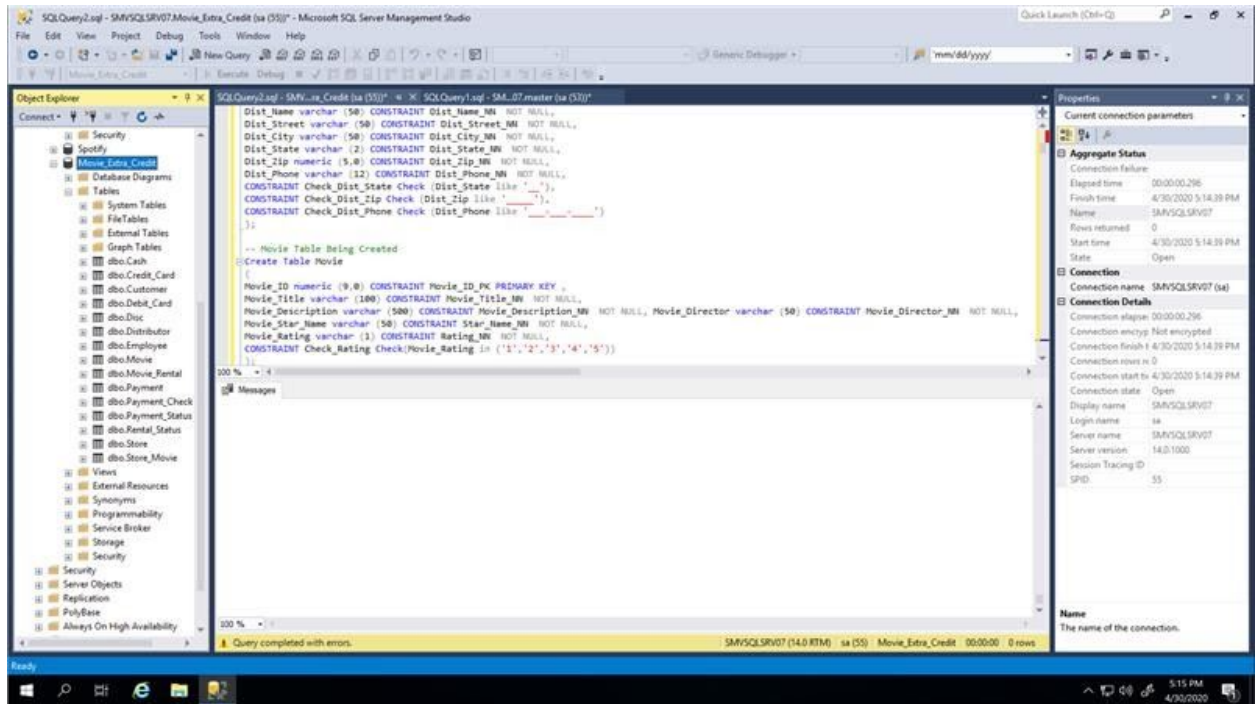


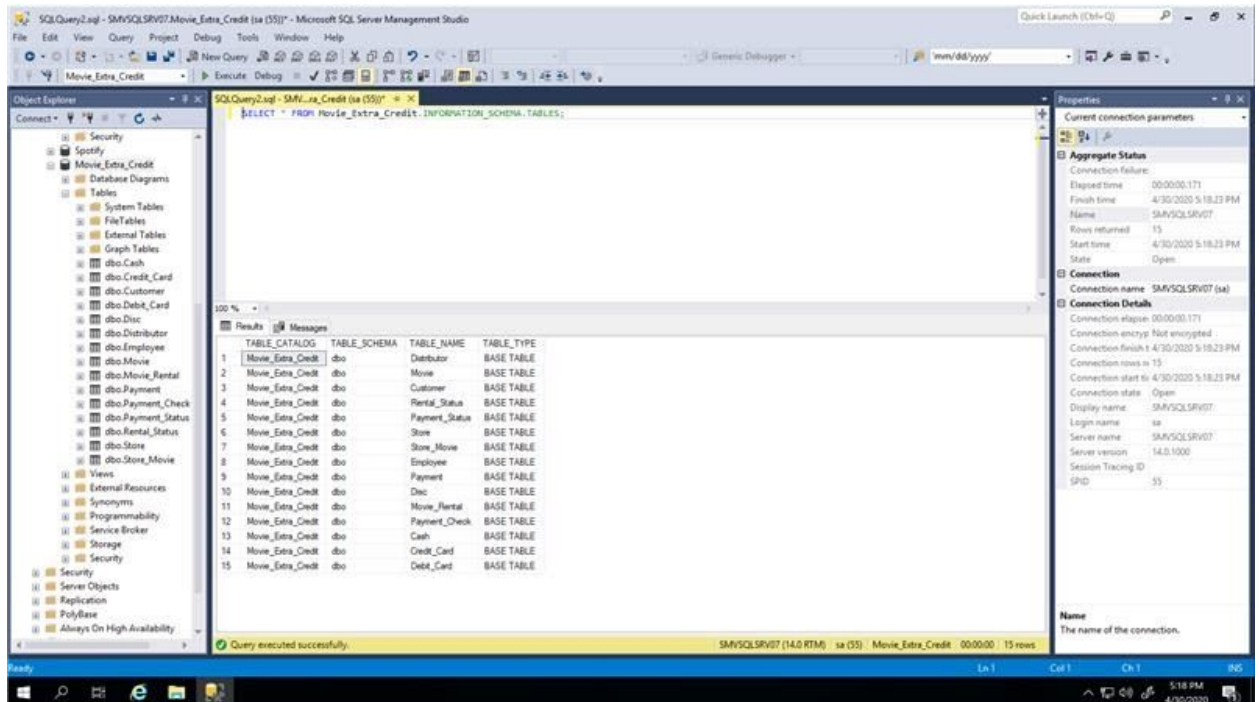
## ITSS 4380 Group Project Final Milestone Extra Credit

*All team members (Zachary