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Assignment-3

Task-1: Database Design

1.Create the database named "HMBank"

```
create database HMBank;
use HMBank;
```

2.Define the schema for the Customers, Accounts, and Transactions tables based on the provided schema.

1.Accounts

```
CREATE TABLE Customers (
    customer_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    DOB DATE,
    email VARCHAR(100),
    phone_number VARCHAR(15),
    address VARCHAR(255)
);
```

```sql
CREATE TABLE Accounts (
    account_id INT PRIMARY KEY,
    customer_id INT,
    account_type VARCHAR(50),
    balance DECIMAL(10, 2),
    FOREIGN KEY (customer_id) REFERENCES Customers(customer_id)
);
desc Accounts;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
account_id	int	NO	PRI	NULL	
customer_id	int	YES	MUL	NULL	
account_type	varchar(50)	YES		NULL	
balance	decimal(10,2)	YES		NULL	

```sql
CREATE TABLE Transactions (
    transaction_id INT PRIMARY KEY,
    account_id INT,
    transaction_type VARCHAR(50),
    amount DECIMAL(10, 2),
    transaction_date DATE,
    FOREIGN KEY (account_id) REFERENCES Accounts(account_id)
);
desc Transactions;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Field	Type	Null	Key	Default	Extra
transaction_id	int	NO	PRI	NULL	
account_id	int	YES	MUL	NULL	
transaction_type	varchar(50)	YES		NULL	
amount	decimal(10,2)	YES		NULL	
transaction_date	date	YES		NULL	

4.Write SQL scripts to create the mentioned tables with appropriate data types, constraints, and relationships.

- Customers
- Accounts

- Transactions

```sql
CREATE TABLE Customers (
    customer_id INT PRIMARY KEY,
    first_name VARCHAR(50),
    last_name VARCHAR(50),
    DOB DATE,
    email VARCHAR(100),
    phone_number VARCHAR(15),
    address VARCHAR(255)
);

CREATE TABLE Accounts (
    account_id INT PRIMARY KEY,
    customer_id INT,
    account_type VARCHAR(50),
    balance DECIMAL(10, 2),
    FOREIGN KEY (customer_id) REFERENCES Customers(customer_id)
);

CREATE TABLE Transactions (
    transaction_id INT PRIMARY KEY,
    account_id INT,
    transaction_type VARCHAR(50),
    amount DECIMAL(10, 2),
    transaction_date DATE,
    FOREIGN KEY (account_id) REFERENCES Accounts(account_id)
);
```

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

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

```sql
INSERT INTO Customers (customer_id, first_name, last_name, DOB, email, phone_number, address)
VALUES
(1, 'Amit', 'Sharma', '1985-05-15', 'amit.sharma@example.com', '9876543210', 'New Delhi'),
(2, 'Priya', 'Patel', '1990-09-22', 'priya.patel@example.com', '8765432109', 'Mumbai'),
(3, 'Rahul', 'Mukherjee', '1988-03-10', 'rahul.m@example.com', '7654321098', 'Kolkata'),
(4, 'Neha', 'Rao', '1995-11-28', 'neha.rao@example.com', '6543210987', 'Bangalore'),
(5, 'Anjali', 'Menon', '1980-07-03', 'anjali.menon@example.com', '5432109876', 'Chennai'),
(6, 'Rajesh', 'Kumar', '1992-12-18', 'rajesh.kumar@example.com', '4321098765', 'Hyderabad'),
(7, 'Ayesha', 'Singh', '1987-06-25', 'ayesha.singh@example.com', '3210987654', 'Jaipur'),
(8, 'Vikram', 'Verma', '1993-04-07', 'vikram.verma@example.com', '2109876543', 'Pune'),
(9, 'Sunita', 'Gupta', '1984-08-14', 'sunita.gupta@example.com', '1098765432', 'Ahmedabad'),
(10, 'Arjun', 'Mehra', '1998-02-03', 'arjun.mehra@example.com', '9876543210', 'Chandigarh');
```

