

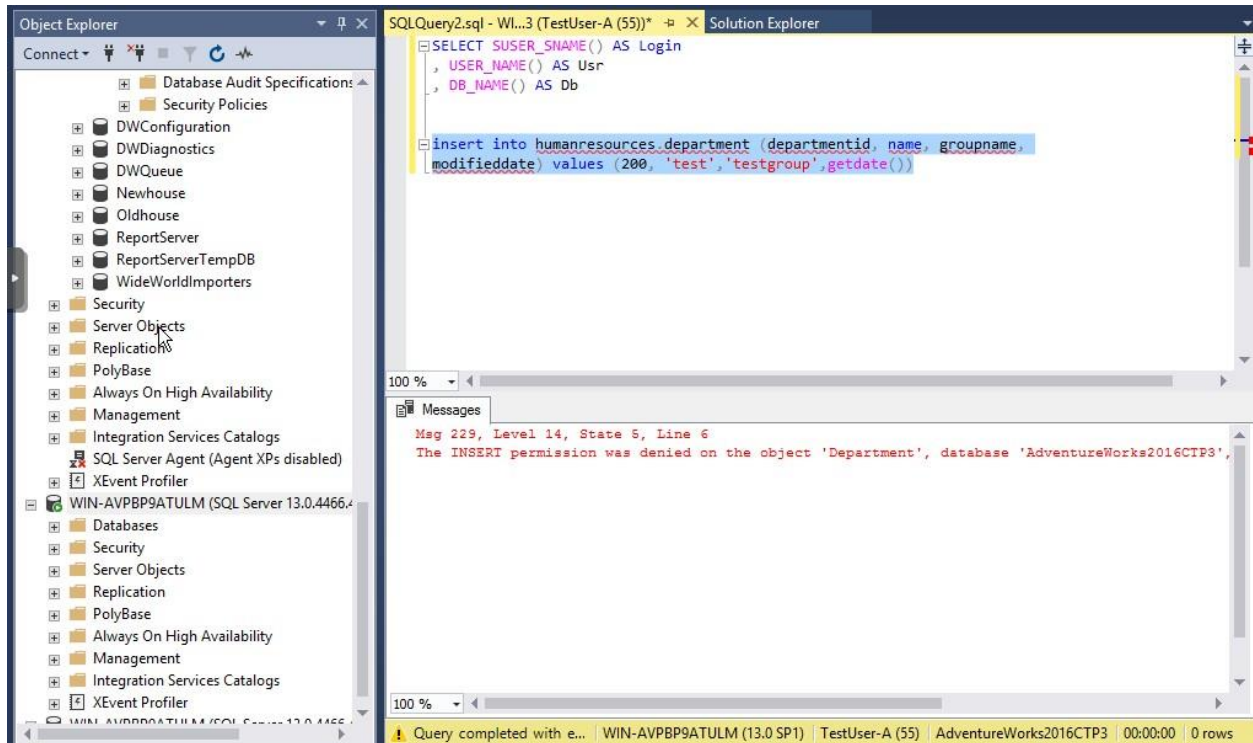
## Homework 5: User Management

### Task 4. Assigning User Mappings to Fixed Database Roles

#### A. Assigning a user to a database role

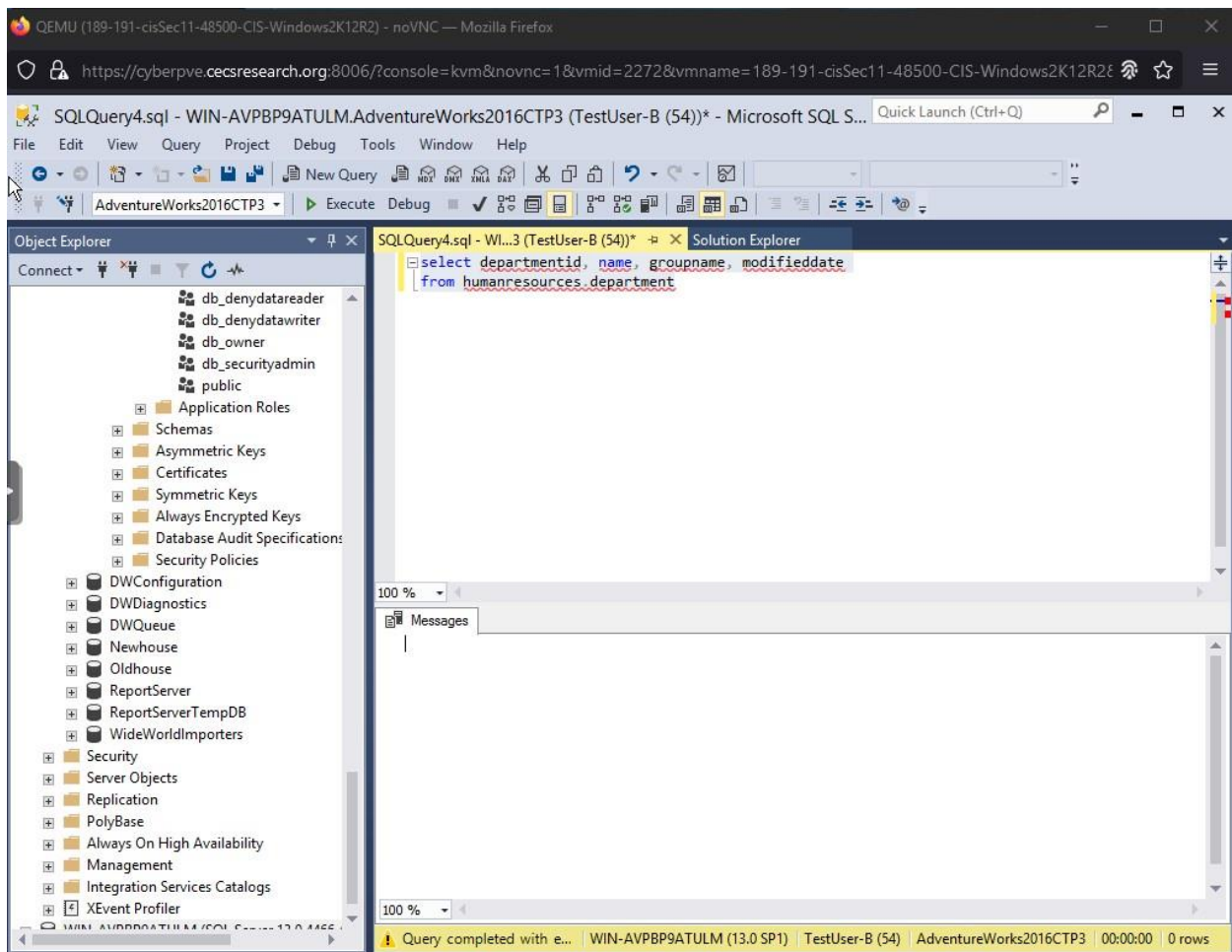
#### B. Verifying the results

5) Does it fail? Show the result in a screenshot. Describe your observation and explain why it fails.



The reason it fails is because we added this user to the 'db\_denydatareader' role which restricts the ability to use modifications commands such as INSERT, UPDATE, or DELETE.

10) Does it fail? Show the result in a screenshot. Describe your observation and explain why it fails.



This one also fails. The user was not given permissions to make select statements explicitly.

## Task 5. Creating a Custom Database Role

### A. Creating a custom database role

### B. Verifying results

4) Does it work? Show the result in a screenshot. Describe your observation and explain why it works.

The screenshot shows the SQL Server Enterprise Manager interface. The Object Explorer on the left displays the server hierarchy. The central pane shows the SQL Query Editor with the query: `use AdventureWorks2016CTP3; SELECT * FROM humanresources.department;`. The Results pane below the query shows 16 rows of data with columns: DepartmentID, Name, GroupName, and ModifiedDate. The status bar at the bottom indicates the query was executed successfully.

DepartmentID	Name	GroupName	ModifiedDate
1	Engineering	Research and Development	2008-04-30 00:00:00.000
2	Tool Design	Research and Development	2008-04-30 00:00:00.000
3	Sales	Sales and Marketing	2008-04-30 00:00:00.000
4	Marketing	Sales and Marketing	2008-04-30 00:00:00.000
5	Purchasing	Inventory Management	2008-04-30 00:00:00.000
6	Research and Development	Research and Development	2008-04-30 00:00:00.000
7	Production	Manufacturing	2008-04-30 00:00:00.000
8	Production Control	Manufacturing	2008-04-30 00:00:00.000
9	Human Resources	Executive General and Administration	2008-04-30 00:00:00.000
10	Finance	Executive General and Administration	2008-04-30 00:00:00.000
11	Information Services	Executive General and Administration	2008-04-30 00:00:00.000

It works because we explicitly gave this user select only permissions with our new role

5) Does it fail? Show the result in a screenshot. Describe your observation and explain why it fails.