Starr, Luis Saucedo, and Krishnasai Chalasani) contributed to this extra credit assignment.*

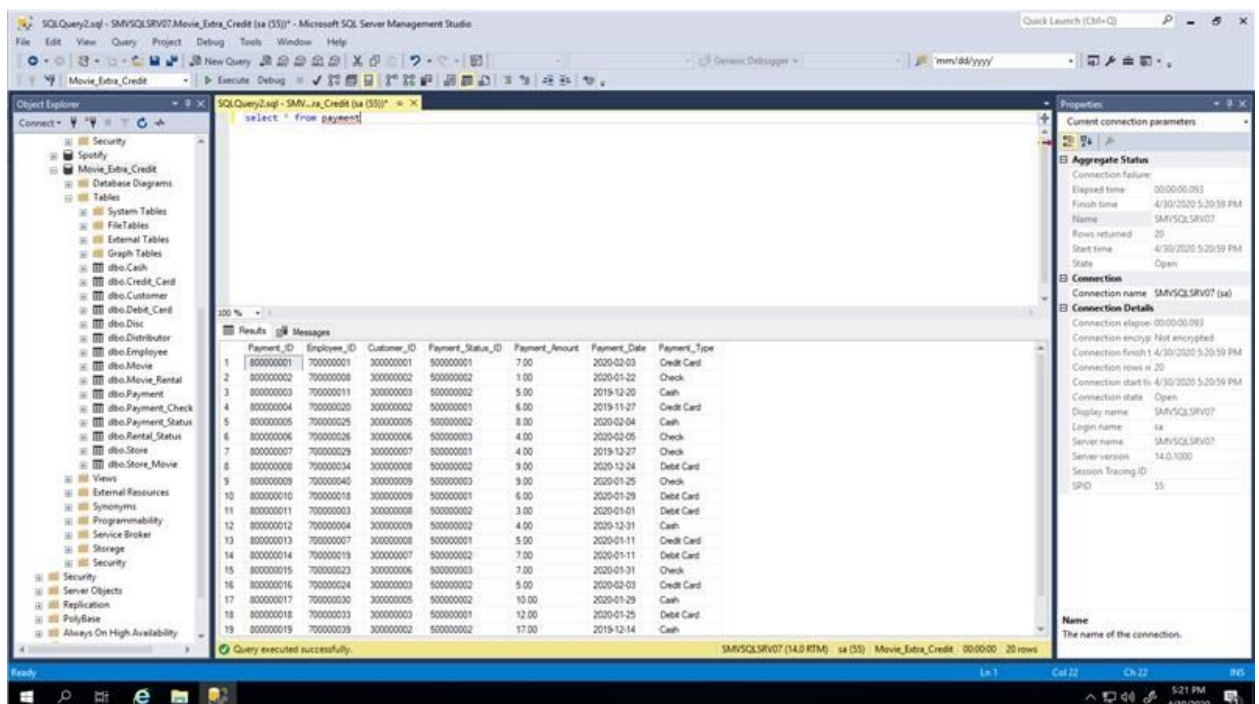
### Screenshot 1 - Tables in the database