customer_id	first_name	last_name	DOB	email	phone_number	address
1	Amit	Sharma	1985-05-15	amit.sharma@example.com	9876543210	New Delhi
2	Priya	Patel	1990-09-22	priya.patel@example.com	8765432109	Mumbai
3	Rahul	Mukherjee	1988-03-10	rahul.m@example.com	7654321098	Kolkata
4	Neha	Rao	1995-11-28	neha.rao@example.com	6543210987	Bangalore
5	Anjali	Menon	1980-07-03	anjali.menon@example.com	5432109876	Chennai
6	Rajesh	Kumar	1992-12-18	rajesh.kumar@example.com	4321098765	Hyderabad
7	Ayesha	Singh	1987-06-25	ayesha.singh@example.com	3210987654	Jaipur
8	Vikram	Verma	1993-04-07	vikram.verma@example.com	2109876543	Pune
9	Sunita	Gupta	1984-08-14	sunita.gupta@example.com	1098765432	Ahmedabad
10	Arjun	Mehra	1998-02-03	arjun.mehra@example.com	9876543210	Chandigarh
NULL	NULL	NULL	NULL	NULL	NULL	NULL

```sql
INSERT INTO Accounts (account_id, customer_id, account_type, balance)
VALUES
(101, 1, 'savings', 50000.00),
(102, 2, 'current', 100000.00),
(103, 3, 'savings', 75000.00),
(104, 4, 'current', 120000.00),
(105, 5, 'zero_balance', 0.00),
(106, 6, 'savings', 30000.00),
(107, 7, 'current', 80000.00),
(108, 8, 'savings', 60000.00),
(109, 9, 'current', 90000.00),
(110, 10, 'zero_balance', 0.00);
```

account_id	customer_id	account_type	balance
101	1	savings	50000.00
102	2	current	100000.00
103	3	savings	75000.00
104	4	current	120000.00
105	5	zero_balance	0.00
106	6	savings	30000.00
107	7	current	80000.00
108	8	savings	60000.00
109	9	current	90000.00
110	10	zero_balance	0.00
NULL	NULL	NULL	NULL

- Transactions

```sql
INSERT INTO Transactions (transaction_id, account_id, transaction_type, amount, transaction_date)
VALUES
(1001, 101, 'deposit', 10000.00, '2024-01-01'),
(1002, 102, 'withdrawal', 5000.00, '2024-01-02'),
(1003, 103, 'deposit', 20000.00, '2024-01-03'),
(1004, 104, 'transfer', 15000.00, '2024-01-04'),
(1005, 105, 'deposit', 5000.00, '2024-01-05'),
(1006, 106, 'deposit', 12000.00, '2024-01-06'),
(1007, 107, 'withdrawal', 10000.00, '2024-01-07'),
(1008, 108, 'deposit', 15000.00, '2024-01-08'),
(1009, 109, 'transfer', 20000.00, '2024-01-09'),
(1010, 110, 'deposit', 8000.00, '2024-01-10');
```

2.Write a SQL query to retrieve the name, account type and email of all customers.

```
80 •  select  accounts.customer_ID , first_name , last_name , email , account_type
81    from customers
82    join accounts on accounts.customer_id = customers.customer_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_ID	first_name	last_name	email	account_type
1	Amit	Sharma	amit.sharma@example.com	savings
2	Priya	Patel	priya.patel@example.com	current
3	Rahul	Mukherjee	rahul.m@example.com	savings
4	Neha	Rao	neha.rao@example.com	current
5	Anjali	Menon	anjali.menon@example.com	zero_balance
6	Rajesh	Kumar	rajesh.kumar@example.com	savings
7	Ayesha	Singh	ayesha.singh@example.com	current
8	Vikram	Verma	vikram.verma@example.com	savings
9	Sunita	Gupta	sunita.gupta@example.com	current
10	Arjun	Mehra	arjun.mehra@example.com	zero_balance

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

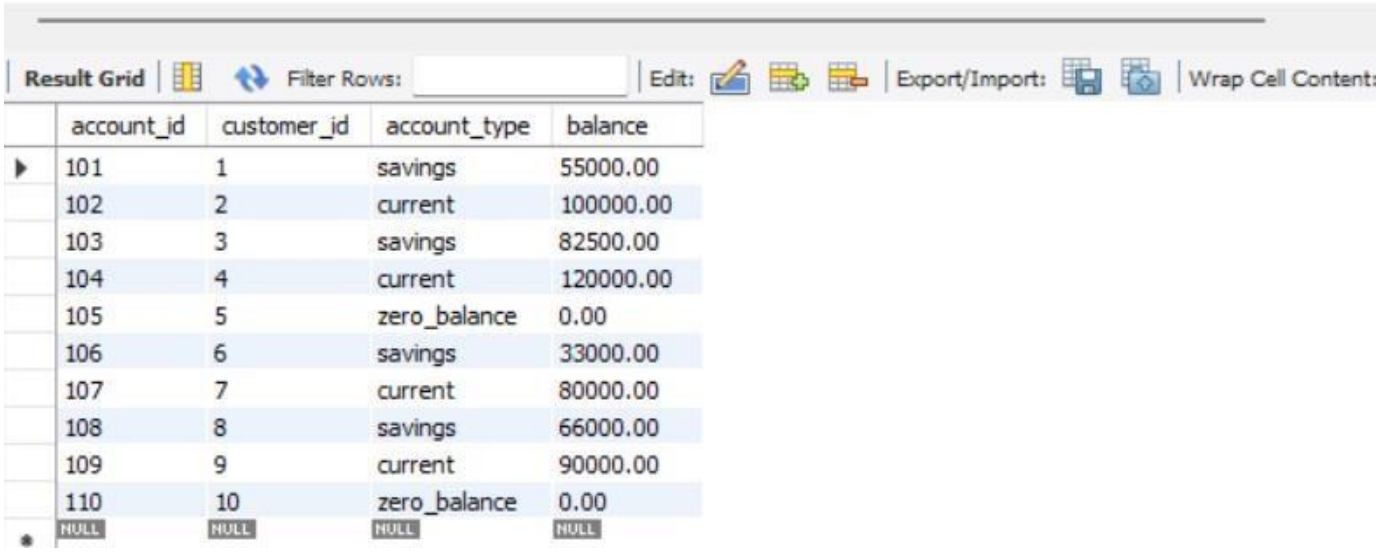
```
84 •  SELECT transactions.transaction_id , transactions.account_id , accounts.customer_id , first_name , last_name
85    FROM Transactions
86    JOIN Accounts ON Transactions.account_id = Accounts.account_id
87    JOIN Customers ON Accounts.customer_id = Customers.customer_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

