Bank Database Schema:

account (account_number, branch_name, balance)
branch (branch_id, branch_name, branch_city, assets)
customer (customer_id, customer_name, customer_street, customer_city, customer_dob)
loan (loan_number, branch_name, amount)
depositor (customer_id, dep_Date, account_number)
borrower (customer_id, bor_Date, loan_number)

SQL Queries:

- a) Write a query for inserting values into the tables.
- b) Write a query to display all the data from the customer table.
- c) Write a query to display the dep_Date. Label the column as Date.
- d) Write a query to display the account_number, brance_name and balance increased by Rate of Interest by 8.3% (expressed as a whole number) for each account_number. Label the column new balance.
- e) Write a query to display the account details in descending order based on balance.
- f) Write a query to display the number of people having the account in same branch.
- g) Write a query to display the account_number and balance whose balance is more than 15,000.
- h) Write a query to display the customer_id and account_number of every depositor who was deposited the amount in 2014.
- i) Write a query to display the account_number, brance_name and balance for all account holders whose balance is not in the range of 5,000 and 20,000.
- j) Write a query to display the customer_id and loan_number of borrowers who borrowed their amount from the loan account between Feb 20, 2014 and May 1, 2014. Order the query in ascending order by bor Date.
- k) Write a query to display the customer_id and customer_name of all customers whose city is not a madurai.
- I) Write a query to add Rs. 1000 as bonus amount for all customers and update it under the balance field in account table.
- m) Write a query to display account_number and branch_name of all customers where branch_name is either SBI_VNR or SBI_SVKS and also their balance is more than Rs. 30,000.
- n) Write a query to display account_number and branch_name of all customers whose branch_name is SBI_VNR, SBI_MDU or SBI_SVKS and also their balance is not equal to 3,500, 4,500 and 7,000.
- o) Write a query to display the names of all customers where the third letter of the name is 'm'.
- p) Write a query to display the names of all customers whose name doesn't start with 'M' or 'L' or 'P'.
- q) Write a query to display the highest, lowest, sum and average balance of all customers. Label the columns Maximum, Minimum, Sum and Average respectively. Round your results to the nearest whole number.
- r) Write a query to display the names of customers (with the first letter uppercase and all other letters lowercase) and the length of the name for all customers whose name starts with the letters 'J' or 'P'. Give each column an appropriate label. Sort the results by the customer_name.
- s) Write a query that displays the difference between the highest and lowest balance. Label the column DIFFERENCE.
- t) Write a query to count the total number of customers present in the customer table.
- u) Write a query to delete 'male' customers.
- v) Write a query to delete 'female' customers.
- w) Write a query to display how many days have passed since all customers birthday.

ANSWERS

mysql> show tables; **+** +-----→ | Tables in step1 | **+** +-----→ | account → | borrower → | branch → | customer → | depositor → | loan **→** +-----+ → 6 rows in set (0.01 sec) mysql> desc account; +-----+ → | Field | Type | Null | Key | Default | Extra | **→** +-----+ → | branch_name | varchar(20) | YES | NULL | → | balance | decimal(10,0) | YES | NULL | **+** +------→ 3 rows in set (0.01 sec) mysql> desc borrower; +-----+ → | Field | Type | Null | Key | Default | Extra | **+** +-----+ → | customer_id | int | YES | MUL | NULL | → | bor_date | date | YES | NULL | | → | loan_number | int | YES | MUL | NULL | +-----+ → 3 rows in set (0.00 sec) mysql> desc branch; **+** +-----+ → | Field | Type | Null | Key | Default | Extra | **+** +-----+ → | branch_id | int | NO | PRI | NULL | | → | branch_name | varchar(20) | YES | NULL |

	 → branch_city varchar(20) YES NULL → assets int YES NULL
	→ ++ → 4 rows in set (0.01 sec)
•	mysql> desc customer;
	→ ++ → Field Type Null Key Default Extra → ++
	 → customer_id int NO PRI NULL → customer_name varchar(20) YES NULL → customer_street varchar(20) YES NULL → customer_city varchar(20) YES NULL → customer_dob varchar(20) YES NULL
	→ ++ → 5 rows in set (0.00 sec)
•	mysql> desc depositor; → ++ → Field Type Null Key Default Extra → ++ → customer_id int YES MUL NULL → dep_date date YES NULL → account_number int YES MUL NULL → ++++ → 3 rows in set (0.00 sec)
•	mysql> desc loan; ++ Field Type Null Key Default Extra
	→ Freid Type Null Rey Default Extra → ++ → loan_number int NO PRI NULL → branch_id int YES MUL NULL → amount int YES NULL → ++ → 3 rows in set (0.00 sec)