SELECT \* FROM Movie\_Extra\_Credit.INFORMATION\_SCHEMA.TABLES;



Screenshot 2 - Data in a table



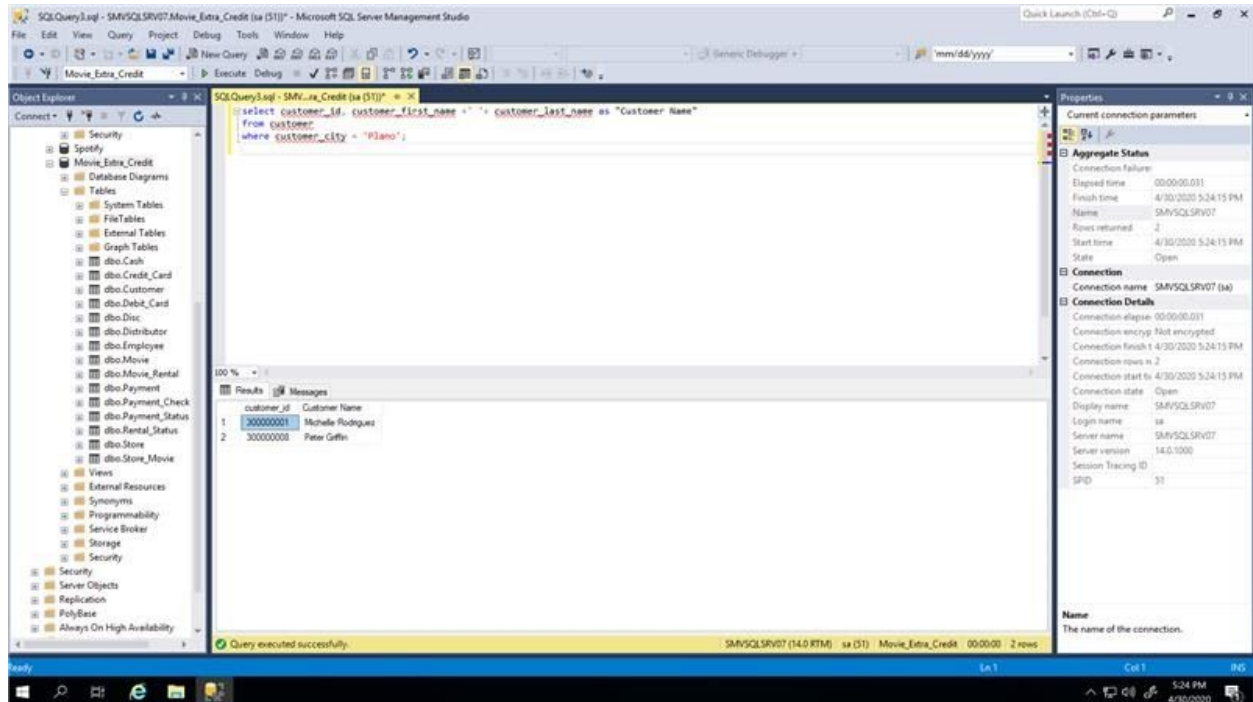
Screenshot 3 - All 10 queries from Milestone #2

a.

```

select customer_id, customer_first_name + ' ' + customer_last_name as "Customer
Name"
from customer
where customer_city = 'Plano';