transaction_id	account_id	customer_id	first_name	last_name
1001	101	1	Amit	Sharma
1002	102	2	Priya	Patel
1003	103	3	Rahul	Mukherjee
1004	104	4	Neha	Rao
1005	105	5	Anjali	Menon
1006	106	6	Rajesh	Kumar
1007	107	7	Ayesha	Singh
1008	108	8	Vikram	Verma
1009	109	9	Sunita	Gupta
1010	110	10	Arjun	Mehra

4.Write a SQL query to increase the balance of a specific account by a certain amount.

```
90 •  update accounts set balance = 1.1 * balance where account_type like 'savings';
91 •  select * from accounts;
```



Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

account_id	customer_id	account_type	balance
101	1	savings	55000.00
102	2	current	100000.00
103	3	savings	82500.00
104	4	current	120000.00
105	5	zero_balance	0.00
106	6	savings	33000.00
107	7	current	80000.00
108	8	savings	66000.00
109	9	current	90000.00
110	10	zero_balance	0.00
NULL	NULL	NULL	NULL

.

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

```
96 •  DELETE FROM Accounts
97    WHERE balance = 0 AND account_type = 'savings';
98
```

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

```
102 •   SELECT  account_id , balance
103     FROM Accounts
104     WHERE account_id = 104;
```

Result Grid | Filter Rows:

account_id	balance
104	120000.00
NULL	NULL

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

```
106 •   select * from accounts
107     where account_type like 'current'
108     and balance > 83124 ; -- $1000 is equal to Rs.83124
```

Result Grid | Filter Rows: | Edit: | Export/I

account_id	customer_id	account_type	balance
102	2	current	100000.00
104	4	current	120000.00
109	9	current	90000.00
NULL	NULL	NULL	NULL

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

```
110 •   select * from transactions
111     having account_id = 105;
```

Result Grid | Filter Rows: | Edit: | Export/Imp

transaction_id	account_id	transaction_type	amount	transaction_date
1005	105	deposit	5000.00	2024-01-05
NULL	NULL	NULL	NULL	NULL

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

```
113     -- interest rate is 4%
114 •   SELECT account_id,balance as current_balance ,  (balance * 1.04)- balance AS accrued_interest ,
115     balance * 1.04 as balance_after_Interest
116     FROM Accounts
117     WHERE account_type = 'savings';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

account_id	current_balance	accrued_interest	balance_after_Interest
101	55000.00	2200.0000	57200.0000
103	82500.00	3300.0000	85800.0000
106	33000.00	1320.0000	34320.0000
108	66000.00	2640.0000	68640.0000

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