The screenshot shows the SQL Server Enterprise Manager interface. The Object Explorer on the left displays the server hierarchy. The central pane shows the SQL Query Editor with the query: `insert into humanresources.department (departmentid, name, groupname, modifieddate) values (200, 'test', 'testgroup', getdate());`. The Messages pane below the query shows an error message: "Msg 229, Level 14, State 5, Line 1 The INSERT permission was denied on the object 'Department', database 'AdventureWorks2016CTP3'". The status bar at the bottom indicates the query completed with an error.

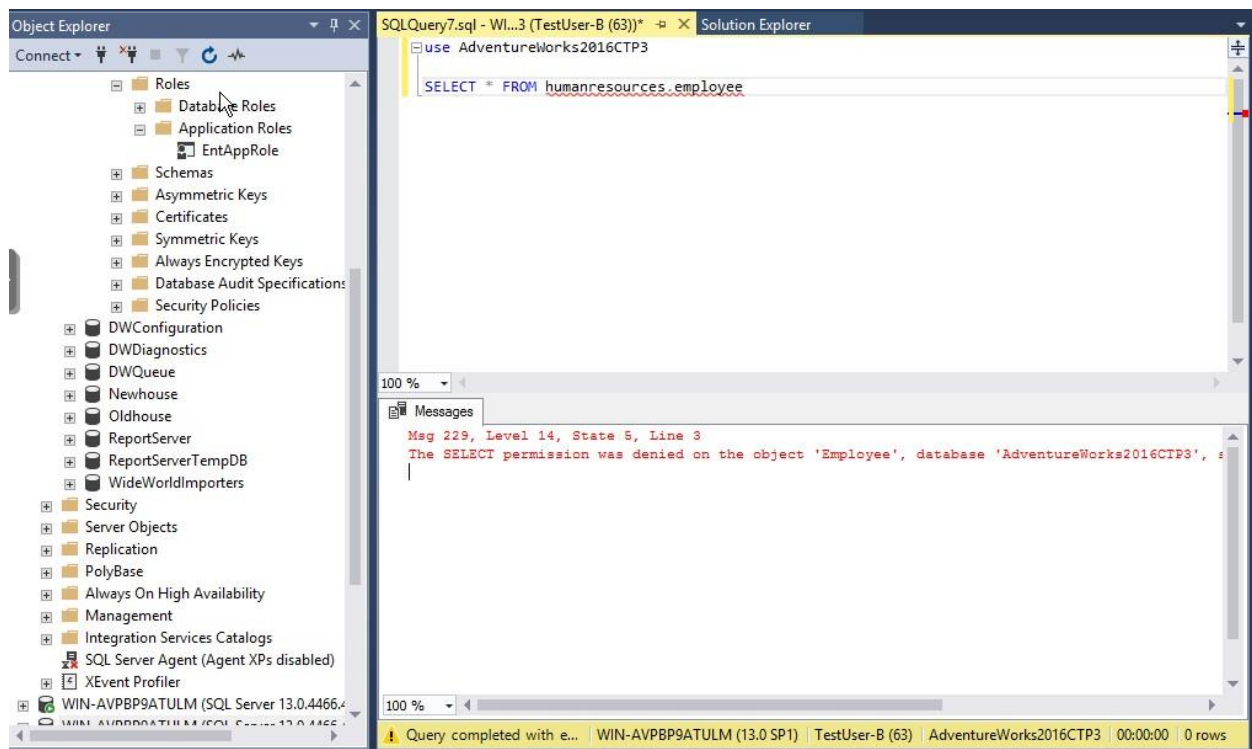
It fails because the user does not have permissions to use the insert command.

## Task 6. Creating an Application Role

### A. Creating an Application Role

### B. Verifying Results

2) Does it fail? Show the result in a screenshot. Describe your observation and explain why it fails.



It fails because the application roles hasn't been enabled for this session. You have to do that first.

4) Does it work? Show the result in a screenshot. You have to click on Results to view the results. Describe your observation and explain why it works.



