Tasks 2: Select, Where, Between, AND, LIKE:

1. Insert at least 10 sample records into each of the following tables.

• Customers

• Accounts

• Transactions

mysql> USE HMBank;

Database changed

mysql> ALTER TABLE Transactions AUTO\_INCREMENT = 201;

Query OK, 0 rows affected (0.05 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE Accounts AUTO\_INCREMENT = 101;

Query OK, 0 rows affected (0.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> ALTER TABLE Customers AUTO\_INCREMENT = 1;

Query OK, 0 rows affected (0.01 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> INSERT INTO Customers (first\_name, last\_name, DOB, email, phone\_number, address) VALUES

-> ('Amit', 'Sharma', '1992-03-15', 'amit.sharma@email.com', '9876543210', '123 MG Road, Mumbai'),

-> ('Priya', 'Verma', '1995-07-25', 'priya.verma@email.com', '9876543211', '456 Nehru Nagar, Delhi'),

-> ('Rahul', 'Patel', '1988-09-10', 'rahul.patel@email.com', '9876543212', '789 Green Avenue, Ahmedabad'),

-> ('Sneha', 'Iyer', '1996-05-05', 'sneha.iyer@email.com', '9876543213', '101 Gandhi Path, Chennai'),

-> ('Vikram', 'Reddy', '1985-02-18', 'vikram.reddy@email.com', '9876543214', '234 Whitefield, Bangalore'),

-> ('Ananya', 'Singh', '1993-11-30', 'ananya.singh@email.com', '9876543215', '567 Kothrud, Pune'),

-> ('Rohan', 'Das', '1990-07-07', 'rohan.das@email.com', '9876543216', '890 Salt Lake, Kolkata'),

-> ('Meera', 'Nair', '1991-12-25', 'meera.nair@email.com', '9876543217', '123 Hitech City, Hyderabad'),

-> ('Karan', 'Kapoor', '1987-04-12', 'karan.kapoor@email.com', '9876543218', '345 Marina Beach, Chennai'),

-> ('Pooja', 'Mehta', '1994-01-20', 'pooja.mehta@email.com', '9876543219', '789 Indiranagar, Bangalore');

Query OK, 10 rows affected (0.00 sec)

Records: 10 Duplicates: 0 Warnings: 0

mysql> select \* from Customers;

+-------------+------------+-----------+------------+------------------------+--------------+-----------------------------+

| customer\_id | first\_name | last\_name | DOB | email | phone\_number | address |

+-------------+------------+-----------+------------+------------------------+--------------+-----------------------------+

| 1 | Amit | Sharma | 1992-03-15 | amit.sharma@email.com | 9876543210 | 123 MG Road, Mumbai |

| 2 | Priya | Verma | 1995-07-25 | priya.verma@email.com | 9876543211 | 456 Nehru Nagar, Delhi |

| 3 | Rahul | Patel | 1988-09-10 | rahul.patel@email.com | 9876543212 | 789 Green Avenue, Ahmedabad |

| 4 | Sneha | Iyer | 1996-05-05 | sneha.iyer@email.com | 9876543213 | 101 Gandhi Path, Chennai |

| 5 | Vikram | Reddy | 1985-02-18 | vikram.reddy@email.com | 9876543214 | 234 Whitefield, Bangalore |

| 6 | Ananya | Singh | 1993-11-30 | ananya.singh@email.com | 9876543215 | 567 Kothrud, Pune |

| 7 | Rohan | Das | 1990-07-07 | rohan.das@email.com | 9876543216 | 890 Salt Lake, Kolkata |

| 8 | Meera | Nair | 1991-12-25 | meera.nair@email.com | 9876543217 | 123 Hitech City, Hyderabad |

| 9 | Karan | Kapoor | 1987-04-12 | karan.kapoor@email.com | 9876543218 | 345 Marina Beach, Chennai |

| 10 | Pooja | Mehta | 1994-01-20 | pooja.mehta@email.com | 9876543219 | 789 Indiranagar, Bangalore |

+-------------+------------+-----------+------------+------------------------+--------------+-----------------------------+

10 rows in set (0.01 sec)

mysql> INSERT INTO Accounts (customer\_id, account\_type, balance)

-> VALUES

-> (1, 'savings', 5000.00),

-> (1, 'current', 2000.00),

-> (2, 'savings', 10000.00),

-> (3, 'zero\_balance', 0.00),

-> (4, 'current', 1500.00),

-> (5, 'savings', 8000.00),

-> (6, 'savings', 12000.00),

-> (6, 'current', 5000.00),

-> (7, 'current', 3000.00),

-> (8, 'savings', 0.00);

Query OK, 10 rows affected (0.01 sec)

Records: 10 Duplicates: 0 Warnings: 0

mysql> select \* from Accounts;