```
120 •   SET @overdraft_limit = 50000.00;
121
122 •   SELECT *
123     FROM Accounts
124     WHERE balance < @overdraft_limit and account_type not like 'zero_balance' ;
125
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Cor

account_id	customer_id	account_type	balance
106	6	savings	33000.00
NULL	NULL	NULL	NULL

11.Write a SQL query to Find customers not living in a specific city.

```
126 •   select * from customers
127     where address not IN('bangalore','mumbai','pune');
128
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

customer_id	first_name	last_name	DOB	email	phone_number	address
1	Amit	Sharma	1985-05-15	amit.sharma@example.com	9876543210	New Delhi
3	Rahul	Mukherjee	1988-03-10	rahul.m@example.com	7654321098	Kolkata
5	Anjali	Menon	1980-07-03	anjali.menon@example.com	5432109876	Chennai
6	Rajesh	Kumar	1992-12-18	rajesh.kumar@example.com	4321098765	Hyderabad
7	Ayesha	Singh	1987-06-25	ayesha.singh@example.com	3210987654	Jaipur
9	Sunita	Gupta	1984-08-14	sunita.gupta@example.com	1098765432	Ahmedabad
10	Arjun	Mehra	1998-02-03	arjun.mehra@example.com	9876543210	Chandigarh
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Tasks 3: Aggregate functions, Having, Order By, GroupBy and Joins:

1.Write a SQL query to Find the average account balance for all customers.

```
130 •   select customers.customer_id , first_name , last_name , avg(balance) as avg_balance
131     from accounts
132     join customers where customers.customer_id = accounts.customer_id
133     group by customer_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_id	first_name	last_name	avg_balance
1	Amit	Sharma	55000.000000
2	Priya	Patel	100000.000000
3	Rahul	Mukherjee	82500.000000
4	Neha	Rao	120000.000000
5	Anjali	Menon	0.000000
6	Rajesh	Kumar	33000.000000
7	Ayesha	Singh	80000.000000
8	Vikram	Verma	66000.000000
9	Sunita	Gupta	90000.000000
10	Arjun	Mehra	0.000000

2.Write a SQL query to Retrieve the top 10 highest account balances.

```sql
select * from accounts
order by balance desc
limit 10;
```

Result Grid | Filter Rows: | Edit:

account_id	customer_id	account_type	balance
104	4	current	120000.00
102	2	current	100000.00
109	9	current	90000.00
103	3	savings	82500.00
107	7	current	80000.00
108	8	savings	66000.00
101	1	savings	55000.00
106	6	savings	33000.00
105	5	zero_balance	0.00
110	10	zero_balance	0.00
NULL	NULL	NULL	NULL

accounts 2

3.Write a SQL query Calculate Total Deposits for All Customers in specific date.

```sql
select transaction_id , account_id , sum(amount) as totalDeposit
from transactions
where transaction_type like 'deposit'
and transaction_date = '24-01-03'
group by transaction_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

transaction_id	account_id	totalDeposit
1003	103	20000.00

4.Write a SQL query to Find the Oldest and Newest Customers.

```sql
select min(dob) as oldest_customer ,
max(dob) as newest_customer
from customers;
```

Result Grid | Filter Rows: | Export:

oldest_customer	newest_customer
1980-07-03	1998-02-03

5.Write a SQL query to Retrieve transaction details along with the account type.

to

```sql
SELECT Transactions.*, Accounts.account_type
FROM Transactions
JOIN Accounts ON Transactions.account_id = Accounts.account_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

transaction_id	account_id	transaction_type	amount	transaction_date	account_type
1001	101	deposit	10000.00	2024-01-01	savings
1002	102	withdrawal	5000.00	2024-01-02	current
1003	103	deposit	20000.00	2024-01-03	savings
1004	104	transfer	15000.00	2024-01-04	current
1005	105	deposit	5000.00	2024-01-05	zero_balance
1006	106	deposit	12000.00	2024-01-06	savings
1007	107	withdrawal	10000.00	2024-01-07	current
1008	108	deposit	15000.00	2024-01-08	savings
1009	109	transfer	20000.00	2024-01-09	current
1010	110	deposit	8000.00	2024-01-10	zero_balance

