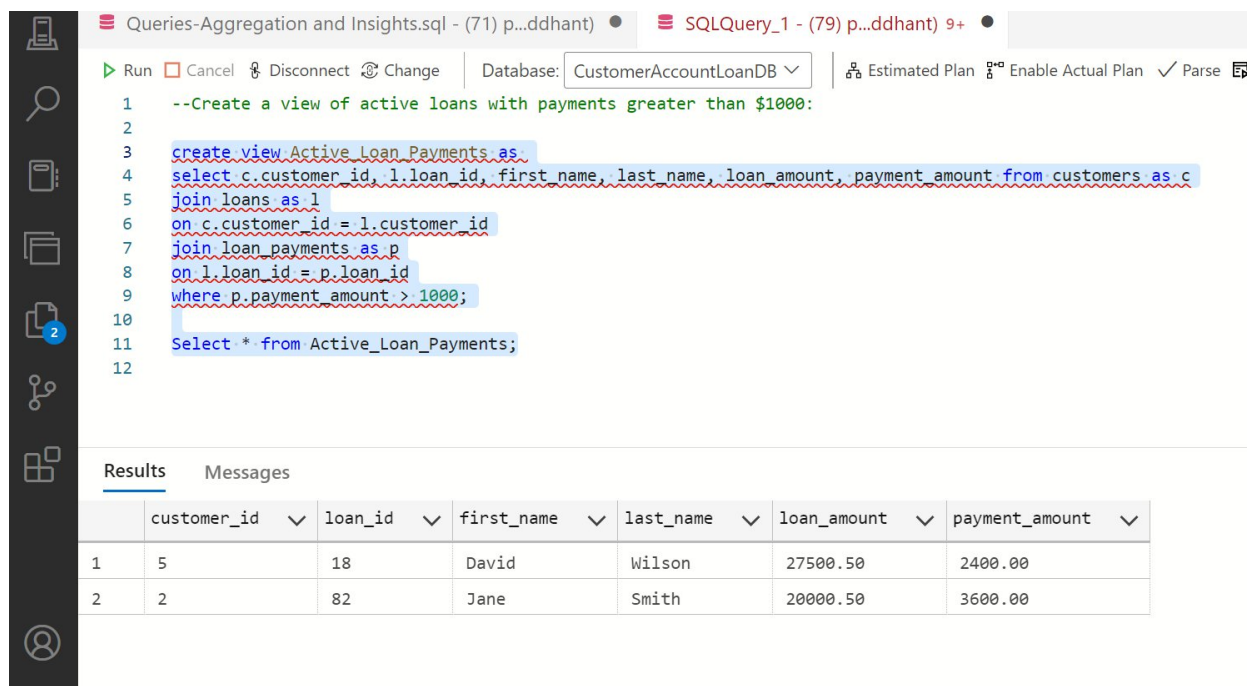


6. Advanced Analysis:

1. Create a view of active loans with payments greater than \$1000:

```
create view Active_Loan_Payments as
select c.customer_id, l.loan_id, first_name, last_name, loan_amount, payment_amount from customers as c
join loans as l
on c.customer_id = l.customer_id
join loan_payments as p
on l.loan_id = p.loan_id
where p.payment_amount > 1000;

Select * from Active_Loan_Payments;
```



The screenshot shows the SQL Server Enterprise Manager interface. The top pane displays the following SQL script:

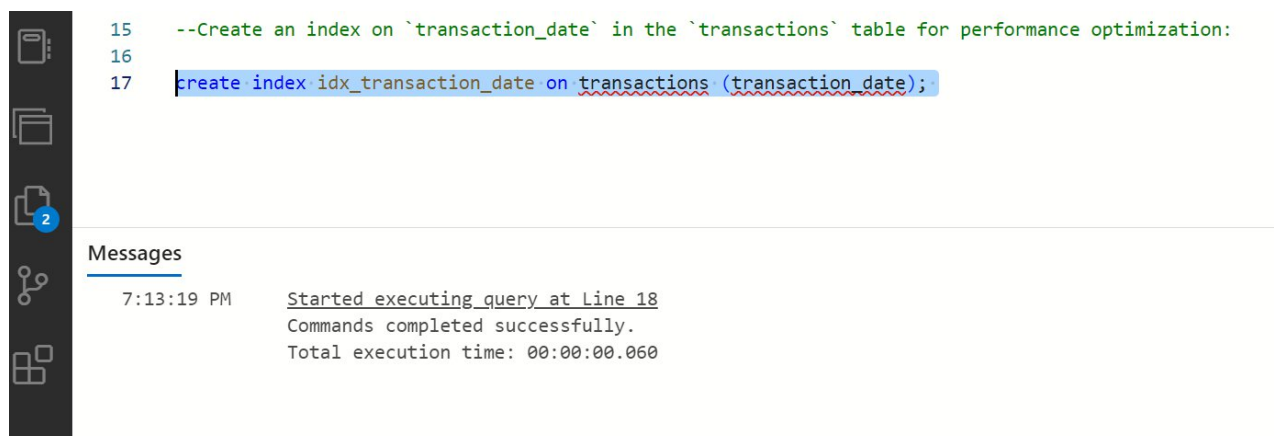
```
--Create a view of active loans with payments greater than $1000:
create view Active_Loan_Payments as
select c.customer_id, l.loan_id, first_name, last_name, loan_amount, payment_amount from customers as c
join loans as l
on c.customer_id = l.customer_id
join loan_payments as p
on l.loan_id = p.loan_id
where p.payment_amount > 1000;
Select * from Active_Loan_Payments;
```