+------------+-------------+--------------+----------+

| account\_id | customer\_id | account\_type | balance |

+------------+-------------+--------------+----------+

| 101 | 1 | savings | 5000.00 |

| 102 | 1 | current | 2000.00 |

| 103 | 2 | savings | 10000.00 |

| 104 | 3 | zero\_balance | 0.00 |

| 105 | 4 | current | 1500.00 |

| 106 | 5 | savings | 8000.00 |

| 107 | 6 | savings | 12000.00 |

| 108 | 6 | current | 5000.00 |

| 109 | 7 | current | 3000.00 |

| 110 | 8 | savings | 0.00 |

+------------+-------------+--------------+----------+

10 rows in set (0.00 sec)

mysql> INSERT INTO Transactions (account\_id, transaction\_type, amount, transaction\_date)

-> VALUES

-> (101, 'deposit', 1000.00, '2024-03-10 10:30:00'),

-> (102, 'withdrawal', 500.00, '2024-03-11 11:00:00'),

-> (103, 'deposit', 2000.00, '2024-03-12 09:15:00'),

-> (104, 'deposit', 1500.00, '2024-03-13 14:20:00'),

-> (105, 'withdrawal', 200.00, '2024-03-14 16:50:00'),

-> (106, 'deposit', 5000.00, '2024-03-15 12:40:00'),

-> (107, 'withdrawal', 3000.00, '2024-03-16 18:00:00'),

-> (108, 'deposit', 2500.00, '2024-03-17 08:30:00'),

-> (109, 'deposit', 4000.00, '2024-03-18 20:15:00'),

-> (110, 'withdrawal', 1000.00, '2024-03-19 07:45:00');

Query OK, 10 rows affected (0.01 sec)

Records: 10 Duplicates: 0 Warnings: 0

mysql> select \* from Transactions;

+----------------+------------+------------------+---------+---------------------+

| transaction\_id | account\_id | transaction\_type | amount | transaction\_date |

+----------------+------------+------------------+---------+---------------------+

| 201 | 101 | deposit | 1000.00 | 2024-03-10 10:30:00 |

| 202 | 102 | withdrawal | 500.00 | 2024-03-11 11:00:00 |

| 203 | 103 | deposit | 2000.00 | 2024-03-12 09:15:00 |

| 204 | 104 | deposit | 1500.00 | 2024-03-13 14:20:00 |

| 205 | 105 | withdrawal | 200.00 | 2024-03-14 16:50:00 |

| 206 | 106 | deposit | 5000.00 | 2024-03-15 12:40:00 |

| 207 | 107 | withdrawal | 3000.00 | 2024-03-16 18:00:00 |

| 208 | 108 | deposit | 2500.00 | 2024-03-17 08:30:00 |

| 209 | 109 | deposit | 4000.00 | 2024-03-18 20:15:00 |

| 210 | 110 | withdrawal | 1000.00 | 2024-03-19 07:45:00 |

+----------------+------------+------------------+---------+---------------------+

10 rows in set (0.00 sec)

2. Write SQL queries for the following tasks:

1. Write a SQL query to retrieve the name, account type and email of all customers.  
  
mysql> SELECT c.first\_name, c.last\_name, a.account\_type, c.email

-> FROM Customers c, Accounts a

-> WHERE c.customer\_id = a.customer\_id;

+------------+-----------+--------------+------------------------+

| first\_name | last\_name | account\_type | email |

+------------+-----------+--------------+------------------------+

| Amit | Sharma | savings | amit.sharma@email.com |

| Amit | Sharma | current | amit.sharma@email.com |

| Priya | Verma | savings | priya.verma@email.com |

| Rahul | Patel | zero\_balance | rahul.patel@email.com |

| Sneha | Iyer | current | sneha.iyer@email.com |

| Vikram | Reddy | savings | vikram.reddy@email.com |

| Ananya | Singh | savings | ananya.singh@email.com |

| Ananya | Singh | current | ananya.singh@email.com |

| Rohan | Das | current | rohan.das@email.com |

| Meera | Nair | savings | meera.nair@email.com |

+------------+-----------+--------------+------------------------+

10 rows in set (0.01 sec)

mysql> SELECT CONCAT(c.first\_name, ' ', c.last\_name) AS Name, a.account\_type, c.email

-> FROM Customers c, Accounts a

-> WHERE c.customer\_id = a.customer\_id;

