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Create a new login authentication and user authorization using MS SQL Server

Safet Jahaj
CUNY College of Staten Island, safet.jahaj@csi.cuny.edu

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Safet Jahaj, Adjunct Lecturer

College of Staten Island, CUNY

MS SQL Server supports two authentication modes

- Windows authentication (default)
- Mixed (Windows authentication and SQL Server authentication)

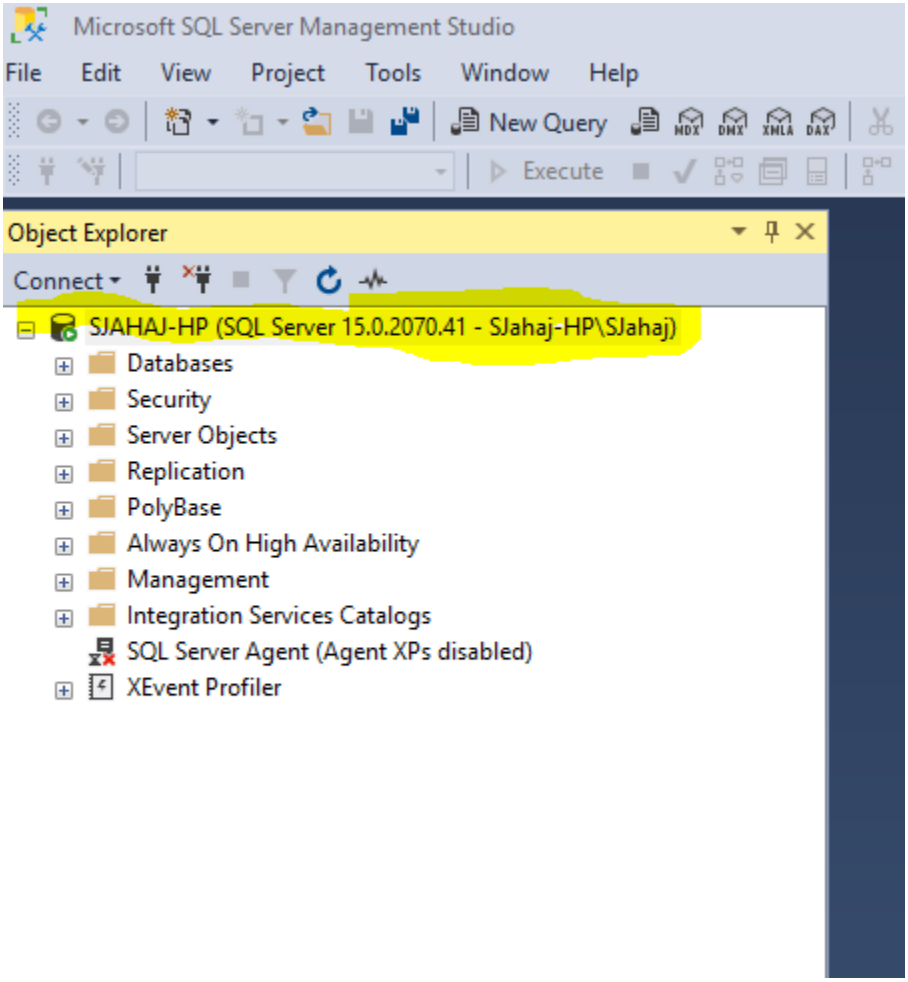
This document describes the steps on creating a new login authentication using the mixed mode, and adding user authorizations.

MS SQL Server Management Studio is used in the first part to complete the task, whereas in the second part the DDL (Data Definition Language) and DCL (Data Control Language) commands are used to create a new login authentication and add user authorizations.