• mysql> select dep_date as Date from depositor;

→ +----+

```
    → | Date |
    → +-----+
    → | 2004-02-02 |
    → | 2022-02-01 |
    → | 2014-02-01 |
    → | 2014-04-02 |
    → +------+
    → 4 rows in set (0.00 sec)
```

- mysql> select account_number,branch_name,round(balance+balance*8
- .3,0) as new_balance from account;

```
+-----
→ | account number | branch name | new balance |
+ +-----+
      123 | sbi
→ |
                   9300 |
               | 18600 |
→ |
      1234 | tmb
     12345 | icici
                | 2790 |
    123455 | icici | 148800 |
→ |
      123456 | sbi vnr | 148800 |
+-----+
→ 5 rows in set (0.01 sec)
```

mysql> select * from account order by balance desc;

```
    → +-----+
    → | account_number | branch_name | balance |
    → +-----+
    → | 123455 | icici | 16000 |
    → | 123456 | sbi_vnr | 16000 |
    → | 1234 | tmb | 2000 |
    → | 123 | sbi | 1000 |
    → | 12345 | icici | 300 |
    → +-----+
    → 5 rows in set (0.00 sec)
```

mysql> desc account;

```
    → +-----+
    → | Field | Type | Null | Key | Default | Extra |
    → +----+
    → account_number | int | NO | PRI | NULL | |
    → | branch_name | varchar(20) | YES | NULL | |
    → | balance | decimal(10,0) | YES | NULL | |
```

```
→ +-----+
→ 3 rows in set (0.01 sec)
```

mysql> select * from account;

```
    → +-----+
    → | account_number | branch_name | balance |
    → +-----+
    → | 123 | sbi | 1000 |
    → | 1234 | tmb | 2000 |
    → | 12345 | icici | 300 |
    → | 123455 | icici | 16000 |
    → | 123456 | sbi_vnr | 16000 |
    → +-----+
    → 5 rows in set (0.00 sec)
```

mysql> select * from branch;

```
    → +-----+
    → branch_id | branch_name | branch_city | assets |
    → +-----+
    → 111 | sbi | vnr | 100 |
    → | 123 | sbi | mdu | 500 |
    → | 1234 | sbi | svks | 500 |
    → +-----+
    → 3 rows in set (0.00 sec)
```

 mysql> select branch_name ,count(account_number) as number_of_people from account group by branch_name;

- mysql> select account_number,balance from account where balance>
- 15000;

```
    → +-----+
    → | account_number | balance |
    → +-----+
    → | 123455 | 16000 |
    → | 123456 | 16000 |
    → +-----+
    → 2 rows in set (0.01 sec)
```

- mysql> select customer_id,account_number from depositor where de
- p date between 2014-01-01 and 2014-12-31;
 - → Empty set, 2 warnings (0.01 sec)
- mysql> select * from depositor;

```
→ +-----+
→ | customer_id | dep_date | account_number |
→ +-----+
→ | 1 | 2004-02-02 | 123 |
→ | 2 | 2022-02-01 | 1234 |
→ | 2 | 2014-02-01 | 12345 |
→ | 3 | 2014-04-02 | 1234 |
→ +-----+
→ 4 rows in set (0.00 sec)
```

- mysql> select customer_id,account_number from depositor where dep_date between 2014-12-31 and 2014-01-01;
 - → Empty set, 2 warnings (0.00 sec)
- mysql> select customer_id,account_number from depositor where dep_date between
 '2014-01-01' and '2014-12-31';

```
    → +-----+
    → | customer_id | account_number |
    → +-----+
    → | 2 | 12345 |
    → | 3 | 1234 |
    → +-----+
    → 2 rows in set (0.00 sec)
```

- mysql> select account number, branch name, balance from account wh
- ere balance between 5000 and 20000;

```
    → +-----+
    → | account_number | branch_name | balance |
    → +-----+
    → | 123455 | icici | 16000 |
    → | 123456 | sbi_vnr | 16000 |
    → +-----+
```

