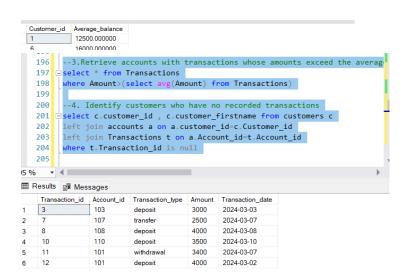```sql
183
184   --1.Retrieve the customer(s) with the highest account balance.
185
186   select c.customer_firstname, c.customer_phone, a.balance
187   from customers c
188   join accounts a on c.customer_id = a.customer_id
189   where a.balance = (select max(balance) from accounts)
190
191   --2.average account balance for customers who have more than one accou
192   select Customer_id , avg(Balance) as Average_balance from Accounts
193   group by Customer_id
194   having count(account_id)>1
195
196   --3.Retrieve accounts with transactions whose amounts exceed the avera
```

Results

| customer_firstname | customer_phone | balance |
|---|---|---|
| John | 9876543210 | 20000.00 |
| Sophia | 9876543215 | 20000.00 |

| Customer_id | Average_balance |
|---|---|
| 1 | 12500.000000 |
| 6 | 16000.000000 |

```sql
196    --3.Retrieve accounts with transactions whose amounts exceed the averag
197    select * from Transactions
198    where Amount>(select avg(Amount) from Transactions)
199
200    --4. Identify customers who have no recorded transactions
201    select c.customer_id , c.customer_firstname from customers c
202    left join accounts a on a.customer_id=c.Customer_id
203    left join Transactions t on a.Account_id=t.Account_id
204    where t.Transaction_id is null
205
```

Results

	Transaction_id	Account_id	Transaction_type	Amount	Transaction_date
1	3	103	deposit	3000	2024-03-03
2	7	107	transfer	2500	2024-03-07
3	8	108	deposit	4000	2024-03-08
4	10	110	deposit	3500	2024-03-10
5	11	101	withdrawal	3400	2024-03-07
6	12	101	deposit	4000	2024-03-02

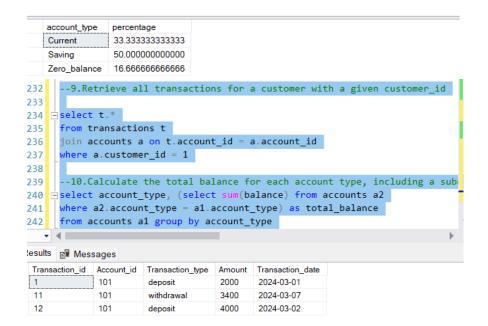|	customer_id	customer_firstname
1	1	John
2	6	Sophia
3	11	poornima

```sql
205
206    --5.e total balance of accounts with no recorded transactions
207    select a.Account_id ,sum(a.balance) as total_balance
208    from accounts a
209    left join transactions t on a.account_id = t.account_id
210    where t.transaction_id is null
211    group by a.Account_id
212
213    --6. transactions for accounts with the lowest balance.
214    select * from transactions
215    where account_id in (select account_id from accounts where balance =
216    (select min(balance) from accounts));
217
218    --7.Identify customers who have accounts of multiple types
```

Results

Account_id	total_balance
114	20000.00
115	20000.00

Transaction_id	Account_id	Transaction_type	Amount	Transaction_date
4	104	transfer	1000	2024-03-01
8	108	deposit	4000	2024-03-08

```sql
--7.Identify customers who have accounts of multiple types

select customer_id
from accounts
group by customer_id
having count(distinct account_type) > 1

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

select account_type, count(*) * 100.0 / (select count(*)
from accounts) as percentage
from accounts group by account_type

--9.Retrieve all transactions for a customer with a given custome
```

Results

customer_id
1
6

account_type	percentage
Current	33.333333333333
Saving	50.000000000000
Zero_balance	16.666666666666

```sql
--9.Retrieve all transactions for a customer with a given customer_id

select t.*
from transactions t
join accounts a on t.account_id = a.account_id
where a.customer_id = 1

--10.Calculate the total balance for each account type, including a sub
select account_type, (select sum(balance) from accounts a2
where a2.account_type = a1.account_type) as total_balance
from accounts a1 group by account_type
```

Results

Transaction_id	Account_id	Transaction_type	Amount	Transaction_date
1	101	deposit	2000	2024-03-01
11	101	withdrawal	3400	2024-03-07
12	101	deposit	4000	2024-03-02

account_type	total_balance
Current	57000.00
Saving	49000.00
Zero_balance	0.00