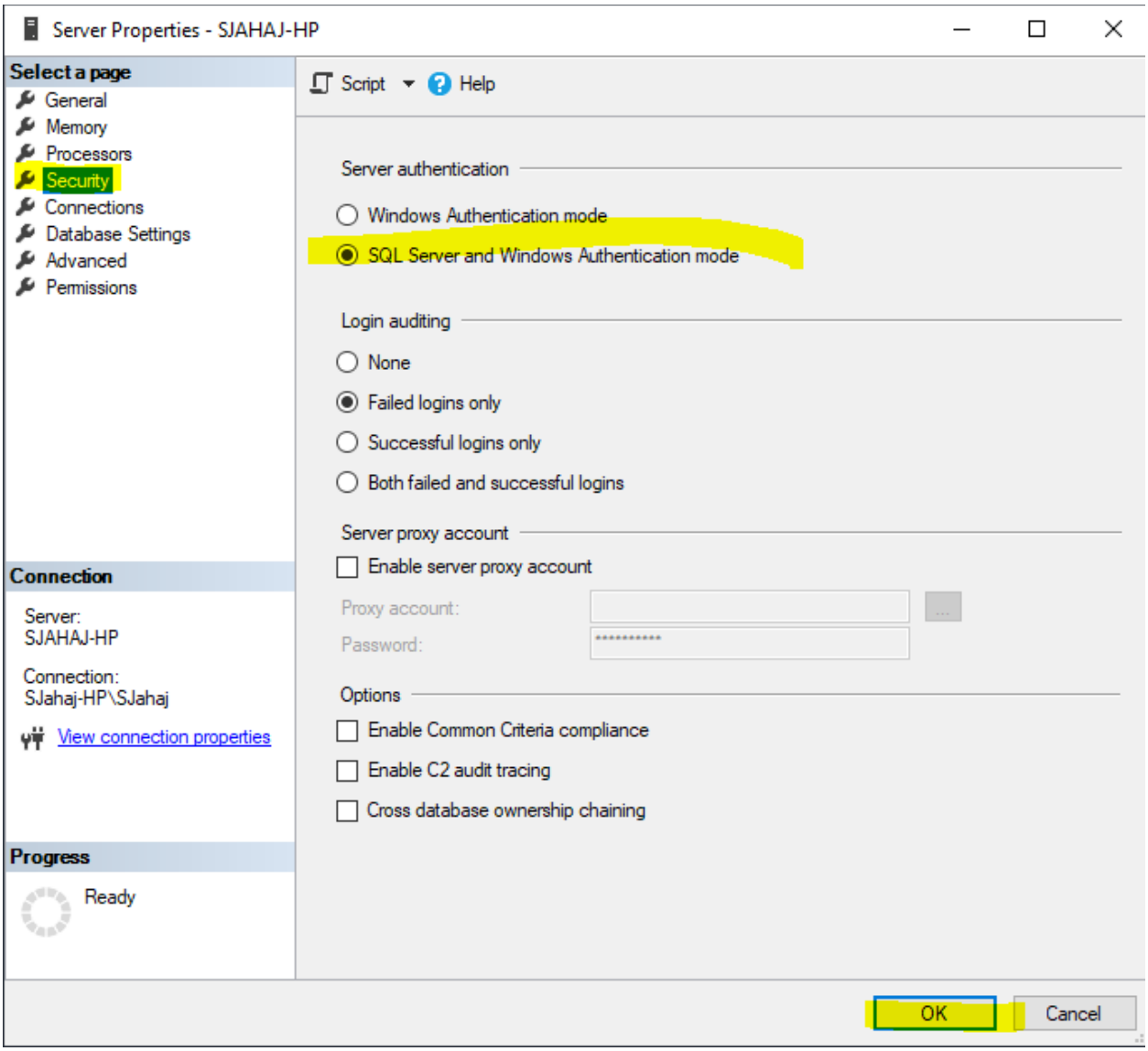
Part I

1. Launch Microsoft SQL Server Management Studio

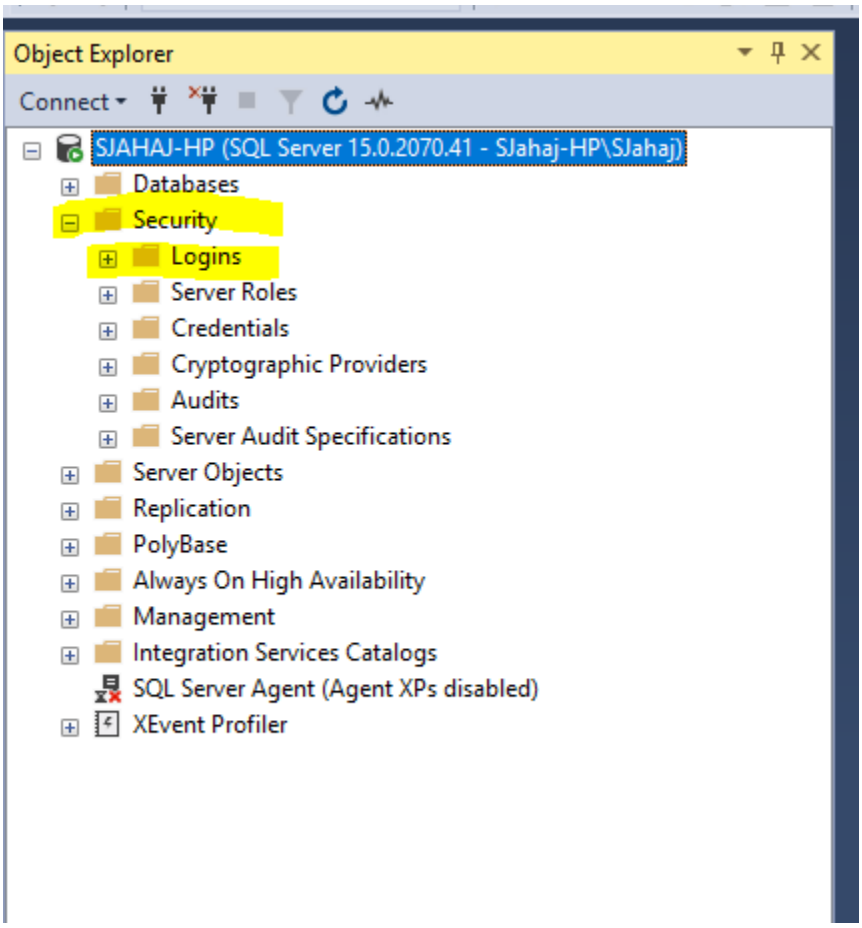
2. In the Object Explorer, right click on the server name, then go to Properties