The screenshot shows the SQL Server Enterprise Manager interface. The Object Explorer on the left displays the 'EntAppRole' under 'Application Roles'. The SQL Query window in the center contains the following T-SQL code:

```

sp_setapprole @rolename='EntAppRole', @password='Pa$$w0rd'

use AdventureWorks2016CTP3

SELECT * FROM humanresources.employee
  
```

The Results grid at the bottom displays the following data:

	BusinessEntityID	NationalIDNumber	LoginID	OrganizationNode	OrganizationLevel	JobTitle
1	1	295847284	adventure-works\ken0	NULL	NULL	Chief Executive Officer
2	2	245797967	adventure-works\item0	0x58	1	Vice President of Engineering
3	3	509647174	adventure-works\roberto0	0x5AC0	2	Engineering Manager
4	4	112457891	adventure-works\rob0	0x5AD6	3	Senior Tool Designer
5	5	695256908	adventure-works\gail0	0x5ADA	3	Design Engineer
6	6	998320692	adventure-works\jossef0	0x5ADE	3	Design Engineer
7	7	134969118	adventure-works\dylan0	0x5AE1	3	Research and Development Engineer
8	8	811994146	adventure-works\diane1	0x5AE158	4	Research and Development Engineer
9	9	658797903	adventure-works\gigi0	0x5AE168	4	Research and Development Engineer
10	10	879342154	adventure-works\michael6	0x5AE178	4	Research and Development Engineer

It works now because we enabled the application role for the session.

## Task 7. Assigning Permissions

9) Does it work? Show the result in a screenshot. Describe your observation and explain why it works.

The screenshot shows the SQL Server Enterprise Manager interface. The Object Explorer on the left displays the 'TestUser-A' under 'Users'. The SQL Query window in the center contains the following T-SQL code:

```

use AdventureWorks2016CTP3

SELECT * FROM person.address
  
```

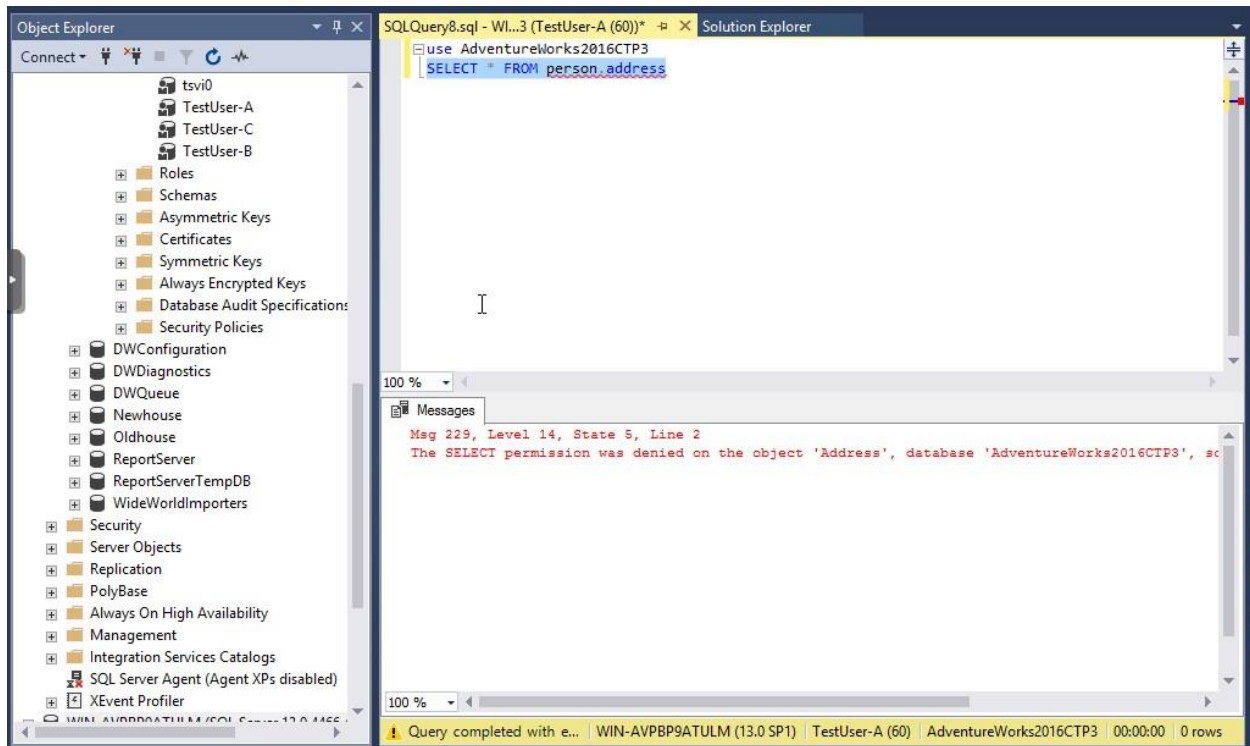
The Results grid at the bottom displays the following data:

