CIS 552: Database Design

Lab Homework- 5

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Creating an Azure SQL Database Account:

I created a student account on Azure following the lab manual. Then I created an SQL database providing necessary details.

Set up the server: I created a new server with a unique name, selected the region and set the admin login credentials.

The details of the newly created SQL server database are displayed in the following screenshot:
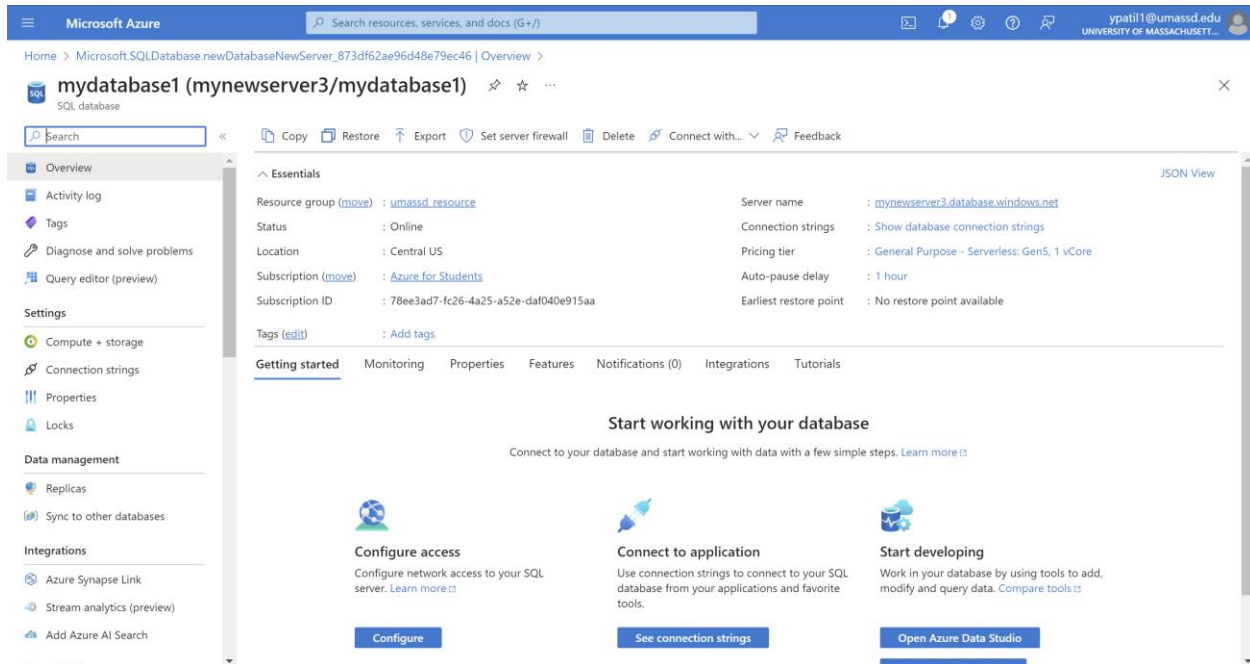
Then I navigated to the SQL database server settings, selected to set server firewall where I added my local IP address to the allowed list.

The SQL Server database is hence created on Azure Cloud.

Creating Tables and populating data using SSMS on local computer:

Connecting to Azure SQL Database from Local SSMS: I launched SSMS on my laptop and entered the SQL Azure SQL Database server name, chose SQL Server Authentication, and provided the admin login details.
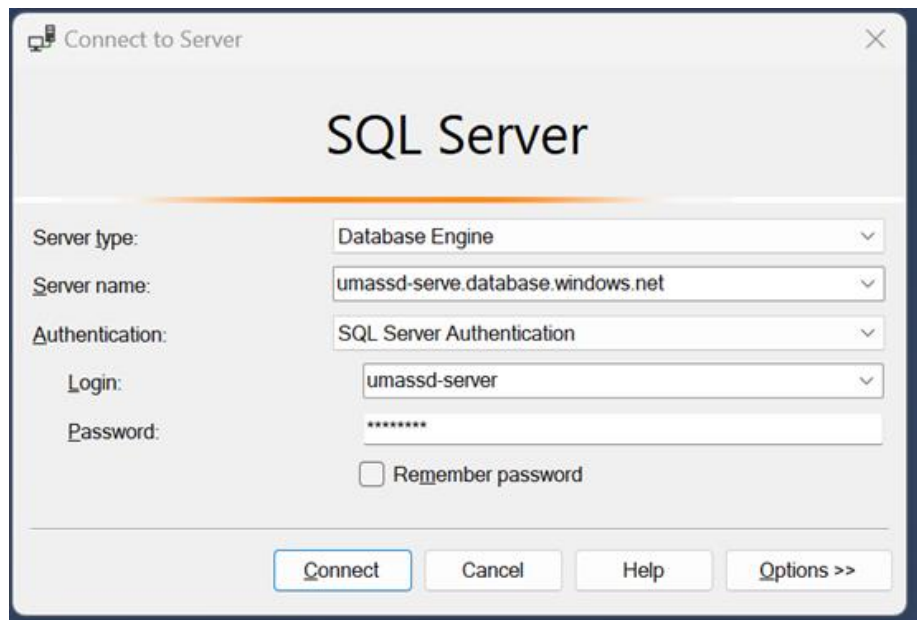
Linking local database to the Azure SQL Database: After selecting Database Engine, I entered details like server name, server authentication, and login credentials to connect to the cloud database.

