

CSE 581 : INTRODUCTION TO DATABASE MANAGEMENT SYSTEMS**LAB : 11****DATE : 11/30/2022**

Q1) 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 Vendors and Invoices table, UPDATE and INSERT permission for the InvoiceLineItems table, and SELECT permission for all user tables.

Ans:

USE AP;

CREATE ROLE PaymentEntry;

GRANT UPDATE ON Vendors

TO PaymentEntry;

GRANT UPDATE ON Invoices

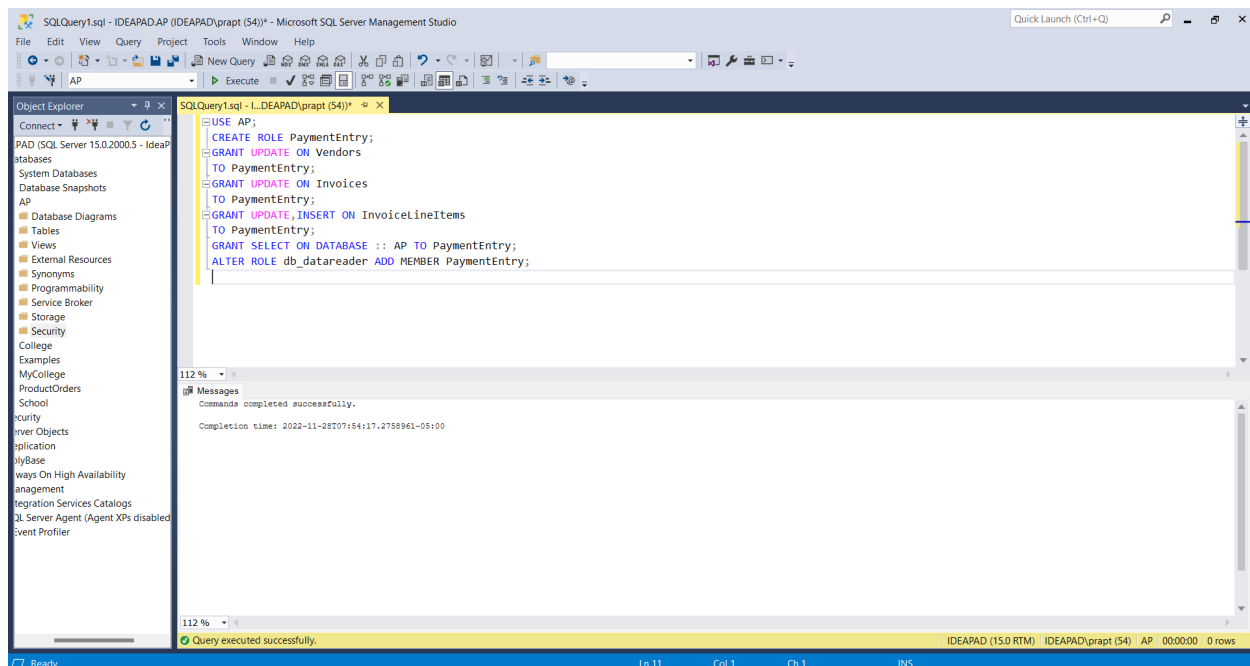
TO PaymentEntry;

GRANT UPDATE,INSERT ON InvoiceLineItems

TO PaymentEntry;

GRANT SELECT ON DATABASE :: AP TO PaymentEntry;

ALTER ROLE db_datareader ADD MEMBER PaymentEntry;



Comment: Here, USE AP is used to use the database AP I.e, perform the query in AP database.CREATE ROLE is used to create a new database role in the existing database that is