- → 2 rows in set (0.00 sec)
- mysql> select customer_id,loan_number from borrower where bor_da
- te between '2014-02-20' and '2014-05-01' order by bor date;

```
    → +-----+
    → | customer_id | loan_number |
    → +-----+
    → 2 | 9 |
    → +-----+
    → 1 row in set (0.00 sec)
```

mysql> select * from borrower;

```
    → +-----+
    → | customer_id | bor_date | loan_number |
    → +-----+
    → | 1 | 2004-02-02 | 7 |
    → | 2 | 2022-02-01 | 8 |
    → | 2 | 2014-04-02 | 9 |
    → +-----+
    → 3 rows in set (0.00 sec)
```

 mysql> select customer_id,customer_name,customer_city from customer where customer city not in('madurai');

```
    → +-----+
    + customer_id | customer_name | customer_city |
    → +-----+
    → | 1 | bhu | apk |
    → | 2 | abi | svks |
    → | 3 | raj | mdu |
    → +-----+
    → 3 rows in set (0.01 sec)
```

 mysql> select customer_id,customer_name,customer_city from customer where customer city not in('mdu');

```
    → +-----+
    → | customer_id | customer_name | customer_city |
    → +-----+
    → | 1 | bhu | apk |
    → | 2 | abi | svks |
    → +-----+
    → 2 rows in set (0.00 sec)
```

 mysql> select round(balance+1000) as balance,account_number,branch_name from account;

```
    → +-----+
    → | balance | account_number | branch_name |
    → +-----+
    → | 2000 | 123 | sbi |
    → | 3000 | 1234 | tmb |
    → | 1300 | 12345 | icici |
    → | 17000 | 123455 | icici |
    → | 17000 | 123456 | sbi_vnr |
    → +-----+
    → 5 rows in set (0.00 sec)
```

mysql> select * from account;

```
    → +-----+
    → | account_number | branch_name | balance |
    → +-----+
    → | 123 | sbi | 1000 |
    → | 1234 | tmb | 2000 |
    → | 12345 | icici | 300 |
    → | 123455 | icici | 16000 |
    → | 123456 | sbi_vnr | 16000 |
    → +-----+
    → 5 rows in set (0.00 sec)
```

- mysql> update account set balance=balance+1000;
 - → Query OK, 5 rows affected (0.02 sec)
 - → Rows matched: 5 Changed: 5 Warnings: 0

mysql> select * from account;

```
    → +-----+
    → | account_number | branch_name | balance |
    → +-----+
    → | 123 | sbi | 2000 |
    → | 1234 | tmb | 3000 |
    → | 12345 | icici | 1300 |
    → | 123455 | icici | 17000 |
    → | 123456 | sbi_vnr | 17000 |
    → +-----+
    → 5 rows in set (0.00 sec)
```

- 2 2 10 110 111 001 (0.00 000)
- mysql> update account set balance=balance+50000 where account_nu
- mber=123456;
 - → Query OK, 1 row affected (0.01 sec)
 - → Rows matched: 1 Changed: 1 Warnings: 0
- mysql> select * from account;
 - → +-----+
 → | account_number | branch_name | balance |
 → +-----+
 → | 123 | sbi | 2000 |
 → | 1234 | tmb | 3000 |
 → | 12345 | icici | 1300 |
 → | 123455 | icici | 17000 |
 → | 123456 | sbi_vnr | 67000 |
 → +-----+
 → 5 rows in set (0.00 sec)
- mysql> select * from account where branch_name ='sbi_vnr' or bra
- nch name='sbi svks' and balance >=30000;

→ 1 row in set (0.00 sec)

```
    → +-----+
    → account_number | branch_name | balance |
    → +----+
    → 123456 | sbi_vnr | 67000 |
    → +-----+
```

•	mysql> SELECT account_number,branch_name
	→ FROM account
	→ WHERE branch_name="sbi_vnr" OR branch_name="sbi_svks" OR
	branch_name="sbi_mdu"
	→ AND balance NOT IN(3500,7000,4500)
	→ :
	→ ++
	account number branch name
	++
	→ 123456 sbi_vnr
	+
	→ 1 row in set (0.00 sec)
•	mysql> desc customer;
	→ ++
	→ Field Type Null Key Default Extra
	→ ++
	→ customer_id int NO PRI NULL
	→ customer_name varchar(20) YES NULL
	→ customer_street varchar(20) YES NULL
	→ customer_city varchar(20) YES NULL
	→ customer_dob varchar(20) YES NULL
	++
	→ 5 rows in set (0.00 sec)
	7 5 10W3 111 Set (0.00 Set)
•	mysql> insert into customer values(198, 'hema', 'abb', 'kkk', '11-04, 2021');
	→ Query OK, 1 row affected (0.01 sec)
_	mucals calact customer name from customer where customer name like " mo/".
•	mysql> select customer_name from customer where customer_name like "m%";
	→ ++
	customer_name
	→ ++
	→ hema
	→ ++
	→ 1 row in set (0.01 sec)
	→ 1 row in set (0.01 sec)
	→ 1 row in set (0.01 sec)
_	
•	mysql> select customer_name
•	mysql> select customer_name → from customer
•	mysql> select customer_name → from customer → where customer_name not like "m%" or "l%" or "p%";
•	mysql> select customer_name → from customer → where customer_name not like "m%" or "l%" or "p%"; → ++
•	mysql> select customer_name → from customer → where customer_name not like "m%" or "l%" or "p%";

```
    → | bhu |
    → | abi |
    → | raj |
    → | hema |
    → +-----+
    → 4 rows in set, 2 warnings (0.00 sec)
```

