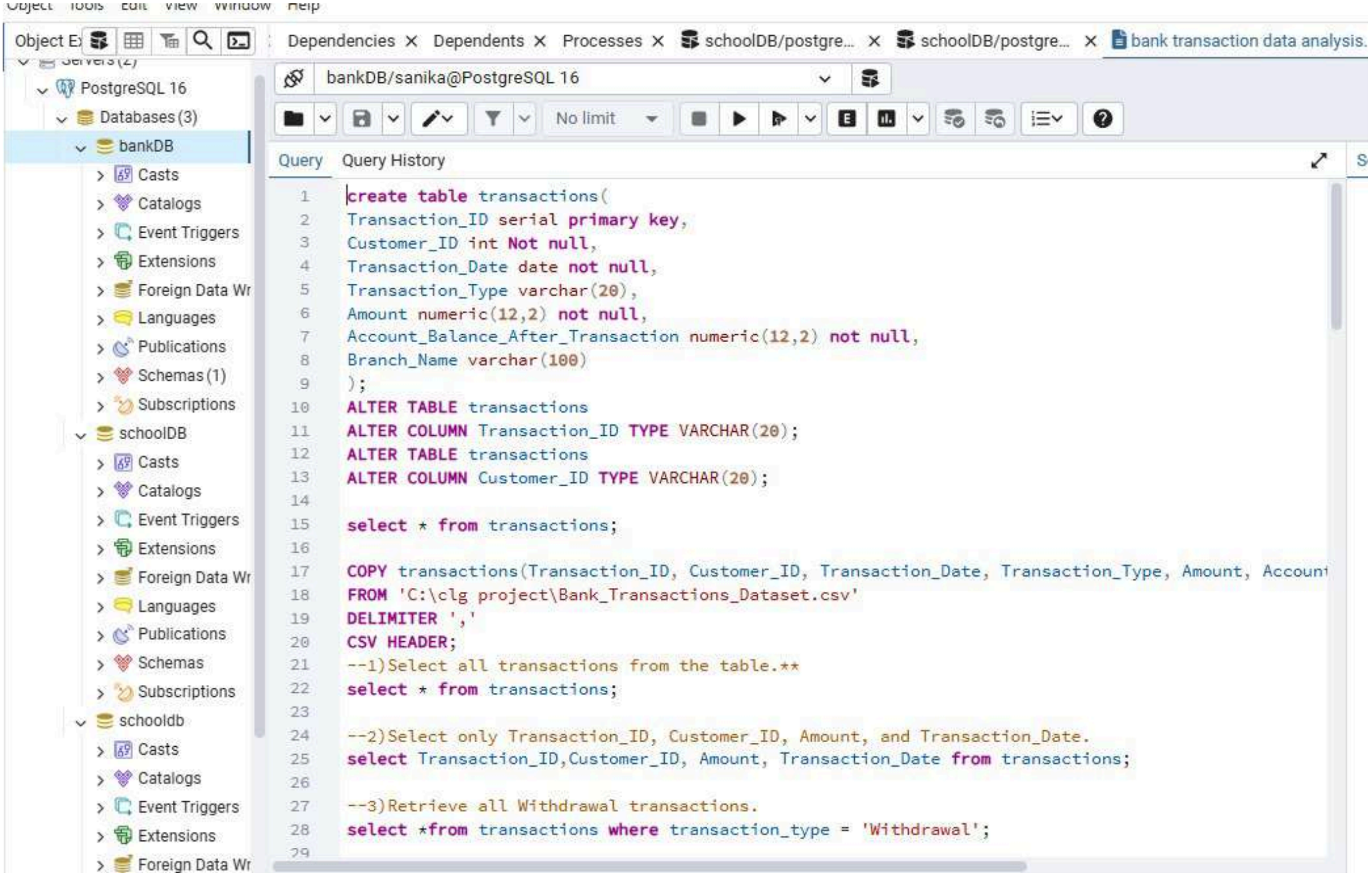
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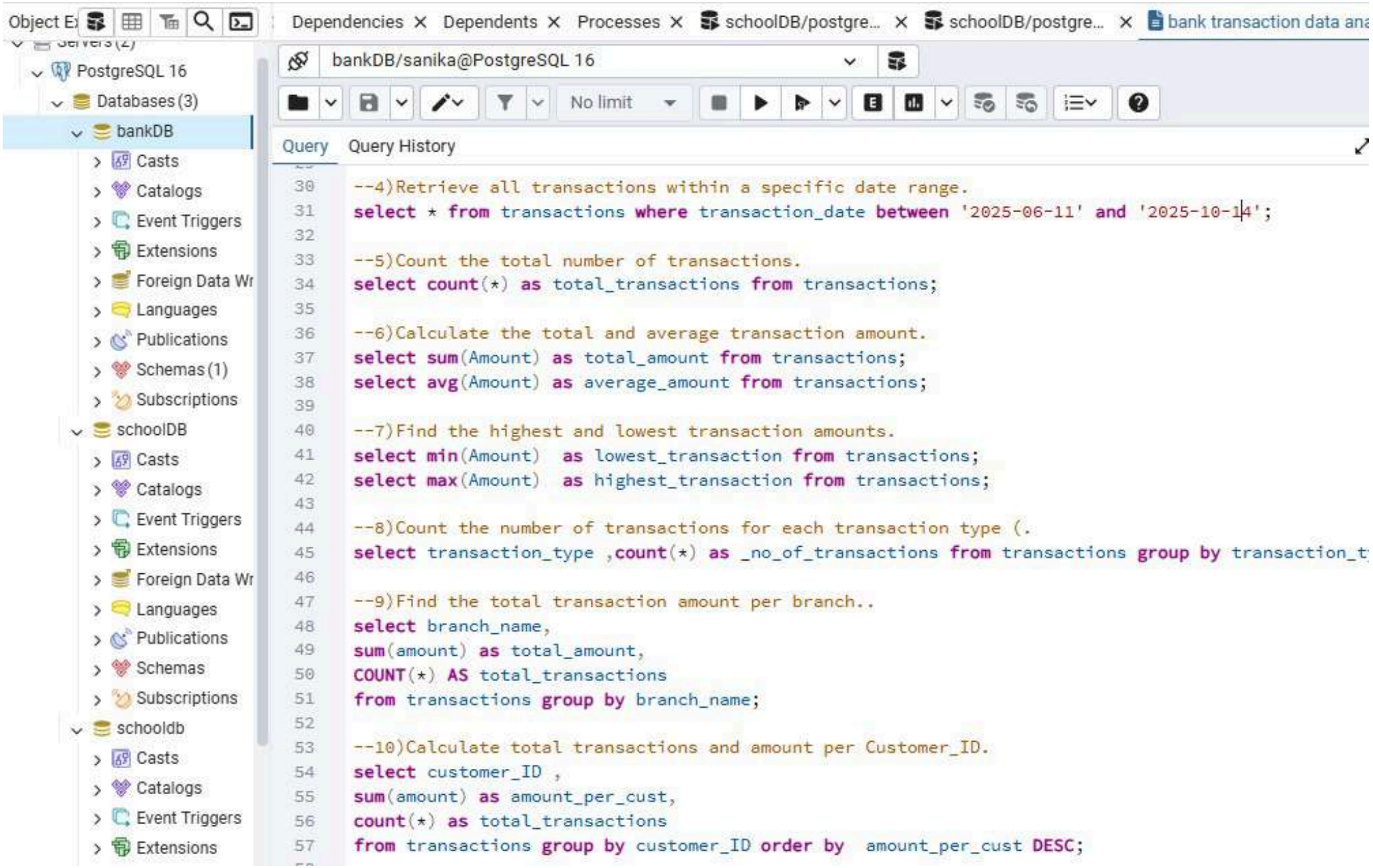
Query History
create table transactions(
Transaction_ID serial primary key,
Customer_ID int Not null,
Transaction_Date date not null,
Transaction_Type varchar(20),
Amount numeric(12,2) not null,
Account_Balance_After_Transaction numeric(12,2) not null,
Branch_Name varchar(100)
);
ALTER TABLE transactions
ALTER COLUMN Transaction_ID TYPE VARCHAR(20);
ALTER TABLE transactions
ALTER COLUMN Customer_ID TYPE VARCHAR(20);
select * from transactions;
COPY transactions(Transaction_ID, Customer_ID, Transaction_Date, Transaction_Type, Amount, Accoun
FROM 'C:\clg project\Bank_Transactions_Dataset.csv'
DELIMITER ','
CSV HEADER;
--1)Select all transactions from the table.**
select * from transactions;
--2)Select only Transaction_ID, Customer_ID, Amount, and Transaction_Date.