+--------------+--------------+------------------------+

| Name | account\_type | email |

+--------------+--------------+------------------------+

| Amit Sharma | savings | amit.sharma@email.com |

| Amit Sharma | current | amit.sharma@email.com |

| Priya Verma | savings | priya.verma@email.com |

| Rahul Patel | zero\_balance | rahul.patel@email.com |

| Sneha Iyer | current | sneha.iyer@email.com |

| Vikram Reddy | savings | vikram.reddy@email.com |

| Ananya Singh | savings | ananya.singh@email.com |

| Ananya Singh | current | ananya.singh@email.com |

| Rohan Das | current | rohan.das@email.com |

| Meera Nair | savings | meera.nair@email.com |

+--------------+--------------+------------------------+

10 rows in set (0.00 sec)

2. Write a SQL query to list all transaction corresponding customer.

mysql> SELECT t.transaction\_id, CONCAT(c.first\_name, ' ', c.last\_name) mysql> SELECT t.transaction\_id, c.first\_name, c.last\_name, t.transaction\_type, t.amount, t.transaction\_date

-> FROM Transactions t, Accounts a, Customers c

-> WHERE t.account\_id = a.account\_id

-> AND a.customer\_id = c.customer\_id;

+----------------+------------+-----------+------------------+---------+---------------------+

| transaction\_id | first\_name | last\_name | transaction\_type | amount | transaction\_date |

+----------------+------------+-----------+------------------+---------+---------------------+

| 201 | Amit | Sharma | deposit | 1000.00 | 2024-03-10 10:30:00 |

| 202 | Amit | Sharma | withdrawal | 500.00 | 2024-03-11 11:00:00 |

| 203 | Priya | Verma | deposit | 2000.00 | 2024-03-12 09:15:00 |

| 204 | Rahul | Patel | deposit | 1500.00 | 2024-03-13 14:20:00 |

| 205 | Sneha | Iyer | withdrawal | 200.00 | 2024-03-14 16:50:00 |

| 206 | Vikram | Reddy | deposit | 5000.00 | 2024-03-15 12:40:00 |

| 207 | Ananya | Singh | withdrawal | 3000.00 | 2024-03-16 18:00:00 |

| 208 | Ananya | Singh | deposit | 2500.00 | 2024-03-17 08:30:00 |

| 209 | Rohan | Das | deposit | 4000.00 | 2024-03-18 20:15:00 |

| 210 | Meera | Nair | withdrawal | 1000.00 | 2024-03-19 07:45:00 |

+----------------+------------+-----------+------------------+---------+---------------------+

10 rows in set (0.00 sec)

3. Write a SQL query to increase the balance of a specific account by a certain amount.  
  
mysql> UPDATE Accounts

-> SET balance = balance + 500

-> WHERE account\_id = 101;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from Accounts;

+------------+-------------+--------------+----------+

| account\_id | customer\_id | account\_type | balance |

+------------+-------------+--------------+----------+

| 101 | 1 | savings | 5500.00 |

| 102 | 1 | current | 2000.00 |

| 103 | 2 | savings | 10000.00 |

| 104 | 3 | zero\_balance | 0.00 |

| 105 | 4 | current | 1500.00 |

| 106 | 5 | savings | 8000.00 |

| 107 | 6 | savings | 12000.00 |

| 108 | 6 | current | 5000.00 |

| 109 | 7 | current | 3000.00 |

| 110 | 8 | savings | 0.00 |

+------------+-------------+--------------+----------+

10 rows in set (0.00 sec)

4. Write a SQL query to Combine first and last names of customers as a full\_name.

mysql> SELECT CONCAT(first\_name, ' ', last\_name) AS full\_name FROM Customers;

+--------------+

| full\_name |

+--------------+

| Amit Sharma |

| Priya Verma |

| Rahul Patel |

| Sneha Iyer |

| Vikram Reddy |

| Ananya Singh |

| Rohan Das |

| Meera Nair |

| Karan Kapoor |

| Pooja Mehta |

+--------------+

10 rows in set (0.00 sec)

5. Write a SQL query to remove accounts with a balance of zero where the account

type is savings.

mysql> DELETE FROM Accounts

-> WHERE balance = 0 AND account\_type = 'savings';

Query OK, 1 row affected (0.00 sec)

mysql> Select \* from Accounts;

+------------+-------------+--------------+----------+

| account\_id | customer\_id | account\_type | balance |

+------------+-------------+--------------+----------+

| 101 | 1 | savings | 5500.00 |

| 102 | 1 | current | 2000.00 |

| 103 | 2 | savings | 10000.00 |

| 104 | 3 | zero\_balance | 0.00 |

| 105 | 4 | current | 1500.00 |

| 106 | 5 | savings | 8000.00 |

| 107 | 6 | savings | 12000.00 |

| 108 | 6 | current | 5000.00 |

| 109 | 7 | current | 3000.00 |

+------------+-------------+--------------+----------+

9 rows in set (0.01 sec)

6. Write a SQL query to Find customers living in a specific city.

mysql> SELECT \* FROM Customers

-> WHERE address LIKE '%Chennai%';