6.Write a SQL query Get a list of customers along with their account details.

```sql
select customers.* , accounts.*
from customers
join accounts on accounts.customer_ID = customers.customer_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_id	first_name	last_name	DOB	email	phone_number	address	account_id	customer_id	account_type	balance
1	Amit	Sharma	1985-05-15	amit.sharma@example.com	9876543210	New Delhi	101	1	savings	55000.00
2	Priya	Patel	1990-09-22	priya.patel@example.com	8765432109	Mumbai	102	2	current	100000.00
3	Rahul	Mukherjee	1988-03-10	rahul.m@example.com	7654321098	Kolkata	103	3	savings	82500.00
4	Neha	Rao	1995-11-28	neha.rao@example.com	6543210987	Bangalore	104	4	current	120000.00
5	Anjali	Menon	1980-07-03	anjali.menon@example.com	5432109876	Chennai	105	5	zero_balance	0.00
6	Rajesh	Kumar	1992-12-18	rajesh.kumar@example.com	4321098765	Hyderabad	106	6	savings	33000.00
7	Ayesha	Singh	1987-06-25	ayesha.singh@example.com	3210987654	Jaipur	107	7	current	80000.00
8	Vikram	Verma	1993-04-07	vikram.verma@example.com	2109876543	Pune	108	8	savings	66000.00
9	Sunita	Gupta	1984-08-14	sunita.gupta@example.com	1098765432	Ahmedabad	109	9	current	90000.00
10	Arjun	Mehra	1998-02-03	arjun.mehra@example.com	9876543210	Chandigarh	110	10	zero_balance	0.00

7.Write a SQL query to Retrieve transaction details along with customer information for a specific account.

```sql
SELECT Transactions.*, Customers.*
FROM Transactions
JOIN Accounts ON Transactions.account_id = Accounts.account_id
JOIN Customers ON Accounts.customer_id = Customers.customer_id
WHERE accounts.customer_id = 4;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

transaction_id	account_id	transaction_type	amount	transaction_date	customer_id	first_name	last_name	DOB	email	phone_number	address
1004	104	transfer	15000.00	2024-01-04	4	Neha	Rao	1995-11-28	neha.rao@example.com	6543210987	Bangalore

8.Write a SQL query to Identify customers who have more than one account.

to

```sql
SELECT customer_id
FROM Accounts
GROUP BY customer_id
HAVING COUNT(*) > 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_id

9.Write a SQL query to Calculate the difference in transaction amounts between deposits and withdrawals.

```sql
SELECT SUM(CASE WHEN transaction_type = 'deposit' THEN amount ELSE -amount END) AS net_transaction_amount
FROM Transactions;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

net_transaction_amount
20000.00

10.Write a SQL query Calculate the average daily balance for each account over a specified period.

```
172 •   select transactions.account_id , avg(balance) as daily_average
173     from accounts
174     join transactions on transactions.account_id = accounts.account_id
175     where transaction_date between '2024-01-01' and '2024-01-05'
176     group by account_id;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

account_id	daily_average
101	55000.000000
102	100000.000000
103	82500.000000
104	120000.000000
105	0.000000

11.Calculate the total balance for each account type.

```
178 •   SELECT account_type, SUM(balance) AS total_balance
179     FROM Accounts
180     GROUP BY account_type;
181
```

Result Grid | Filter Rows: | Export: | Wrap Cell Conten

account_type	total_balance
savings	236500.00
current	390000.00
zero_balance	0.00

12.Identify accounts with the highest number of transactions order by descending order.

```
182 •  SELECT account_id, COUNT(transaction_id) AS transaction_count
183    FROM Transactions
184    GROUP BY account_id
185    ORDER BY transaction_count DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

account_id	transaction_count
101	1
102	1
103	1
104	1
105	1
106	1
107	1
108	1
109	1
110	1

13.List customers with high aggregate account balances, along with their account types.

```
187 •  SELECT Customers.customer_id, SUM(balance) AS aggregate_balance, GROUP_CONCAT(account_type) AS account_types
188    FROM Customers
189    JOIN Accounts ON Customers.customer_id = Accounts.customer_id
190    GROUP BY Customers.customer_id
191    HAVING aggregate_balance > 70000;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

customer_id	aggregate_balance	account_types
2	100000.00	current
3	82500.00	savings
4	120000.00	current
7	80000.00	current
9	90000.00	current

14.Identify and list duplicate transactions based on transaction amount, date, and account.