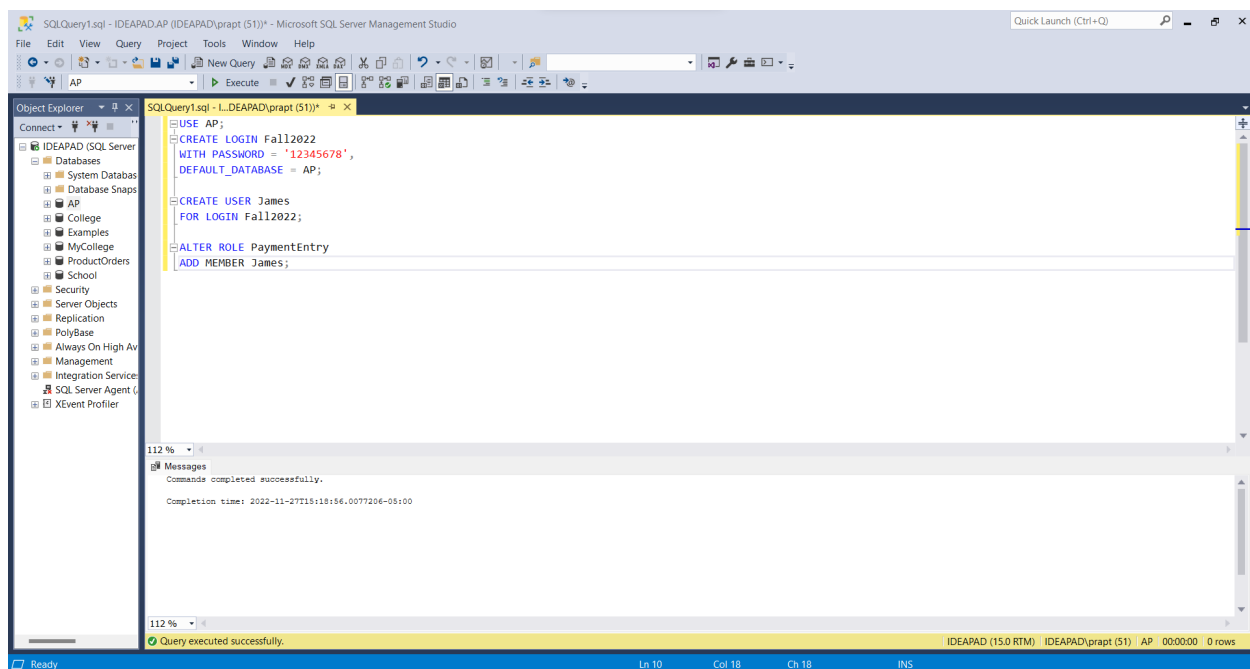
selected and the name of that role is given as PaymentEntry. GRANT is used to grant UPDATE permissions on the Vendors table and the Invoices table to the PaymentEntry and UPDATE and INSERT permissions on the InvoiceLineItems table. GRANT is used to grant SELECT permission for all tables in the AP database to the PaymentEntry table and ALTER ROLE adds this member to the database role.

Q2) Write a script that

- (1) creates a login ID named “Fall2022” with the password “12345678”;
- (2) sets the default database for the login to the AP database;
- (3) creates a user named “James” for the login; and
- (4) assigns the user to the PaymentEntry role you created in question 1.

Ans:

```
USE AP;  
CREATE LOGIN Fall2022  
WITH PASSWORD = '12345678',  
DEFAULT_DATABASE = AP;  
CREATE USER James  
FOR LOGIN Fall2022;  
ALTER ROLE PaymentEntry  
ADD MEMBER James;
```