Using COMPANY database to deploy:

I clicked on 'Deploy Database to Microsoft Azure SQL Database', which opened the 'Deployment Settings' window, where I entered the necessary login details to connect to the Azure Cloud SQL Server for database migration.
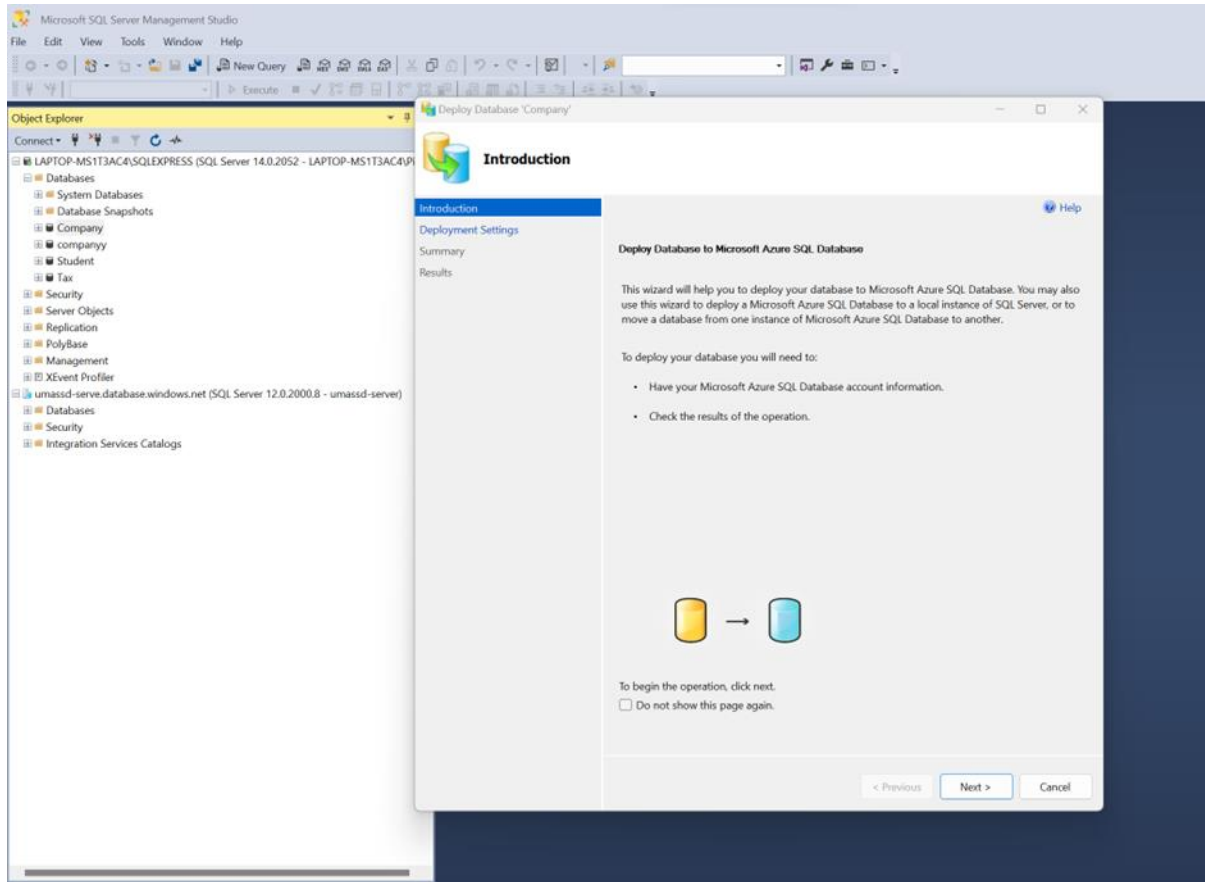
I specified the new database name to be migrated as 'Company12'.