```sql
SELECT amount, transaction_date, account_id
FROM Transactions
WHERE (amount, transaction_date, account_id) IN (
    SELECT amount, transaction_date, account_id
    FROM Transactions
    GROUP BY amount, transaction_date, account_id
    HAVING COUNT(*) > 1
);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

amount	transaction_date	account_id

Tasks 4: Subquery and its type:

1.Retrieve the customer(s) with the highest account balance.

```sql
SELECT *
FROM Customers
WHERE customer_id = (
    SELECT customer_id
    FROM Accounts
    ORDER BY balance DESC
    LIMIT 1
);
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Conte

customer_id	first_name	last_name	DOB	email	phone_number	address
4	Neha	Rao	1995-11-28	neha.rao@example.com	6543210987	Bangalore
NULL	NULL	NULL	NULL	NULL	NULL	NULL

2.Calculate the average account balance for customers who have more than one account.

```sql
SELECT AVG(balance) AS avg_balance
FROM Accounts
WHERE customer_id IN (
    SELECT customer_id
    FROM Accounts
    GROUP BY customer_id
    HAVING COUNT(*) > 1
);
```

Result Grid | Filter Rows: | Expor

avg_balance
NULL

3.Retrieve accounts with transactions whose amounts exceed the average transaction amount.

```sql
SELECT *
FROM Accounts
WHERE EXISTS (
    SELECT 1
    FROM Transactions
    WHERE Transactions.account_id = Accounts.account_id
    AND amount > (SELECT AVG(amount) FROM Transactions)
);
```

Result Grid | Filter Rows: | Edit: | Export/Import:

account_id	customer_id	account_type	balance
103	3	savings	82500.00
104	4	current	120000.00
108	8	savings	66000.00
109	9	current	90000.00
NULL	NULL	NULL	NULL

4.Identify customers who have no recorded transactions.

```sql
SELECT Customers.*
FROM Customers
WHERE NOT EXISTS (
    SELECT 1
    FROM Accounts
    JOIN Transactions ON Accounts.account_id = Transactions.account_id
    WHERE Accounts.customer_id = Customers.customer_id
);
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap C

customer_id	first_name	last_name	DOB	email	phone_number	address
NULL	NULL	NULL	NULL	NULL	NULL	NULL

5.Calculate the total balance of accounts with no recorded transactions.

```sql
SELECT SUM(balance) AS total_balance_no_transactions
FROM Accounts
WHERE NOT EXISTS (
    SELECT 1
    FROM Transactions
    WHERE Transactions.account_id = Accounts.account_id
);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_balance_no_transactions
NULL

6.Retrieve transactions for accounts with the lowest balance.

```sql
SELECT Transactions.*
FROM Transactions
JOIN Accounts ON Transactions.account_id = Accounts.account_id
WHERE Accounts.balance = (SELECT MIN(balance) FROM Accounts);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

transaction_id	account_id	transaction_type	amount	transaction_date
1005	105	deposit	5000.00	2024-01-05
1010	110	deposit	8000.00	2024-01-10

7.Identify customers who have accounts of multiple types.

```sql
SELECT Customers.*
FROM Customers
WHERE EXISTS (
    SELECT 1
    FROM Accounts
    WHERE Accounts.customer_id = Customers.customer_id
    GROUP BY account_type
    HAVING COUNT(DISTINCT account_type) > 1
);
```

Result Grid | Filter Rows: | Edit: | Export/Impor

customer_id	first_name	last_name	DOB	email	phone_number	address
NULL	NULL	NULL	NULL	NULL	NULL	NULL

8.Calculate the percentage of each account type out of the total number of accounts.

```sql
SELECT account_type, COUNT(*) * 100.0 / (SELECT COUNT(*) FROM Accounts) AS percentage
FROM Accounts
GROUP BY account_type;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

account_type	percentage
savings	40.00000
current	40.00000
zero_balance	20.00000

9.Retrieve all transactions for a customer with a given customer_id.

```
267 •   SELECT *
268     FROM Transactions
269     join accounts on transactions.account_id = accounts.account_id
270     WHERE customer_id = (SELECT customer_id FROM Customers WHERE customer_id = 1);
271
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

transaction_id	account_id	transaction_type	amount	transaction_date	account_id	customer_id	account_type	balance
1001	101	deposit	10000.00	2024-01-01	101	1	savings	55000.00

10.Calculate the total balance for each account type, including a subquery within the SELECT clause.

```
272 •   SELECT account_type, SUM(balance) AS total_balance
273     FROM Accounts
274     GROUP BY account_type,
275              (SELECT 1);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content

account_type	total_balance
savings	236500.00
current	390000.00
zero_balance	0.00