select Transaction_ID,Customer_ID, Amount, Transaction_Date from transactions;
--3)Retrieve all Withdrawal transactions.
select *from transactions where transaction_type = 'Withdrawal';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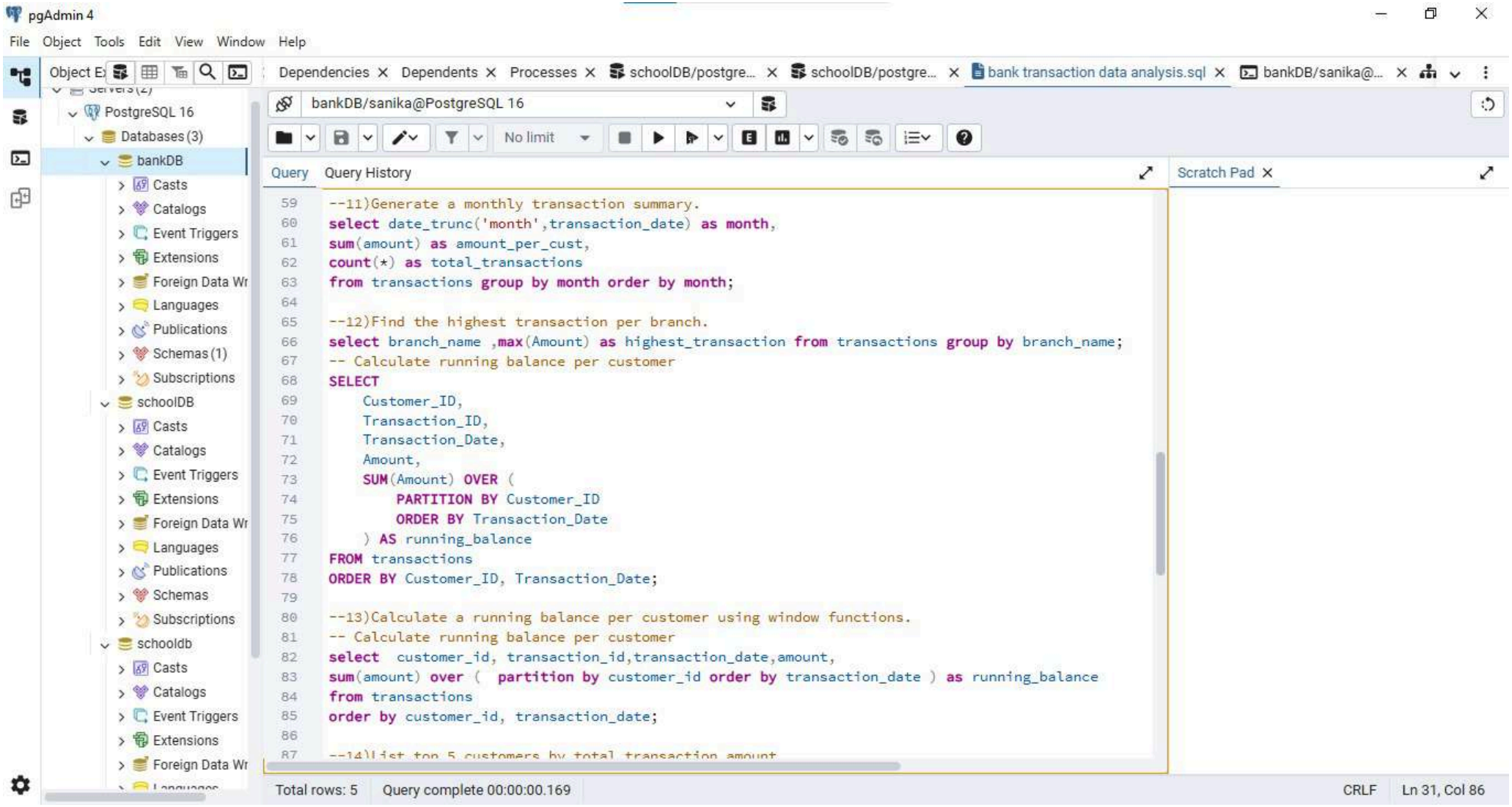
Query History
--4)Retrieve all transactions within a specific date range.
select * from transactions where transaction_date between '2025-06-11' and '2025-10-14';
--5)Count the total number of transactions.
select count(*) as total_transactions from transactions;
--6)Calculate the total and average transaction amount.
select sum(Amount) as total_amount from transactions;
select avg(Amount) as average_amount from transactions;
--7)Find the highest and lowest transaction amounts.
select min(Amount) as lowest_transaction from transactions;
select max(Amount) as highest_transaction from transactions;
--8)Count the number of transactions for each transaction type (.
select transaction_type ,count(*) as _no_of_transactions from transactions group by transaction_t
--9)Find the total transaction amount per branch..
select branch_name,
sum(amount) as total_amount,
COUNT(*) AS total_transactions
from transactions group by branch_name;
--10)Calculate total transactions and amount per Customer_ID.
select customer_ID ,
sum(amount) as amount_per_cust,
count(*) as total_transactions
from transactions group by customer_ID order by amount_per_cust DESC;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59 --11)Generate a monthly transaction summary.
60 select date_trunc('month',transaction_date) as month,
61 sum(amount) as amount_per_cust,
62 count(*) as total_transactions
63 from transactions group by month order by month;
64
65 --12)Find the highest transaction per branch.
66 select branch_name ,max(Amount) as highest_transaction from transactions group by branch_name;
67 -- Calculate running balance per customer
68 SELECT
69 Customer_ID,
70 Transaction_ID,
71 Transaction_Date,
72 Amount,
73 SUM(Amount) OVER (
74 PARTITION BY Customer_ID
75 ORDER BY Transaction_Date
76) AS running_balance
77 FROM transactions
78 ORDER BY Customer_ID, Transaction_Date;
79
80 --13)Calculate a running balance per customer using window functions.