- mysql> select round(max(balance),0) as maximum,round(min(balance),0) as minimum,round(sum(balance),0) as sum,round(avg(balance),
- as average from account;

```
    → +-----+
    → | maximum | minimum | sum | average |
    → +-----+
    → | 67000 | 1300 | 90300 | 18060 |
    → +-----+
    → 1 row in set (0.01 sec)
```

- mysql> select customer_name from customer where customer_name li
- ke "j%" or "r%" or "p%" order by customer_name;
 - Empty set, 2 warnings (0.00 sec)
- mysql> select * from customer;
 - +-----+
 - | customer_id | customer_name | customer_street | customer_city | customer_dob |
 - +-----+

```
| 1 | bhu | xxx | apk
| 11-02-2004 |
| 2 | abi | yyy | svks
| 11-01-2004 |
| 3 | raj | zzz | mdu
| 26-08-2003 |
```

- | 198 | hema | abb | kkk
- | 11-04,2021 |
- +-----+
- 4 rows in set (0.00 sec)
- mysql> insert customer values(4,'jegan','ghy','madurai','12-06-2
- 013');
 - Query OK, 1 row affected (0.01 sec)

•	++ customer_name ++ jegan
my •	++ jegan
my •	jegan ++ 1 row in set, 2 warnings (0.00 sec) ysql> insert customer values(5,'pura','ghy','madurai','12-06-2013'); Query OK, 1 row affected (0.01 sec)
my •	++ 1 row in set, 2 warnings (0.00 sec) ysql> insert customer values(5,'pura','ghy','madurai','12-06-2013'); Query OK, 1 row affected (0.01 sec)
my •	++ 1 row in set, 2 warnings (0.00 sec) ysql> insert customer values(5,'pura','ghy','madurai','12-06-2013'); Query OK, 1 row affected (0.01 sec)
my •	ysql> insert customer values(5,'pura','ghy','madurai','12-06-2013'); Query OK, 1 row affected (0.01 sec)
my	Query OK, 1 row affected (0.01 sec)
	ysql> insert customer values(6,'rura','ghy','madurai','12-06-20
13	
•	Query OK, 1 row affected (0.01 sec)
•	customer_name ++ jegan
	ysql> select customer_name from customer where customer_name like "j%" or "r%" an %" order by customer_name; ++
•	customer_name
•	++
•	jegan
•	
•	1 row in set, 1 warning (0.00 sec)

+	
custome	
+ pura	
+	
1 row in so	et (0.00 sec)
	customer_name from customer where customer_name like "j%" or "r%
"; +	+
custome	r_name
+ jegan	
+	
1 row in so	et, 1 warning (0.00 sec)
ccount;	round(max(balance)-min(balance)) as difference fro +
ccount;	+
ccount; + differend +	+ ce +
ccount; + differen	+ ce + O
ccount; +	+ ce + O
ccount; +	+ ce + O +
ccount; +	+ ce + O +
difference	+ ce + 0 + et (0.00 sec)
difference +	+ ce + 0 + et (0.00 sec)
difference 65700 6	+ ce + 0 + et (0.00 sec)
ccount; +	+ ce + 0 + et (0.00 sec) count(customer_id) as count from customer;
ccount; +	+ ce + 0 + et (0.00 sec)
difference difference 65700 +	+ ce + 0 + et (0.00 sec) count(customer_id) as count from customer; et (0.04 sec)
difference difference 65700 +	+ ce + 0 + et (0.00 sec) count(customer_id) as count from customer; et (0.04 sec) round('2024-08-07' - customer_dob) as difference f
difference 65700 +	tee tee tee tee tee (0.00 sec) count(customer_id) as count from customer; et (0.04 sec) round('2024-08-07' - customer_dob) as difference f ;
difference difference 65700 +	the ce the ce the count (0.00 sec) count(customer_id) as count from customer; et (0.04 sec) round('2024-08-07' - customer_dob) as difference f ;t erence

```
→ | 2013 |
→ | 1998 |
→ | 2012 |
→ | 2012 |
→ | 2013 |
→ +-----+
→ 7 rows in set, 14 warnings (0.00 sec)
```