Then I chose the SQL query to be executed on the 'Company12' database. The following screenshot shows the Select statement executed on the database on the cloud server.
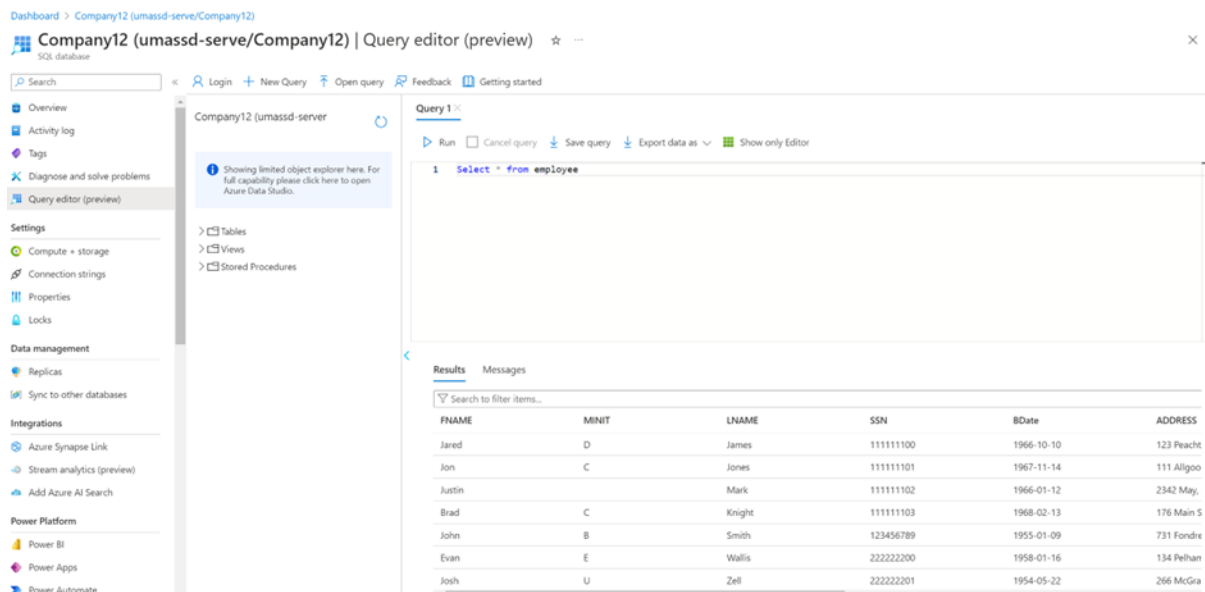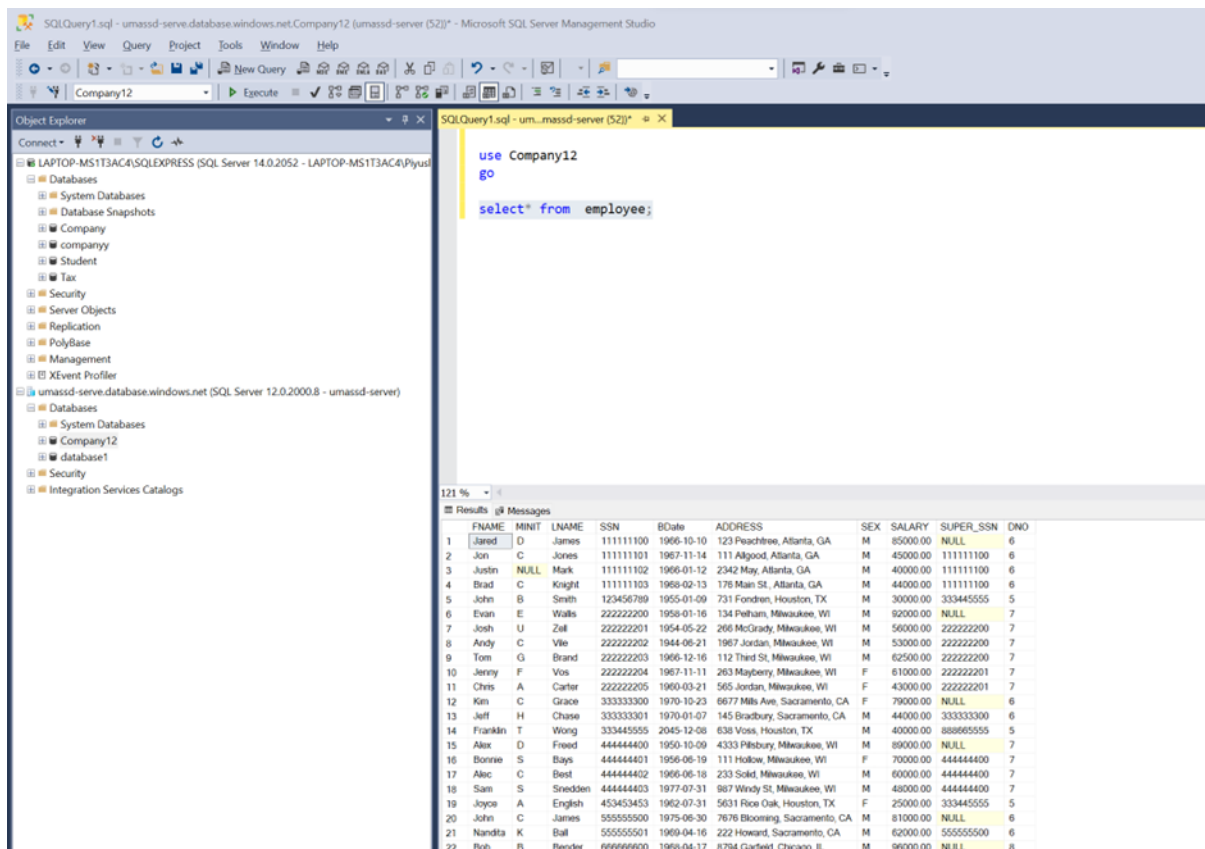
Creating new database from the local computer to cloud database:

