**Lab 11: Server Security**

1. Sol:

Here is a script that creates a user-defined database role named PaymentEntry in the AP database and gives 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.

USE AP;

CREATE ROLE PaymentEntry;

GRANT UPDATE

ON AP.dbo.Invoices

TO PaymentEntry;

GRANT UPDATE

ON AP.dbo.Vendors

TO PaymentEntry;

GRANT UPDATE,INSERT

ON AP.dbo.InvoiceLineItems

TO PaymentEntry;

ALTER ROLE db\_datareader ADD MEMBER PaymentEntry;

Here is the screenshot of the result obtained after executing the above query.

Graphical user interface, application

Description automatically generated

1. Sol:

Here is a script that creates a login ID named “Fall2020” with the password “123456”; sets the default database for the login to the AP database; creates a user named “Robert” for the login; and assigns the user to the PaymentEntry role we created in question 1.

USE AP;

CREATE LOGIN Fall2020 WITH PASSWORD = '123456',

DEFAULT\_DATABASE = AP;

CREATE USER Robert FOR LOGIN Fall2020;

ALTER ROLE PaymentEntry ADD MEMBER Robert;

Here is the screenshot of the result obtained after executing the above query.

Graphical user interface, application, Word

Description automatically generated

1. Sol:

Here are the screenshots obtained using the Management Studio, that creates a login ID named “DBMSFALL2020” with the password “Fall0202” and sets the default database to the AP database and then grants the login ID access to the AP database, also creates a user for the login ID named “Fall” and assigns the user to the PaymentEntry role we created in question 1.

Graphical user interface, application, Word

Description automatically generated

Graphical user interface, application

Description automatically generated

1. Sol:

Here is a script that creates a schema named as my own name i.e., SatwikHosamani and transfers the table named ContactUpdates from the dbo schema to your schema and assigns the Admin schema as the default schema for the user named Robert that we created in question 2 and also grants all standard privileges except for REFERENCES and ALTER to Robert for our schema.

USE AP;

GO

CREATE SCHEMA SatwikHosamani;

GO

ALTER SCHEMA SatwikHosamani TRANSFER dbo.ContactUpdates;

ALTER USER Robert WITH DEFAULT\_SCHEMA = SatwikHosamani;

GRANT SELECT, UPDATE, INSERT, DELETE, EXECUTE

ON SCHEMA :: SatwikHosamani TO Robert;

Here is the screenshot of the result obtained after executing the above query.

A screenshot of a computer

Description automatically generated