	AddressID	AddressLine1	AddressLine2	City	StateProvinceID	PostalCode	SpatialLocation
1	1	1970 Napa Ct.	NULL	Bothell	79	98011	0xE6100000010CAE8BFC28BCE4
2	2	9833 Mt. Dias Blv.	NULL	Bothell	79	98011	0xE6100000010CD6FA851AE6D7
3	3	7484 Roundtree Drive	NULL	Bothell	79	98011	0xE6100000010C18E304C4ADE1
4	4	9539 Glenside Dr	NULL	Bothell	79	98011	0xE6100000010C813A0D5F9FDE
5	5	1226 Shoe St.	NULL	Bothell	79	98011	0xE6100000010C61C64D8ABBD5
6	6	1399 Firestone Drive	NULL	Bothell	79	98011	0xE6100000010CE0B4E50458DA
7	7	5672 Hale Dr.	NULL	Bothell	79	98011	0xE6100000010C18E304C4ADE1
8	8	6387 Scenic Avenue	NULL	Bothell	79	98011	0xE6100000010C0029A5D93BDF
9	9	8713 Yosemite Ct.	NULL	Bothell	79	98011	0xE6100000010C6A80AD742DDC
10	10	250 Race Court	NULL	Bothell	79	98011	0xE6100000010C219D64AE1FE4

The status bar at the bottom indicates: Query executed successfully. WIN-AVPBP9ATULM (13.0 SP1) | TestUser-A (60) | AdventureWorks2016CTP3 | 00:00:00 | 19614 rows

It works because we added the permission for this user to select from this table.

13) Run the previous query. Show the result in a screenshot. Describe your observation and explain why it fails.



It doesn't work because we removed the select permission for this table for this user.

15) Run the previous query. Show the result in a screenshot. Describe your observation and explain why it works.

Object Explorer

Connect

SQLQuery8.sql - Wl...3 (TestUser-A (60))

Solution Explorer

```
use AdventureWorks2016CTP3
SELECT * FROM person.address
```

100 %

Results Spatial results Messages

	AddressID	AddressLine1	AddressLine2	City	StateProvinceID	PostalCode	SpatialLocation
1	1	1970 Napa Ct.	NULL	Bothell	79	98011	0xE6100000010CAE8BFC28BCE4
2	2	9833 Mt. Dias Blv.	NULL	Bothell	79	98011	0xE6100000010CD6FA851AE6D7
3	3	7484 Roundtree Drive	NULL	Bothell	79	98011	0xE6100000010C18E304C4ADE1
4	4	9539 Glenside Dr	NULL	Bothell	79	98011	0xE6100000010C813A0D5F9FDE
5	5	1226 Shoe St.	NULL	Bothell	79	98011	0xE6100000010C61C64D8ABBD5
6	6	1399 Firestone Drive	NULL	Bothell	79	98011	0xE6100000010CE0B4E50458DA
7	7	5672 Hale Dr.	NULL	Bothell	79	98011	0xE6100000010C18E304C4ADE1
8	8	6387 Scenic Avenue	NULL	Bothell	79	98011	0xE6100000010C0029A5D938DF
9	9	8713 Yosemite Ct.	NULL	Bothell	79	98011	0xE6100000010C6A80AD742DDC
10	10	250 Race Court	NULL	Bothell	79	98011	0xE6100000010C219D64AE1FE4

Query executed suc... WIN-AVPBP9ATULM (13.0 SP1) TestUser-A (60) AdventureWorks2016CTP3 00:00:00 19614 rows

It works because the db\_datareader grants select statement permissions for the user

19) Run the previous query. Show the result in a screenshot. Describe your observation and explain why it fails.

Object Explorer

Connect

SQLQuery8.sql - Wl...3 (TestUser-A (60))

Solution Explorer

```
use AdventureWorks2016CTP3
SELECT * FROM person.address
```

100 %

Messages

Msg 229, Level 14, State 5, Line 2  
The SELECT permission was denied on the object 'Address', database 'AdventureWorks2016CTP3', sc...

Query completed with e... WIN-AVPBP9ATULM (13.0 SP1) TestUser-A (60) AdventureWorks2016CTP3 00:00:00 0 rows

**It fails because we explicitly denied select permissions for this user on this table.**