# Task 2: Select, Where, Between, AND, LIKE

## **Inserting Records into each Table:**

### **Customers Table:**

```
CREATE TABLE Customers (
    customer_id INT AUTO_INCREMENT PRIMARY KEY,
    first_name VARCHAR(50) NOT NULL,
    last_name VARCHAR(50) NOT NULL,
    DOB DATE NOT NULL,
    email VARCHAR(100) UNIQUE NOT NULL,
    phone_number VARCHAR(15) UNIQUE NOT NULL,
    address TEXT NOT NULL

* );
```

## **Accounts Table:**

```
CREATE TABLE Accounts (

account_id INT AUTO_INCREMENT PRIMARY KEY,

customer_id INT NOT NULL,

account_type ENUM('savings', 'current', 'zero_balance') NOT NULL,

balance DECIMAL(15,2) DEFAULT 0.00,

FOREIGN KEY (customer_id) REFERENCES Customers(customer_id) ON DELETE CASCADE

);
```

#### **Transactions Table:**

```
CREATE TABLE Transactions (
    transaction_id INT AUTO_INCREMENT PRIMARY KEY,
    account_id INT NOT NULL,
    transaction_type ENUM('deposit', 'withdrawal', 'transfer') NOT NULL,
    amount DECIMAL(15,2) NOT NULL CHECK (amount > 0),
    transaction_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    FOREIGN KEY (account_id) REFERENCES Accounts(account_id) ON DELETE CASCADE
);
```

## **SQL QUERIES:**

1) SQL query to retrieve the name, account type and email of all customers.

```
SELECT c.first_name, c.last_name, a.account_type, c.email
FROM Customers c
JOIN Accounts a ON c.customer_id = a.customer_id;
```

	first_name	last_name	account_type	email
•	John	Doe	savings	john.doe@example.com
	Alice	Smith	current	alice.smith@example.com
	Bob	Johnson	savings	bob.johnson@example.com
	Charlie	Brown	current	charlie.brown@example.com
	David	Williams	savings	david.williams@example.com
	Eve	Miller	current	eve.miller@example.com
	Frank	Wilson	savings	frank.wilson@example.com
	Grace	Moore	current	grace.moore@example.com
	Hannah	Taylor	savings	hannah.taylor@example.com
	Isaac	Anderson	current	isaac.anderson@example.com

2) SQL query to list all transaction corresponding customer.

```
SELECT c.first_name, c.last_name, t.transaction_type, t.amount, t.transaction_date
FROM Transactions t
JOIN Accounts a ON t.account_id = a.account_id
JOIN Customers c ON a.customer_id = c.customer_id;
```

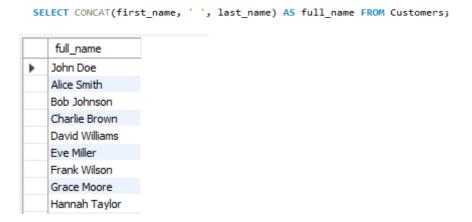
		first_name	last_name	transaction_type	amount	transaction_date
	•	John	Doe	deposit	500.00	2024-01-15 00:00:00
		Alice	Smith	withdrawal	700.00	2024-02-10 00:00:00
		Bob	Johnson	deposit	300.00	2024-03-05 00:00:00
		Charlie	Brown	withdrawal	1000.00	2024-04-20 00:00:00
		David	Williams	deposit	150.00	2024-05-30 00:00:00
		Eve	Miller	withdrawal	400.00	2024-06-12 00:00:00
		Frank	Wilson	deposit	600.00	2024-07-18 00:00:00
		Grace	Moore	withdrawal	500.00	2024-08-22 00:00:00
		Hannah	Taylor	deposit	350.00	2024-09-25 00:00:00
		Isaac	Anderson	withdrawal	200.00	2024-10-28 00:00:00

3) SQL query to increase the balance of a specific account by a certain amount.

```
UPDATE Accounts
SET balance = balance + 500
WHERE account_id = 101;
```



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



5) SQL query to remove accounts with a balance of zero where the account type is savings.

6) SQL query to Find customers living in a specific city

SELECT \* FROM Customers WHERE address = 'New York';

```
        customer_id
        first_name
        last_name
        DOB
        email
        phone_number
        address

        1
        John
        Doe
        1985-07-10
        iohn.doe@example.com
        9876543210
        New York
```

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

```
balance balance FROM Accounts WHERE account_id = 101;

balance 2000.00
```

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



SELECT \* FROM Accounts WHERE account type = 'current' AND balance > 1000;

9) SQL query to Retrieve all transactions for a specific account

SELECT \* FROM Transactions WHERE account\_id = 102;

	· — -					
	transaction_id	account_id	transaction_type	amount	transaction_date	
•	2	102	withdrawal	700.00	2024-02-10 00:00:00	
	NULL	NULL	NULL	NULL	NULL	

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

```
SELECT account_id, balance, balance * 0.04 AS interest
FROM Accounts WHERE account_type = 'savings';
```

	account_id	balance	interest
•	101	2000.00	80.0000
	103	500.00	20.0000
	107	2500.00	100.0000
	109	200.00	8.0000

11) SQL query to Identify accounts where the balance is less than a specified overdraft limit.

SELECT \* FROM Accounts WHERE balance < 500;



# 12) SQL query to Find customers not living in a specific city.

SELECT \* FROM Customers WHERE address <> 'New York';

	customer_id	first_name	last_name	DOB	email	phone_number	address
•	2	Alice	Smith	1990-03-15	alice.smith@example.com	9823456789	Los Angeles
	3	Bob	Johnson	1988-11-20	bob.johnson@example.com	9845671234	Chicago
	4	Charlie	Brown	1992-06-25	charlie.brown@example.com	9876543123	Houston
	5	David	Williams	1995-09-18	david.williams@example.com	9887654321	Phoenix
	6	Eve	Miller	1993-12-01	eve.miller@example.com	9812345678	Dallas
	7	Frank	Wilson	1997-02-17	frank.wilson@example.com	9898765432	San Diego
	8	Grace	Moore	1989-08-30	grace.moore@example.com	9854321098	Austin
	9	Hannah	Taylor	1991-05-22	hannah.taylor@example.com	9821098765	San Francisco
	10	Isaac	Anderson	1994-04-11	isaac.anderson@example.com	9872105432	Seattle
	NULL	NULL	NULL	NULL	NULL	NULL	NULL