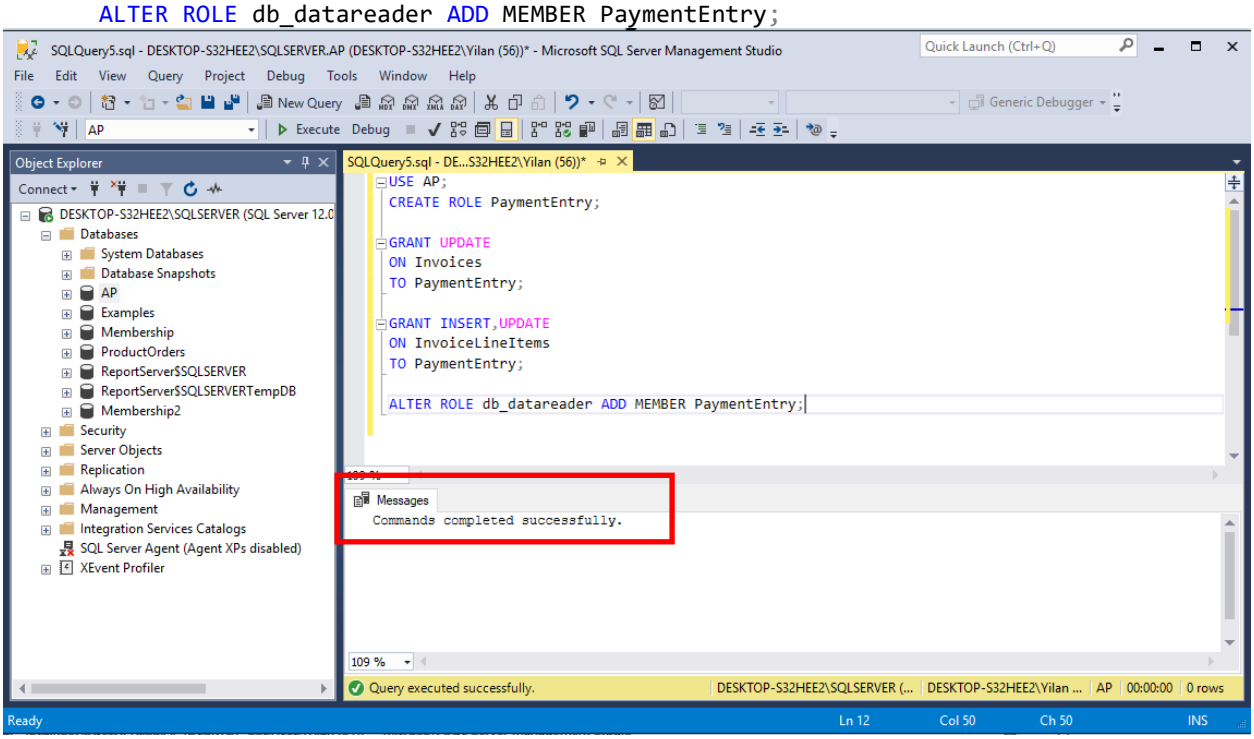
Lab 11: Server Security Solution

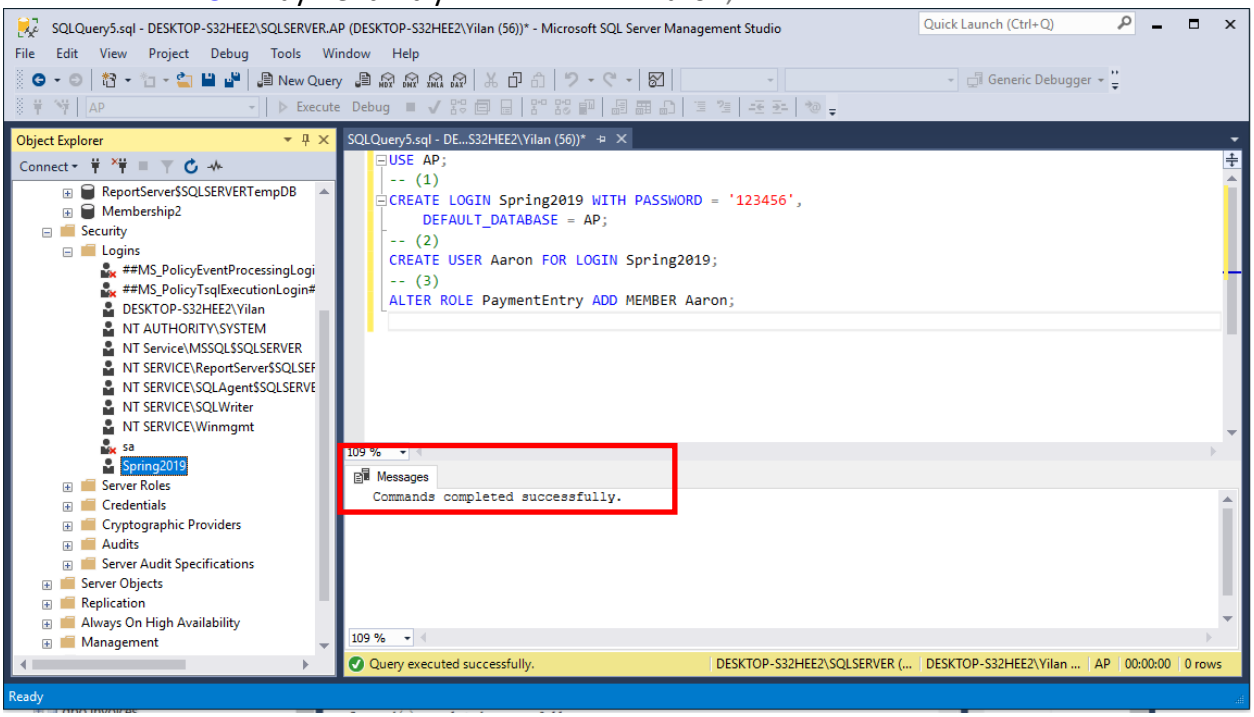
1. Write a script that creates a user-defined database role named PaymentEntry in the AP database. Give UPDATE permission to the new role for the Invoices table, UPDATE and INSERT permission for the