or loan or both at bank.

mysql> select cust_name from Depositor union select cust_name from Borrower;

```
+-----------+
| cust_name |
+-----------+
| Dhruvil   |
| Gaurav    |
| Sundar    |
```

```
| Golu       |
| Sonu       |
+------------+
```

Q6. Find all customers who have both account and loan at bank.

mysql> select D.cust_name from Depositor D inner join Borrower B on D.cust_name=B.cust_name;

```
+------------+
| cust_name  |
+------------+
| Ram        |
| Gaurav     |
| Soham      |
+------------+
```

Q7. Find all customer who have account but no loan at the bank.

mysql> select D.cust_name from Depositor D where cust_name not in (select cust_name from Borrower);

```
+------------+
| cust_name  |
+------------+
| Sundar     |
| Golu       |
+------------+
```

Q8. Find average account balance at Camp branch.

mysql> select avg(balance) from Account where branch_name="mumbai";

```
+--------------+
| avg(balance) |
+--------------+
|   30000.0000 |
+--------------+
```

Q9. Find the average account balance at each branch
mysql> select branch_name, avg(balance) from Account group by branch_name;

```
+-------------+--------------+
| branch_name | avg(balance) |
+-------------+--------------+
| MG road     |   10000.0000 |
| nagpur      |   12500.0000 |
| Mumbai      |   20000.0000 |
| pune        |   30000.0000 |
| indore      |   14500.0000 |
+-------------+--------------+
```

Q10. Find no. of depositors at each branch.
mysql> select branch_name,count(D.acc_no) from Account A,Depositor D where A.acc_no = D.acc_no group by branch_name;

```
+-------------+-----------------+
| branch_name | count(D.acc_no) |
+-------------+-----------------+
| MG road     |               1 |
| nagpur      |               1 |
| Mumbai      |               1 |
| pune        |               1 |
| indore      |               1 |
+-------------+-----------------+
```

Q11. Find the branches where average account balance > 12000
mysql> select branch_name,avg(balance) Average_Balance from Account where balance > 12000 group by branch_name;

```
+-------------+-----------------+
| branch_name | Average_Balance |
+-------------+-----------------+
| nagpur      |      12500.0000 |
| Mumbai      |      20000.0000 |
| pune        |      30000.0000 |
| indore      |      14500.0000 |
+-------------+-----------------+
```

Q12. Find number of tuples in customer relation.

mysql> select count(cust_city) No_Of_Tuples from Customer;

```
+--------------+
| No_Of_Tuples |
```

```
+--------------+
|            5 |
+--------------+
```

Q13. Calculate total loan amount given by bank.

```
mysql> select sum(amount) Total_Loan from Loan;
+------------+
| Total_Loan |
+------------+
|     162700 |
+------------+
```

Q14. Delete all loans with loan amount between 1300 and 1500.

```
mysql> delete from Loan where amount between 20000 and 35000;
mysql> select * from Loan;

+---------+-------------+--------+
| loan_no | branch_name | amount |
+---------+-------------+--------+
| 22658   | pune        |  67500 |
| 33128   | nagpur      |  35200 |
| 55457   | indore      |   9000 |
+---------+-------------+--------+
```

Q15. Delete all tuples at every branch located in pune.

```
mysql>  delete A,L from Account A inner join Loan L on A.branch_name=L.branch_name where
A.branch_name = "pune";
mysql> select * from Account;

+--------+-------------+---------+
| acc_no | branch_name | balance |
+--------+-------------+---------+
| 112011 | MG road     |   10000 |
| 112701 | nagpur      |   12500 |
| 701905 | Mumbai      |   20000 |
| 741905 | indore      |   14500 |
+--------+-------------+---------+

mysql> select * from Loan;

+---------+-------------+--------+
| loan_no | branch_name | amount |
+---------+-------------+--------+
| 33128   | nagpur      |  35200 |
```

```
| 55457   | indore      |   9000 |
+---------+-------------+--------+
```

Q.16. Create synonym for customer table as cust_name.

```
mysql>  create view cust_name as select * from customer;
mysql> select * from cust_name;
```

```
+-----------+-----------------+-----------+
| cust_name | cust_street     | cust_city |
+-----------+-----------------+-----------+
| Ram       | M G Road        | Pune      |
| shyam     | Phule Market    | Mumbai    |
| sundar    | ramtekari       | Nagpur    |
| golu      | atre road       | pune      |
| sonu      | mahakal highway | Indore    |
+-----------+-----------------+-----------+
```