+-------------+------------+-----------+------------+------------------------+--------------+---------------------------+

| customer\_id | first\_name | last\_name | DOB | email | phone\_number | address |

+-------------+------------+-----------+------------+------------------------+--------------+---------------------------+

| 4 | Sneha | Iyer | 1996-05-05 | sneha.iyer@email.com | 9876543213 | 101 Gandhi Path, Chennai |

| 9 | Karan | Kapoor | 1987-04-12 | karan.kapoor@email.com | 9876543218 | 345 Marina Beach, Chennai |

+-------------+------------+-----------+------------+------------------------+--------------+---------------------------+

2 rows in set (0.00 sec)

7. Write a SQL query to Get the account balance for a specific account.

mysql> SELECT balance as "Account Balance" FROM Accounts WHERE account\_id = 105;

+-----------------+

| Account Balance |

+-----------------+

| 1500.00 |

+-----------------+

1 row in set (0.00 sec)

8. Write a SQL query to List all current accounts with a balance greater than $1,000.

mysql> SELECT \* FROM Accounts

-> WHERE account\_type = 'current' AND balance > 1000;

+------------+-------------+--------------+---------+

| account\_id | customer\_id | account\_type | balance |

+------------+-------------+--------------+---------+

| 102 | 1 | current | 2000.00 |

| 105 | 4 | current | 1500.00 |

| 108 | 6 | current | 5000.00 |

| 109 | 7 | current | 3000.00 |

+------------+-------------+--------------+---------+

4 rows in set (0.00 sec)

9. Write a SQL query to Retrieve all transactions for a specific account.

mysql> SELECT \* FROM Transactions WHERE account\_id = 106;

+----------------+------------+------------------+---------+---------------------+

| transaction\_id | account\_id | transaction\_type | amount | transaction\_date |

+----------------+------------+------------------+---------+---------------------+

| 206 | 106 | deposit | 5000.00 | 2024-03-15 12:40:00 |

+----------------+------------+------------------+---------+---------------------+

1 row in set (0.00 sec)

10. Write a SQL query to Calculate the interest accrued on savings accounts based on a given interest rate.

mysql> SELECT account\_id, balance, (balance \* 0.05) AS interest\_accrued

-> FROM Accounts

-> WHERE account\_type = 'savings';

+------------+----------+------------------+

| account\_id | balance | interest\_accrued |

+------------+----------+------------------+

| 101 | 5500.00 | 275.0000 |

| 103 | 10000.00 | 500.0000 |

| 106 | 8000.00 | 400.0000 |

| 107 | 12000.00 | 600.0000 |

+------------+----------+------------------+

4 rows in set (0.00 sec)

11. Write a SQL query to Identify accounts where the balance is less than a specified

overdraft limit.

mysql> SELECT \* FROM Accounts WHERE balance < 500;

+------------+-------------+--------------+---------+

| account\_id | customer\_id | account\_type | balance |

+------------+-------------+--------------+---------+

| 104 | 3 | zero\_balance | 0.00 |

+------------+-------------+--------------+---------+

1 row in set (0.00 sec)

12. Write a SQL query to Find customers not living in a specific city.  
  
mysql> SELECT \* FROM Customers

-> WHERE address NOT LIKE '%Chennai%';

+-------------+------------+-----------+------------+------------------------+--------------+-----------------------------+

| customer\_id | first\_name | last\_name | DOB | email | phone\_number | address |

+-------------+------------+-----------+------------+------------------------+--------------+-----------------------------+

| 1 | Amit | Sharma | 1992-03-15 | amit.sharma@email.com | 9876543210 | 123 MG Road, Mumbai |

| 2 | Priya | Verma | 1995-07-25 | priya.verma@email.com | 9876543211 | 456 Nehru Nagar, Delhi |

| 3 | Rahul | Patel | 1988-09-10 | rahul.patel@email.com | 9876543212 | 789 Green Avenue, Ahmedabad |

| 5 | Vikram | Reddy | 1985-02-18 | vikram.reddy@email.com | 9876543214 | 234 Whitefield, Bangalore |

| 6 | Ananya | Singh | 1993-11-30 | ananya.singh@email.com | 9876543215 | 567 Kothrud, Pune |

| 7 | Rohan | Das | 1990-07-07 | rohan.das@email.com | 9876543216 | 890 Salt Lake, Kolkata |

| 8 | Meera | Nair | 1991-12-25 | meera.nair@email.com | 9876543217 | 123 Hitech City, Hyderabad |

| 10 | Pooja | Mehta | 1994-01-20 | pooja.mehta@email.com | 9876543219 | 789 Indiranagar, Bangalore |

+-------------+------------+-----------+------------+------------------------+--------------+-----------------------------+

8 rows in set (0.01 sec)