InvoiceLineItems table, and SELECT permission for all user tables.

```
USE AP;
CREATE ROLE PaymentEntry;

GRANT UPDATE
ON Invoices
TO PaymentEntry;

GRANT INSERT,UPDATE
ON InvoiceLineItems
TO PaymentEntry;

ALTER ROLE db_datareader ADD MEMBER PaymentEntry;
```

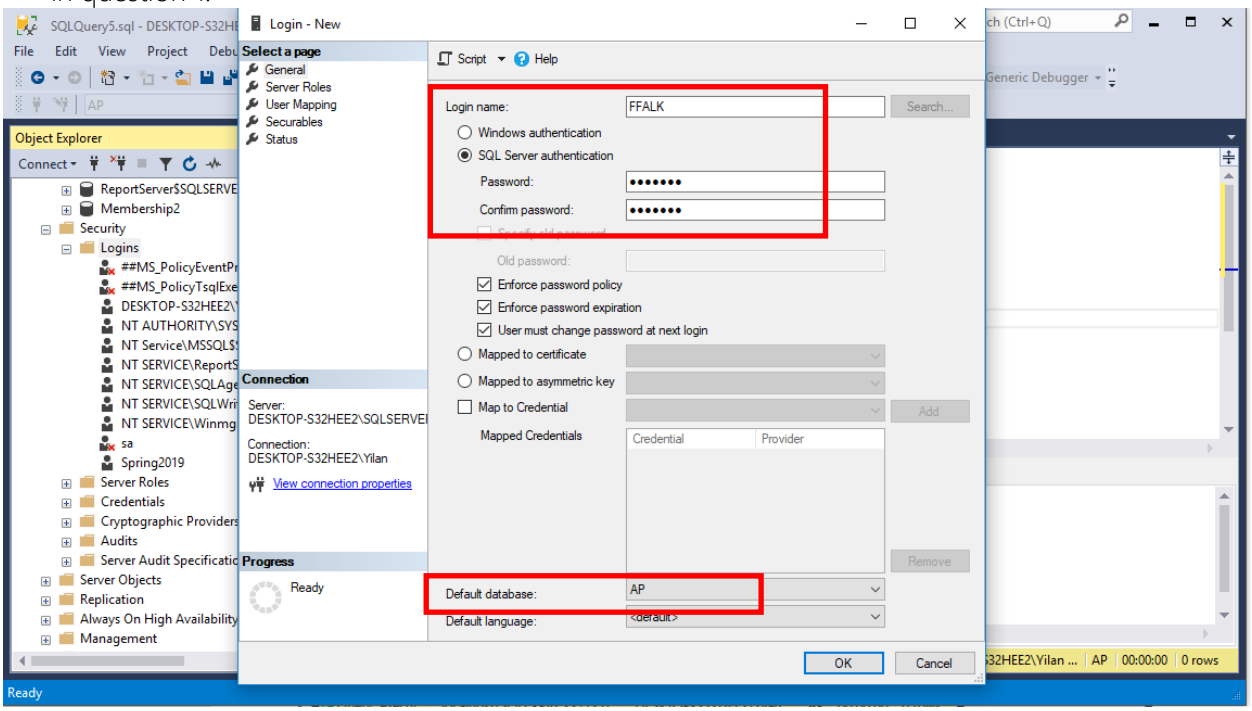