Now, to create new tables and populate the data on the cloud, right click on the databases folder in the cloud and select 'New Database'.

I queried the data from the newly created 'EMPLOYEE' table within the Azure 'Company231' database. To do this, I navigated to 'Query editor (Preview)' and expanded the Tables section. Under the Tables section, I located the 'EMPLOYEE' table.
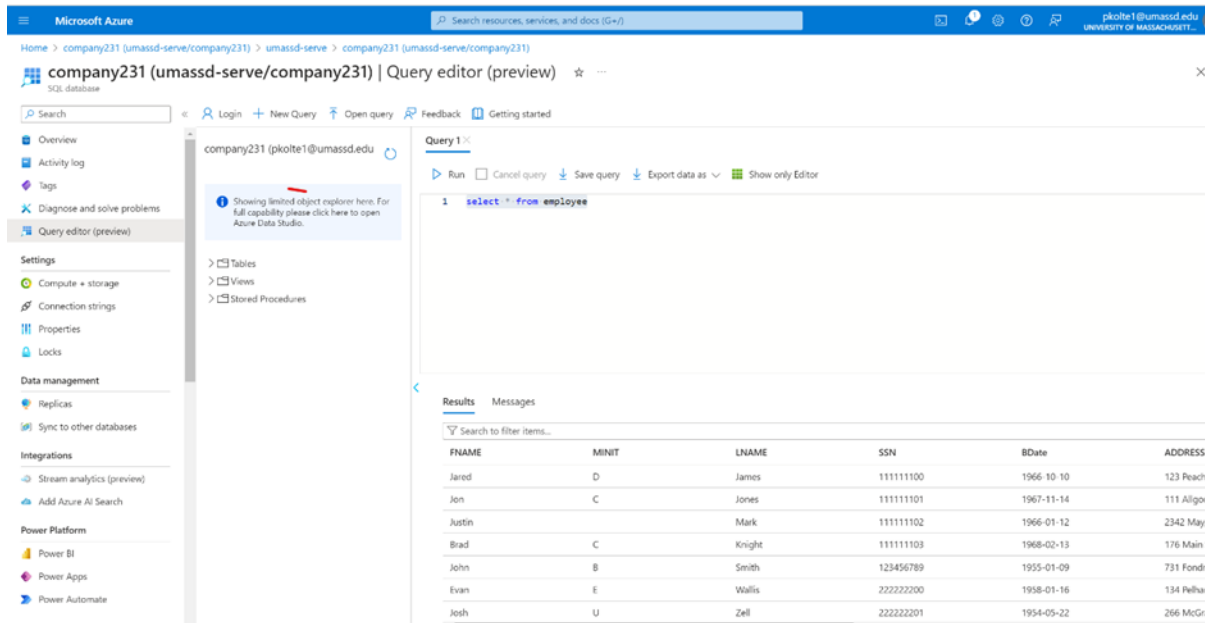
I executed a select query on the 'EMPLOYEE' table in Azure, just as I would in SQL Server Management Studio (SSMS).

Conclusion:

In this homework assignment, I successfully set up an Azure SQL Database server, configured firewall settings to allow access from my local machine, and connected to the server using SQL Server Management Studio (SSMS). I also exported an existing local database and imported it into the Azure SQL Database server.

This exercise clearly demonstrates the ease and efficiency of using cloud services for database management and highlights the significant advantages of Azure's Platform for scalable and accessible database solutions.

Additionally, I explored key features of Azure SQL Database, such as creating new tables, inserting data, and executing queries directly within the cloud environment.

Through this process, I gained valuable practical experience in cloud database administration and strengthened my understanding of cloud computing concepts, particularly in database services. This hands-on experience also improved my ability to manage databases in a cloud environment, ensuring data accessibility and scalability.