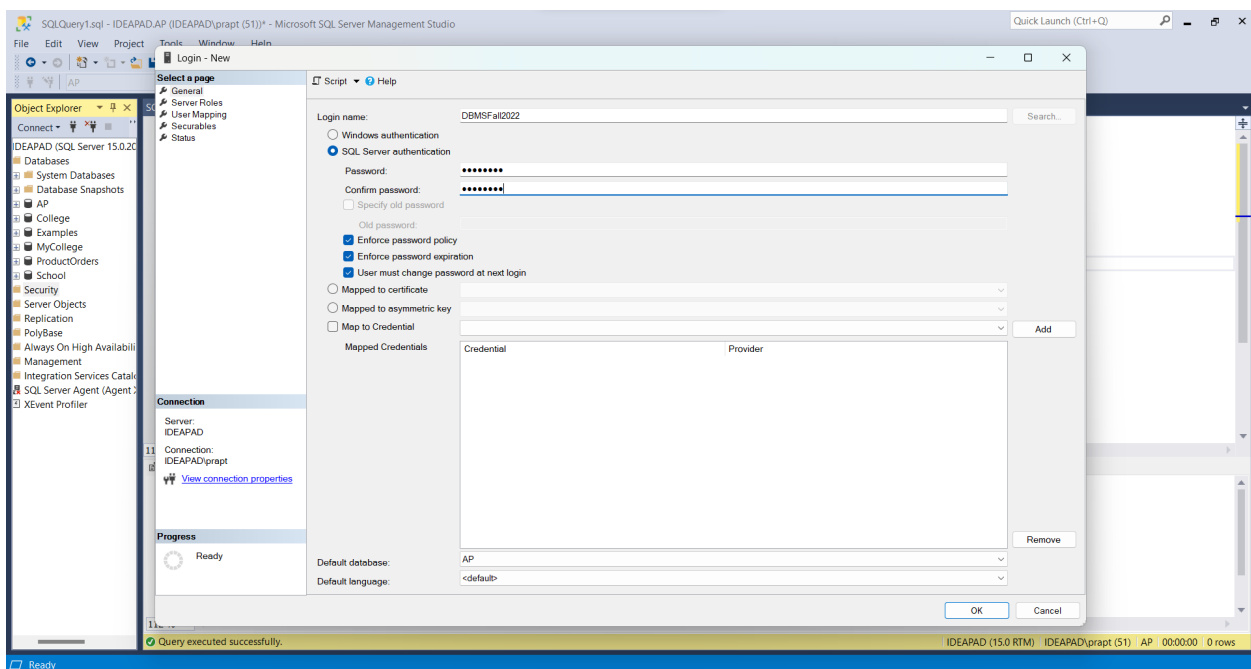


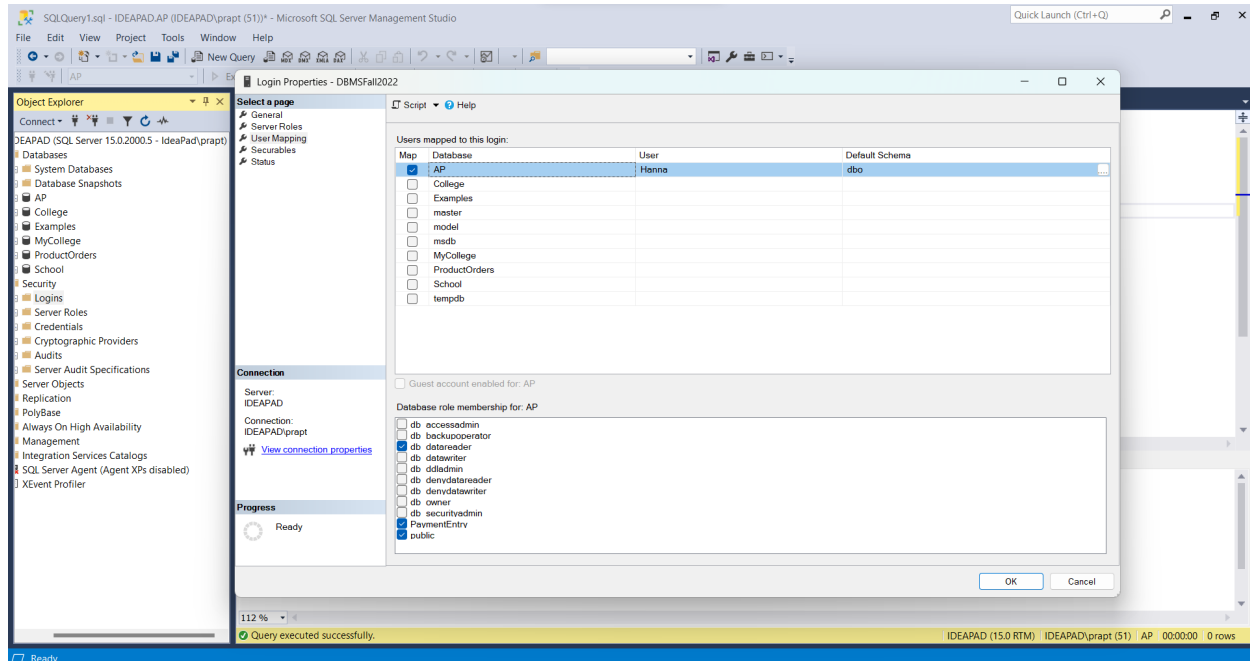
Comment: Here, USE AP is used to use the database AP I.e, perform the query in AP database. CREATE LOGIN is used to create a login id for a role that it is finally assigned to. Fall2022 is

the login name given and WITH PASSWORD is used to create a password for that login name which is given as 12345678. DEFAULT DATABASE is used to set the default database for the login to the AP database. CREATE USER is used to add a user to the current database and is named as James for the Fall2022 Login id. ALTER ROLE is used to add the member James to the database role PaymentEntry.