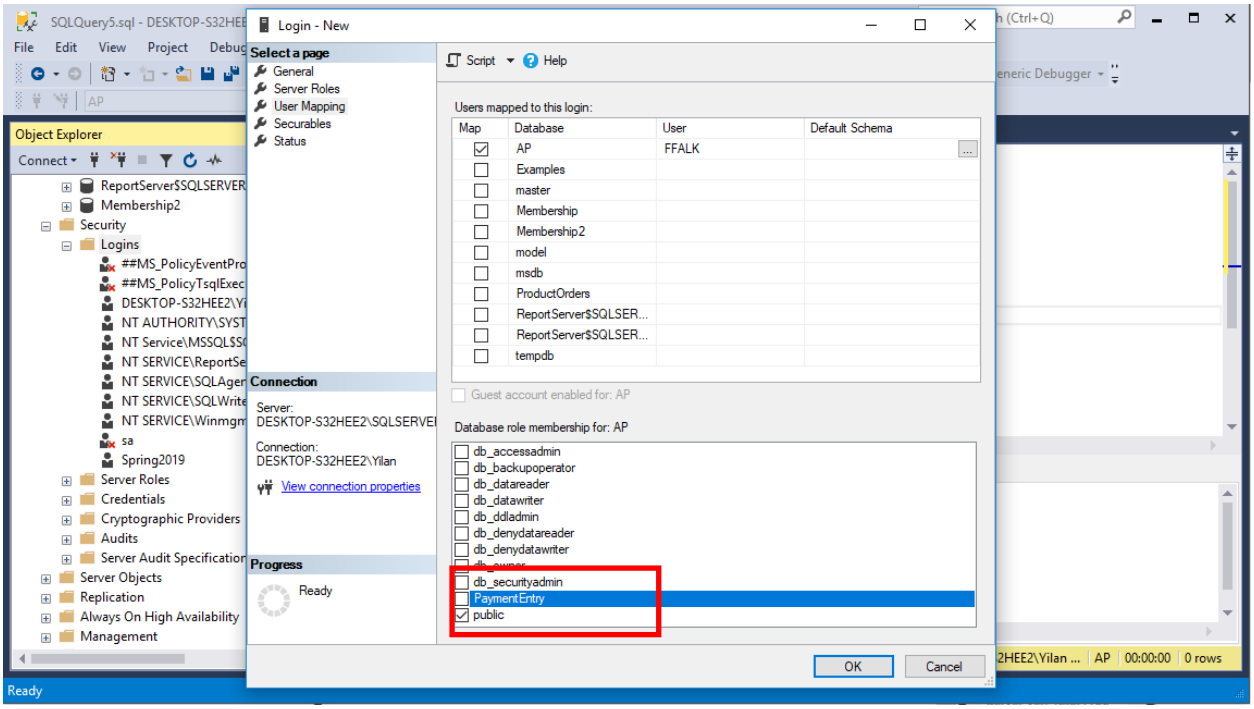
2. Write a script that (1) creates a login ID named "Spring2019" with the password "123456"; (2) sets the default database for the login to the AP database; (3) creates a user named "Aaron" for the login; and (4) assigns the user to the PaymentEntry role you created in question 1.