```



b.

```

select e.employee_id ,Employee_Fname + ' ' + Employee_Lname as "Employee",
FORMAT(sum(payment_amount), 'C') "Total Payment Received"
--convert (sum (payment_amount), '$99.99') as "Total Payment Received"
from employee e, payment p
where e.employee_id = p.employee_id
group by e.employee_id, Employee_Fname + ' ' + Employee_Lname
order by e.employee_id;

```

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane displays the database structure, including tables like `dbo.Cash`, `dbo.Credit_Card`, `dbo.Customer`, `dbo.Debit_Card`, `dbo.Disc`, `dbo.Distributor`, `dbo.Employee`, `dbo.Movie`, `dbo.Movie_Rental`, `dbo.Payment`, `dbo.Payment_Check`, `dbo.Payment_Status`, `dbo.Rental_Status`, `dbo.Store`, `dbo.Store_Movie`, `dbo.Views`, `dbo.External_Resources`, `dbo.Synonyms`, `dbo.Programmability`, `dbo.Service_Broker`, `dbo.Storage`, `dbo.Security`, `dbo.Server_Objects`, `dbo.Replication`, `dbo.PolyBase`, and `dbo.Always On High Availability`.

The central pane shows the following SQL query:

```
select e.employee_id, e.employee_name as 'Employee', round(sum(payment_amount), 'C') 'Total Payment Received'
from employee e, payment p
where e.employee_id = p.employee_id
group by e.employee_id, e.employee_name
order by e.employee_id
```

The right pane displays the Properties window for the connection, showing details such as Connection name, Connection details, and Connection state.

The bottom pane shows the Results window with the following data:

| employee_id | Employee        | Total Payment Received |
|-------------|-----------------|------------------------|
| 700000001   | Phil J. Beth    | \$7.00                 |
| 700000003   | Dinah Constance | \$3.00                 |
| 700000004   | Trudy Gier      | \$4.00                 |
| 700000007   | Josene Duane    | \$5.00                 |
| 700000008   | Vernon Ro       | \$1.00                 |
| 700000011   | Patience Zaria  | \$5.00                 |
| 700000017   | Caitlin Felicia | \$10.00                |
| 700000018   | Laurence Hardy  | \$5.00                 |
| 700000019   | Andrew Warran   | \$7.00                 |
| 700000020   | Martin Hobbs    | \$6.00                 |
| 700000023   | Edmund Orchard  | \$7.00                 |
| 700000024   | Mason Gallop    | \$5.00                 |
| 700000025   | Opal Matthews   | \$8.00                 |
| 700000026   | Jack Manabridge | \$4.00                 |
| 700000030   | James Matthews  | \$3.00                 |

C.

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The left pane displays the database structure, including tables like `dbo.Cash`, `dbo.Credit_Card`, `dbo.Customer`, `dbo.Debit_Card`, `dbo.Disc`, `dbo.Distributor`, `dbo.Employee`, `dbo.Movie`, `dbo.Movie_Rental`, `dbo.Payment`, `dbo.Payment_Check`, `dbo.Payment_Status`, `dbo.Rental_Status`, `dbo.Store`, `dbo.Store_Movie`, `dbo.Views`, `dbo.External_Resources`, `dbo.Synonyms`, `dbo.Programmability`, `dbo.Service_Broker`, `dbo.Storage`, `dbo.Security`, `dbo.Server_Objects`, `dbo.Replication`, `dbo.PolyBase`, and `dbo.Always On High Availability`.

The central pane shows the following SQL query:

```
select store_id, count(movie_id) as 'Total Movies Rented'
from movie_rental m
group by store_id
order by store_id
```

The right pane displays the Properties window for the connection, showing details such as Connection name, Connection details, and Connection state.