Q3) Using the Management Studio (do not write a query), create a login ID named “DBMSFall2022” with the password “Fall2022” 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 “Hanna” and assign the user to the PaymentEntry role you created in question 1.

Ans:





Comment: A new login is created in the AP database for the PaymentEntry role assigned to the user named Hanna using the object explorer and the Login window in the SQL Server Management Studio.

Q4) Write a script that

- (1) creates a schema named as your own name,
- (2) transfer the table named ContactUpdates from the dbo schema to your schema,
- (3) assign the Admin schema as the default schema for the user-named 'James' that you created in question 2,
- (4) grants all standard privileges except for REFERENCES and ALTER to 'James' for your schema.

Ans:

USE AP;

GO

CREATE SCHEMA PraptiOza;

GO

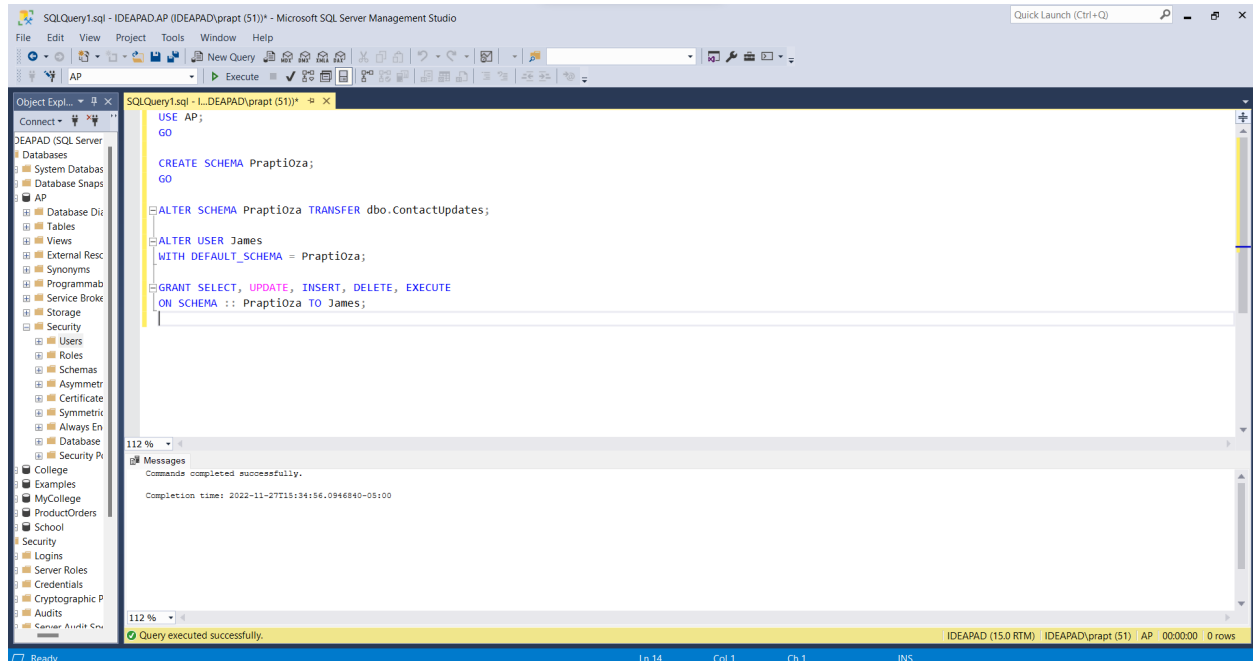
ALTER SCHEMA PraptiOza TRANSFER dbo.ContactUpdates;

ALTER USER James

WITH DEFAULT_SCHEMA = PraptiOza;

GRANT SELECT, UPDATE, INSERT, DELETE, EXECUTE

ON SCHEMA :: PraptiOza TO James;



Comment: Here, USE AP is used to use the database AP I.e, perform the query in AP database. CREATE SCHEMA is used to create a schema in the current database and is named as my name. ALTER SCHEMA is used to transfer data from the ContactUpdates table to the newly created schema using TRANSFER. ALTER USER is used to assign the Admin schema as the default schema for James. GRANT is used to grant SELECT, UPDATE, INSERT, DELETE, and EXECUTE permissions to James for the schema named PraptiOza.

Remarks: This lab is focused on concepts related to database security for authentication and authorization like creating new users and granting different types of permissions, creating database roles and assigning users or groups, creating roles and assigning login credentials.