* **TDE : -**

To implement **Transparent Data Encryption (TDE)** in SQL Server or Azure SQL Database, the steps are as follows:

1️⃣ **Create a Database Master Key (DMK)** (You have already done this).

USE master;

GO

CREATE MASTER KEY ENCRYPTION BY PASSWORD = 'YourStrongPassword123!';

GO

2️⃣ **Create a Certificate** protected by the master key (**This is the next step!**).

CREATE CERTIFICATE TDE\_Certificate

WITH SUBJECT = 'TDE Encryption Certificate';

GO

3️⃣ **Create a Database Encryption Key (DEK)** using the certificate.

USE YourDatabaseName;

GO

CREATE DATABASE ENCRYPTION KEY

WITH ALGORITHM = AES\_256

ENCRYPTION BY SERVER CERTIFICATE TDE\_Certificate;

GO

Verify –

SELECT

name,

is\_encrypted

FROM sys.databases

WHERE name = 'YourDatabaseName';

4️⃣ **Turn on TDE** to encrypt the database.

BACKUP CERTIFICATE TDE\_Certificate

TO FILE = 'C:\Backup\TDE\_Certificate.cer'

WITH PRIVATE KEY (

FILE = 'C:\Backup\TDE\_Certificate.pvk',

ENCRYPTION BY PASSWORD = 'YourBackupPassword123!'

);

GO