The bottom pane shows the Results window with the following data:

| store_id  | Total Movies Rented |
|-----------|---------------------|
| 600000001 | 2                   |
| 600000002 | 2                   |
| 600000003 | 2                   |
| 600000004 | 2                   |
| 600000005 | 2                   |
| 600000006 | 2                   |
| 600000007 | 2                   |
| 600000008 | 2                   |
| 600000009 | 2                   |
| 600000010 | 2                   |

d.

```
select store_id, sm.movie_id, movie_title
from movie m, store_movie sm
```

where m.movie\_id not in (select movie\_id from movie\_rental mr) and m.movie\_id = sm.movie\_id  
order by movie\_id, store\_id

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The query window displays the following SQL query:

```
select store_id, sm.movie_id, movie_title
from movie m, store_movie sm
where m.movie_id not in (select movie_id from movie_rental mr) and m.movie_id = sm.movie_id
order by movie_id, store_id
```

The query results are displayed in the Results pane, showing one row:

| store_id  | movie_id  | movie_title |
|-----------|-----------|-------------|
| 600000001 | 200000111 | Joker       |

The Properties pane on the right shows the connection details for the connection named 'SMVSQLSRV07 (sa)'.

e.

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The query window displays the following SQL query:

```
select customer_id, customer_first_name + ' ' + customer_last_name as "Name"
from customer
where customer_id not in (select customer_id from movie_rental)
order by customer_id
```

The query results are displayed in the Results pane, showing two rows:

| customer_id | Name             |
|-------------|------------------|
| 300000004   | Nirvana Chaleasa |
| 300000010   | Robert Brown     |

The Properties pane on the right shows the connection details for the connection named 'SMVSQLSRV07 (sa)'.

f.



SQLQuery1.sql - SMVSQLSRV07.Movie\_Extra\_Credit (sa [STP]) - Microsoft SQL Server Management Studio

```

select payment_type, payment_status_desc, (sum(payment_amount)) as "Total Amount Received"
-- to_char(sum(payment_amount), '$999,999') as "Total Amount Received"
from payment p, payment_status ps
where p.payment_status_id = ps.payment_status_id
group by payment_type, payment_status_desc
order by payment_status_desc

```

Results

| payment_type | payment_status_desc | Total Amount Received |
|--------------|---------------------|-----------------------|
| 1            | Check               | Approved \$4.00       |
| 2            | Credit Card         | Approved \$20.00      |
| 3            | Debit Card          | Approved \$19.00      |
| 4            | Cash                | Completed \$44.00     |
| 5            | Check               | Completed \$1.00      |
| 6            | Credit Card         | Completed \$5.00      |
| 7            | Debit Card          | Completed \$19.00     |
| 8            | Check               | Pending \$20.00       |

Query executed successfully. SMVSQLSRV07 (14.0 RTM) sa [STP] Movie\_Extra\_Credit 00:00:00 8 rows

Properties

Current connection parameters

Aggregate Status

Connection failure

Elapsed time: 00:00:00.062

Finish time: 4/30/2020 5:38:03 PM

Name: SMVSQLSRV07

Rows returned: 8

Start time: 4/30/2020 5:38:03 PM

Status: Open

Connection

Connection name: SMVSQLSRV07 (sa)

Connection Details

Connection elapsed: 00:00:00.062

Connection encrypt: Not encrypted

Connection finish: 4/30/2020 5:38:03 PM

Connection rows: 8

Connection start: 4/30/2020 5:38:03 PM

Connection state: Open

Display name: SMVSQLSRV07

Login name: sa

Server name: SMVSQLSRV07

Server version: 14.0.1000

Session Tracking ID: SPID

Name: The name of the connection.

g.