The bottom pane shows the results of the query, displaying a table with 7 columns: customer_id, loan_id, first_name, last_name, loan_amount, and payment_amount. The table contains 2 rows of data.

	customer_id	loan_id	first_name	last_name	loan_amount	payment_amount
1	5	18	David	Wilson	27500.50	2400.00
2	2	82	Jane	Smith	20000.50	3600.00

2. Create an index on `transaction_date` in the `transactions` table for performance optimization:

```
create index idx_transaction_date on transactions (transaction_date);
```



The screenshot shows the SQL Server Enterprise Manager interface. The top pane displays the following SQL script:

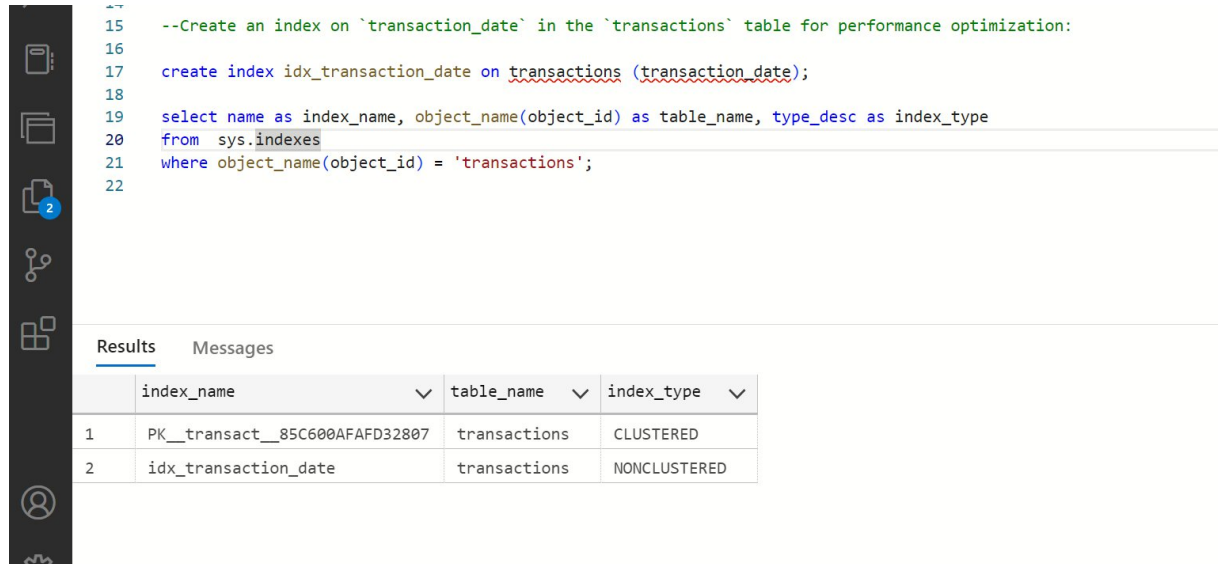
```
--Create an index on `transaction_date` in the `transactions` table for performance optimization:
create index idx_transaction_date on transactions (transaction_date);
```

The bottom pane shows the messages generated by the query execution:

```
7:13:19 PM Started executing query at Line 18
Commands completed successfully.
Total execution time: 00:00:00.060
```

check for the indexes on your transactions table:-

```
select name as index_name, object_name(object_id) as table_name, type_desc as index_type
from sys.indexes
where object_name(object_id) = 'transactions';
```



The screenshot shows a SQL query window with the following code:

```
--Create an index on `transaction_date` in the `transactions` table for performance optimization:
create index idx_transaction_date on transactions (transaction_date);

select name as index_name, object_name(object_id) as table_name, type_desc as index_type
from sys.indexes
where object_name(object_id) = 'transactions';
```

Below the query window, the 'Results' tab is active, displaying a table with the following data:

	index_name	table_name	index_type
1	PK__transact__85C600AF32807	transactions	CLUSTERED
2	idx_transaction_date	transactions	NONCLUSTERED