```
USE AP;
CREATE LOGIN Spring2019 WITH PASSWORD = '123456',
    DEFAULT_DATABASE = AP;

CREATE USER Aaron FOR LOGIN Spring2019;

ALTER ROLE PaymentEntry ADD MEMBER Aaron;
```



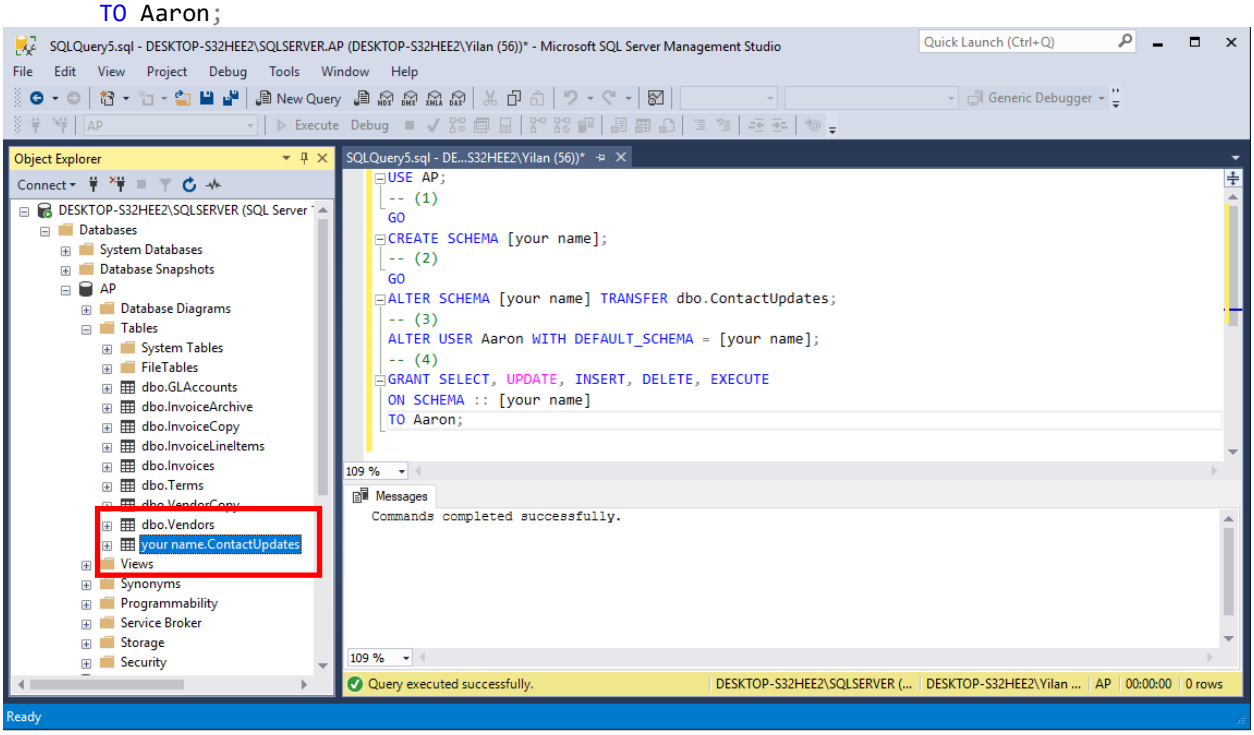
3. Using the Management Studio, create a login ID named "FFALK" with the password "fff1919" and set the default database to the AP database. Then, grant the login ID access to the AP database, create a user for the login ID named "Falk" and assign the user to the PaymentEntry role you created in question 1.





4. Write a script that (1) creates a schema named as your own name, (2) transfers the table named ContactUpdates from the dbo schema to your schema, (3) assigns the Admin schema as the default schema for the user named Aaron that you created in question 2, (4) grants all standard privileges except for REFERENCES and ALTER to Aaron for the your schema.

```
USE AP;
-- (1)
GO
CREATE SCHEMA [your name];
-- (2)
GO
ALTER SCHEMA [your name] TRANSFER dbo.ContactUpdates;
-- (3)
ALTER USER Aaron WITH DEFAULT_SCHEMA = [your name];
-- (4)
GRANT SELECT, UPDATE, INSERT, DELETE, EXECUTE
ON SCHEMA :: [your name]
TO Aaron;
```



(You need to use your own name, instead of "[your name]")