SQLQuery1.sql - SMVSQLSRV07.Movie\_Extra\_Credit (sa [STP]) - Microsoft SQL Server Management Studio

```

select movie_rating, count(*) as "Count"
from movie m, movie_rental mr, disc d, store_movie sm
where m.movie_id = sm.movie_id
and sm.movie_id = d.movie_id
and d.disc_id = mr.disc_id
group by movie_rating
order by movie_rating

```

Results

| movie_rating | Count |
|--------------|-------|
| 1            | 2     |
| 2            | 4     |
| 3            | 6     |
| 4            | 4     |
| 5            | 4     |

Query executed successfully. SMVSQLSRV07 (14.0 RTM) sa [STP] Movie\_Extra\_Credit 00:00:00 5 rows

Properties

Current connection parameters

Aggregate Status

Connection failure

Elapsed time: 00:00:00.046

Finish time: 4/30/2020 5:38:34 PM

Name: SMVSQLSRV07

Rows returned: 5

Start time: 4/30/2020 5:38:34 PM

Status: Open

Connection

Connection name: SMVSQLSRV07 (sa)

Connection Details

Connection elapsed: 00:00:00.046

Connection encrypt: Not encrypted

Connection finish: 4/30/2020 5:38:34 PM

Connection rows: 5

Connection start: 4/30/2020 5:38:34 PM

Connection state: Open

Display name: SMVSQLSRV07

Login name: sa

Server name: SMVSQLSRV07

Server version: 14.0.1000

Session Tracking ID: SPID

Name: The name of the connection.

h.

SQLQuery1.sql - SMVSQLSRV07 Movie\_Extra\_Credit (sa [NT]) - Microsoft SQL Server Management Studio

```

select top 5 c.customer_id, customer_first_name, customer_last_name as "Name", sum(payment_amount) as "Total Payment"
into char(sum(payment_amount), '$99,99') as "Total Payment"
from payment p, movie_rental mr, customer c
where p.payment_id = mr.payment_id
and c.customer_id = mr.customer_id
group by c.customer_id, customer_first_name, customer_last_name
order by "Total Payment" desc
--fetch first 5 rows only

```

Results

|   | customer_id | Name               | Total Payment |
|---|-------------|--------------------|---------------|
| 1 | 300000002   | Luis Saucedo       | \$24.00       |
| 2 | 300000003   | Zachary Star       | \$22.00       |
| 3 | 300000009   | George Lopez       | \$19.00       |
| 4 | 300000005   | Jason Lunar        | \$18.00       |
| 5 | 300000001   | Michelle Rodriguez | \$17.00       |

Query executed successfully. SMVSQLSRV07 (14.0 RTM) - sa [NT] - Movie\_Extra\_Credit - 00:00:00 - 5 rows

Properties

Current connection parameters

Aggregate Status

Connection failure:

Elapsed time: 00:00:00.046

Finish time: 4/30/2020 5:40:31 PM

Name: SMVSQLSRV07

Rows returned: 5

Start time: 4/30/2020 5:40:31 PM

State: Open

Connection

Connection name: SMVSQLSRV07 (sa)

Connection Details

Connection elapsed: 00:00:00.046

Connection encrypt: Not encrypted

Connection finish: 4/30/2020 5:40:31 PM

Connection rows: 5

Connection start: 4/30/2020 5:40:31 PM

Connection state: Open

Display name: SMVSQLSRV07

Login name: sa

Server name: SMVSQLSRV07

Server version: 14.0.1000

Session tracing ID: SPID

Name: The name of the connection.

i.

SQLQuery1.sql - SMVSQLSRV07 Movie\_Extra\_Credit (sa [NT]) - Microsoft SQL Server Management Studio

```

select customer_last_name, customer_first_name, movie_title, rental_status as "Rental Status", mr_rental_rate, employee_name, employee_fname,
from customer c, movie m, rental_status r, movie_rental mr, employee e, payment p, payment_status ps
where c.customer_id = mr.customer_id and c.customer_id = p.customer_id and mr.customer_id = p.customer_id and m.movie_id = mr.movie_id and c.rental_status = r.rental_status