81 -- Calculate running balance per customer
82 select customer_id, transaction_id,transaction_date,amount,
83 sum(amount) over (partition by customer_id order by transaction_date) as running_balance
84 from transactions
85 order by customer_id, transaction_date;
86
87 --14)List top 5 customers by total transaction amount
Total rows: 5
Query complete 00:00:00.169
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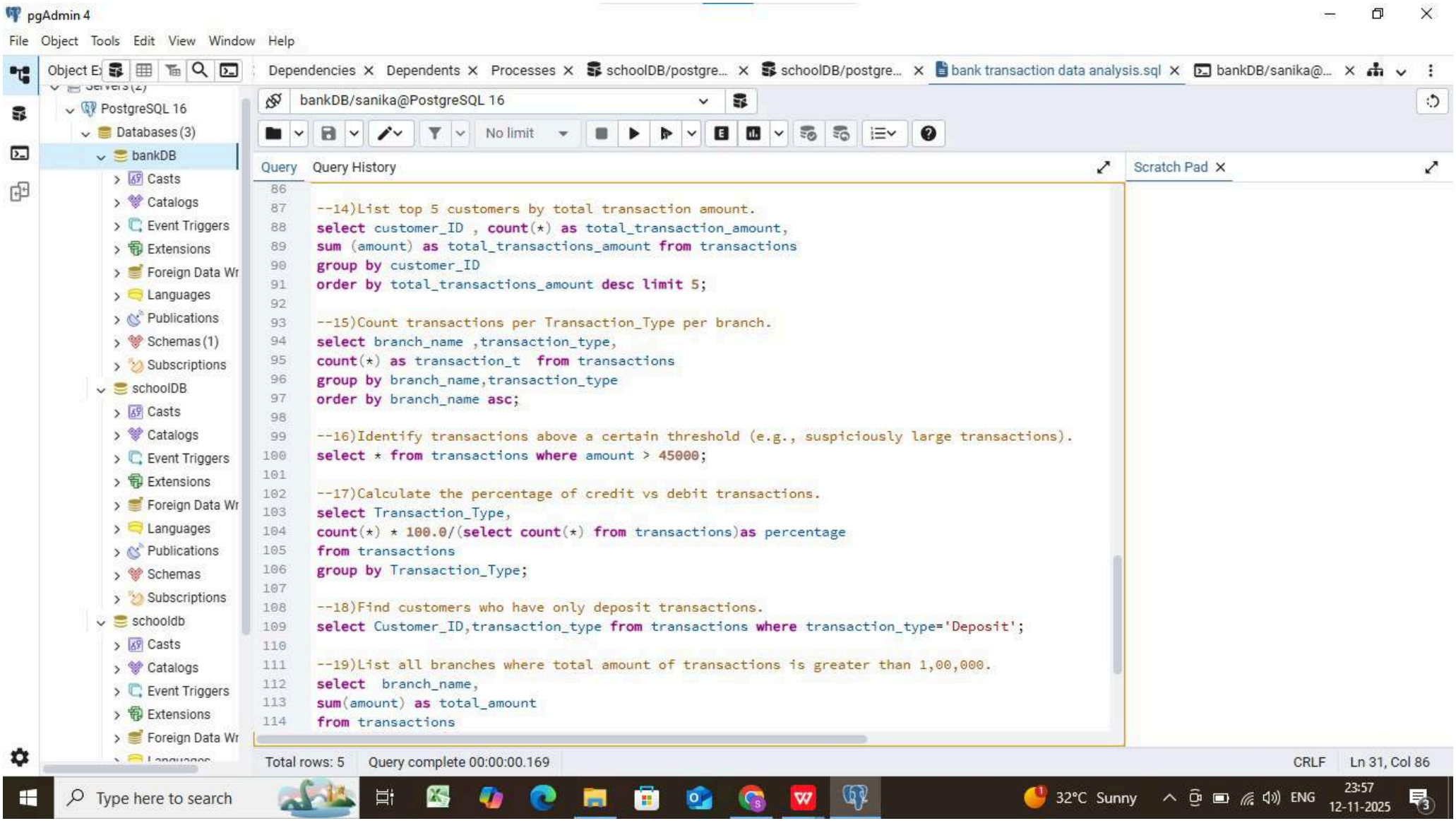
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86
87 --14)List top 5 customers by total transaction amount.
88 select customer_ID , count(*) as total_transaction_amount,
89 sum (amount) as total_transactions_amount from transactions
90 group by customer_ID
91 order by total_transactions_amount desc limit 5;
92
93 --15)Count transactions per Transaction_Type per branch.
94 select branch_name ,transaction_type,
95 count(*) as transaction_t from transactions
96 group by branch_name,transaction_type
97 order by branch_name asc;
98
99 --16)Identify transactions above a certain threshold (e.g., suspiciously large transactions).