mysql> select customer_dob from customer;

```
→ +-----+

→ | customer_dob |

→ +-----+

→ | 11-02-2004 |

→ | 11-01-2004 |

→ | 26-08-2003 |

→ | 12-06-2013 |

→ | 12-06-2013 |

→ | 11-04,2021 |

→ +------+

→ 7 rows in set (0.00 sec)
```

- mysql> select customer_id,round('2024-08-07' customer_dob) as
- difference from customer;

```
→ +-----+
→ | customer_id | difference |
→ +-----+
→ | 1 | 2013 |
→ | 2 | 2013 |
→ | 3 | 1998 |
→ | 4 | 2012 |
→ | 5 | 2012 |
→ | 6 | 2012 |
→ | 198 | 2013 |
→ +-----+
→ 7 rows in set, 14 warnings (0.00 sec)
```

mysql> select customer_name,customer_dob from customer;

```
→ +-----+→ | customer_name | customer_dob |
```

mysql> select customer_id,customer_dob from customer;

```
→ +-----+

→ | customer_id | customer_dob |

→ +-----+

→ | 1 | 11-02-2004 |

→ | 2 | 11-01-2004 |

→ | 3 | 26-08-2003 |

→ | 4 | 12-06-2013 |

→ | 5 | 12-06-2013 |

→ | 198 | 11-04,2021 |

→ +-----+

→ 7 rows in set (0.00 sec)
```

- mysql> insert into customer values(99,'mohana','vnr','sts','female');
- mysql> desc customer;

```
    → +-----+
    → | Field | Type | Null | Key | Default | Extra |
    → +-----+
    → | customer_id | int | NO | PRI | NULL |
    → | customer_name | varchar(20) | YES | | NULL |
    → | customer_street | varchar(20) | YES | | NULL |
    → | customer_city | varchar(20) | YES | | NULL |
    → | customer_dob | varchar(20) | YES | | NULL |
    → +-----+
    → 5 rows in set (0.00 sec)
```

mysql> select*from customer;

+ +-----+

→ | customer_id | customer_name | customer_street | customer_city | customer_dob |→ +------+

```
1 | bhu
                    XXX
                              apk
                                        | 11-02-2004 |
         2 | abi
                              svks
                                        | 11-01-2004 |
                   Јууу
         3 | raj
                             | mdu
                                        | 26-08-2003 |
                   ZZZ
         4 | jegan
                              | madurai
                                         | 12-06-2013 |
                    | ghy
→
         5 | pura
                    | ghy
                               | madurai
                                          | 12-06-2013 |
                    | ghy
         6 | rura
                              | madurai
                                          | 12-06-2013 |
        29 | mohana
                       | vnr
                                 sts
                                          | female
        99 | mohana
                       vnr
                                 sts
                                          | female
                                                     1
→ |
        198 | hema
                      abb
                                 | kkk
                                          | 11-04,2021 |
→ +-----
```

- → 9 rows in set (0.00 sec)
- mysql> delete from customer where customer_dob='female';
 - → Query OK, 2 rows affected (0.01 sec)
- mysql> select*from customer;
 - **→** +-----+
 - → | customer_id | customer_name | customer_street | customer_city | customer_dob |

```
→ +-----+
      1 | bhu
              xxx
                      | apk
                             | 11-02-2004 |
      2 | abi
              l ууу
                      svks
                             | 11-01-2004 |
→ |
      3 | raj
              ZZZ
                     | mdu
                           | 26-08-2003 |
      4 | jegan
                      | madurai | 12-06-2013 |
             | ghy
      5 | pura
                       | madurai
                               | 12-06-2013 |
               | ghy
→ |
      6 | rura
                      | madurai
                              | 12-06-2013 |
               ghy
→ |
      198 | hema
                abb
                        | kkk
                               | 11-04,2021 |
+ +-----+
```

→ 7 rows in set (0.00 sec)