```

Results

|    | customer_last_name | customer_first_name | movie_title                           | Rental Status    | MR_rental_rate | employee_name | employee_fname | payment_type | payment_status_desc |
|----|--------------------|---------------------|---------------------------------------|------------------|----------------|---------------|----------------|--------------|---------------------|
| 1  | Giffin             | Peter               | Avengers: Endgame                     | Rented           | 1.00           | Constance     | Dinah          | Debit Card   | Completed           |
| 2  | Rodriguez          | Michelle            | Avengers: Endgame                     | Rented           | 1.00           | JoBeth        | Phila          | Credit Card  | Approved            |
| 3  | Saucedo            | Luis                | Harry Potter and the Sorcerer's Stone | Returned in Time | 1.00           | Ro            | Vernon         | Check        | Completed           |
| 4  | Lopez              | George              | Harry Potter and the Sorcerer's Stone | Returned in Time | 1.00           | Gier          | Tudy           | Cash         | Completed           |
| 5  | Star               | Zachary             | The Lion King                         | Returned Late    | 1.00           | Zara          | Patience       | Cash         | Completed           |
| 6  | Giffin             | Peter               | The Lion King                         | Returned Late    | 1.00           | Diane         | Juane          | Credit Card  | Approved            |
| 7  | Saucedo            | Luis                | Frozen 2                              | Lost             | 1.00           | Hobbs         | Matin          | Credit Card  | Approved            |
| 8  | Smith              | Roger               | Frozen 2                              | Lost             | 1.00           | Wisman        | Andrew         | Debit Card   | Completed           |
| 9  | Tate               | Tyler               | Kisses Out                            | Broken           | 1.00           | Orchard       | Edmund         | Check        | Pending             |
| 10 | Lunar              | Jason               | Kisses Out                            | Broken           | 1.00           | Mathews       | Opal           | Cash         | Completed           |
| 11 | Star               | Zachary             | Avatar                                | Rented           | 1.00           | Galkop        | Marion         | Credit Card  | Completed           |
| 12 | Tate               | Tyler               | Avatar                                | Rented           | 1.00           | Maribridge    | Jack           | Check        | Pending             |
| 13 | Smith              | Roger               | Star Wars Episode 3: The Last Jedi    | Returned in Time | 1.00           | Harvey        | Lester         | Check        | Approved            |
| 14 | Lunar              | Jason               | Star Wars Episode 3: The Last Jedi    | Returned in Time | 1.00           | Proctor       | Ruthers        | Cash         | Completed           |

Query executed successfully. SMVSQLSRV07 (14.0 RTM) - sa [NT] - Movie\_Extra\_Credit - 00:00:00 - 20 rows

Properties

Current connection parameters

Aggregate Status

Connection failure:

Elapsed time: 00:00:00.063

Finish time: 4/30/2020 5:41:38 PM

Name: SMVSQLSRV07

Rows returned: 20

Start time: 4/30/2020 5:41:38 PM

State: Open

Connection

Connection name: SMVSQLSRV07 (sa)