100 select * from transactions where amount > 45000;
101
102 --17)Calculate the percentage of credit vs debit transactions.
103 select Transaction_Type,
104 count(*) * 100.0/(select count(*) from transactions)as percentage
105 from transactions
106 group by Transaction_Type;
107
108 --18)Find customers who have only deposit transactions.
109 select Customer_ID,transaction_type from transactions where transaction_type='Deposit';
110
111 --19)List all branches where total amount of transactions is greater than 1,00,000.
112 select branch_name,
113 sum(amount) as total_amount
114 from transactions
Total rows: 5
Query complete 00:00:00.169
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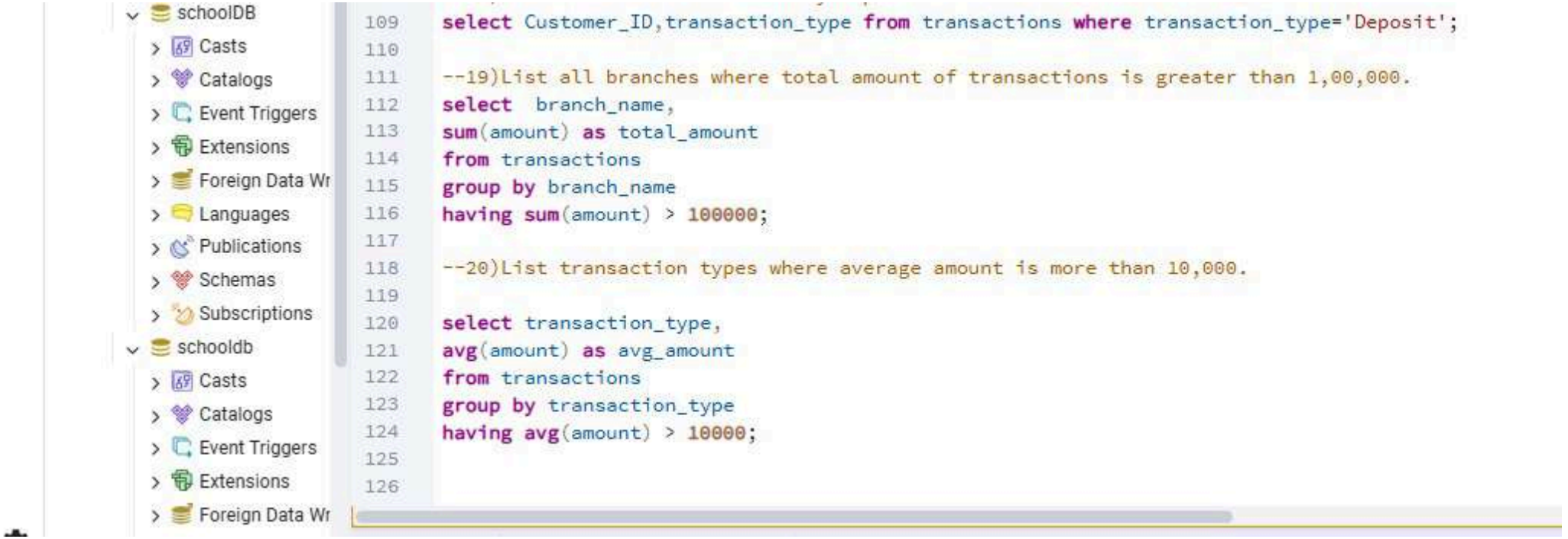
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select Customer_ID,transaction_type from transactions where transaction_type='Deposit';
--19)List all branches where total amount of transactions is greater than 1,00,000.
select branch_name,
sum(amount) as total_amount
from transactions
group by branch_name
having sum(amount) > 100000;
--20)List transaction types where average amount is more than 10,000.
select transaction_type,
avg(amount) as avg_amount
from transactions
group by transaction_type
having avg(amount) > 10000;