Connection Details

Connection elapsed: 00:00:00.063

Connection encrypt: Not encrypted

Connection finish: 4/30/2020 5:41:38 PM

Connection rows: 20

Connection start: 4/30/2020 5:41:38 PM

Connection state: Open

Display name: SMVSQLSRV07

Login name: sa

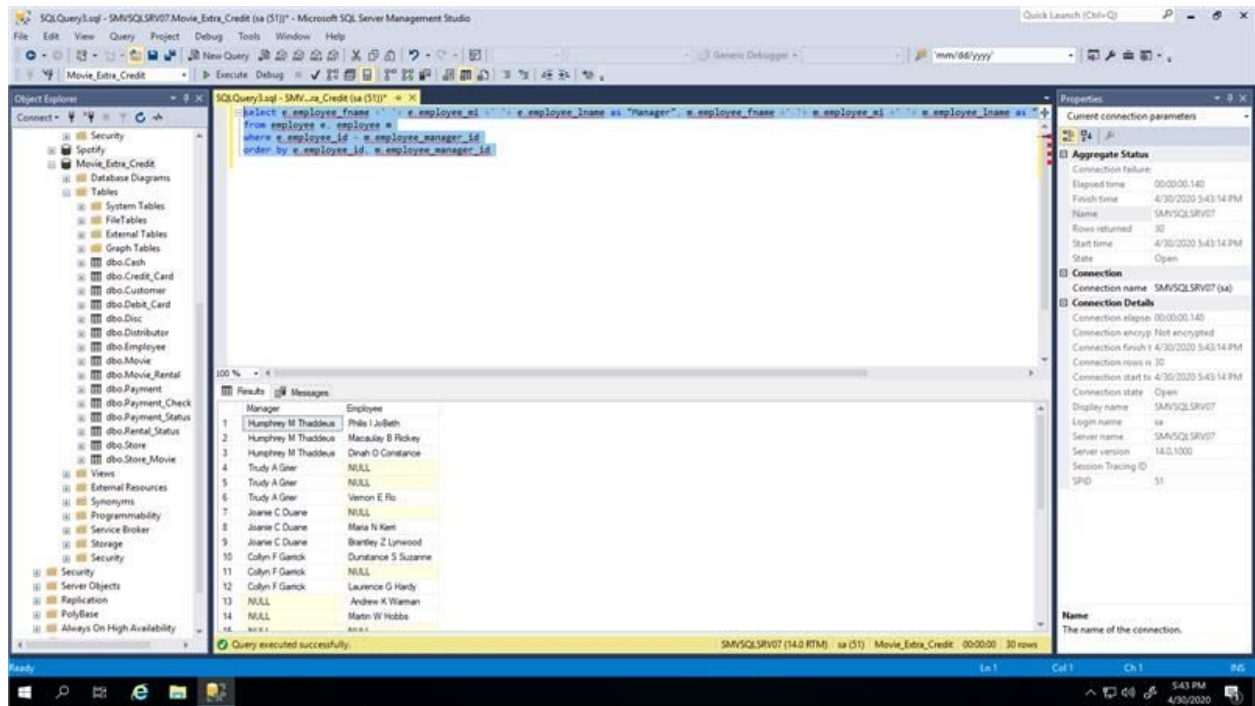
Server name: SMVSQLSRV07

Server version: 14.0.1000

Session tracing ID: SPID

Name: The name of the connection.

j.



|                        |                       |                                    |
|------------------------|-----------------------|------------------------------------|
| Oracle Version         | MS SQL Server Version | Location Used                      |
| To_Date ()<br>Function | Convert()<br>Function | Creating Tables,<br>Inserting Data |
| To_Char()<br>Function  | Format()<br>Function  | Queries 2, 6,<br>and 8             |
|                        | +                     | Queries 1, 5, 8,<br>and 10         |
| Sysdate<br>Function    | Getdate()<br>Function | Creating Tables                    |
| Number<br>Datatype     | Numeric<br>Datatype   | Creating Tables                    |
| Varchar2<br>Datatype   | Varchar<br>Datatype   | Creating Tables                    |



|              |  |         |
|--------------|--|---------|
| Fetch Clause | Select Top 5 in<br>"Select" Line of<br>the Query | Query 8 |
|--------------|--|---------|

### Challenges

- Finding the right way to convert DDL and DML commands from Oracle to SQL Server
  - We had to look at many websites and go through a trial-and-error process in determining the keywords that would successfully execute the query or statement.
- Determining how to create a database in SQL Server

### Microsoft SQL Server

| Pros   | Cons   |
|--|--|
| The interface looks nice once you get used to it.                          | Since we are accustomed to Oracle, there is a bit of a learning curve (This isn't really a con). |
| We can clearly see the tables that the database has in a graphical format. | The interface looks a little overwhelming at first.  |

### Oracle

| Pros   | Cons   |
|--|--|
| We are accustomed to this platform.                | We don't like the user interface for Oracle 11g Database Express because it looks outdated.      |
| There is an online Oracle DBMS called Oracle Live. | There are 2 logins needed to query the database: one for the workspace and one for the database. |