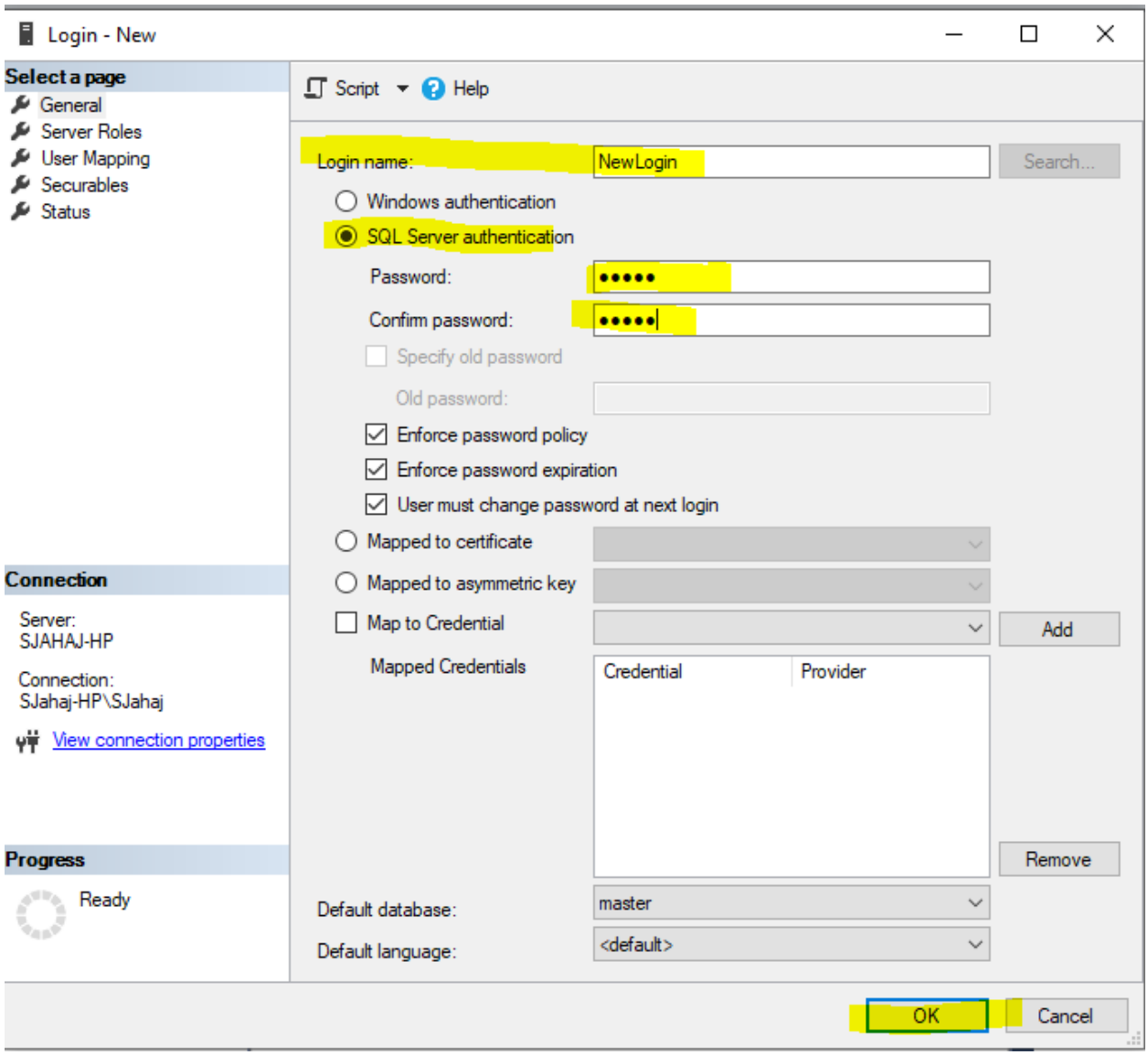
3. Change the server authentication mode to mixed (SQL Server and Windows Authentication mode), then click OK

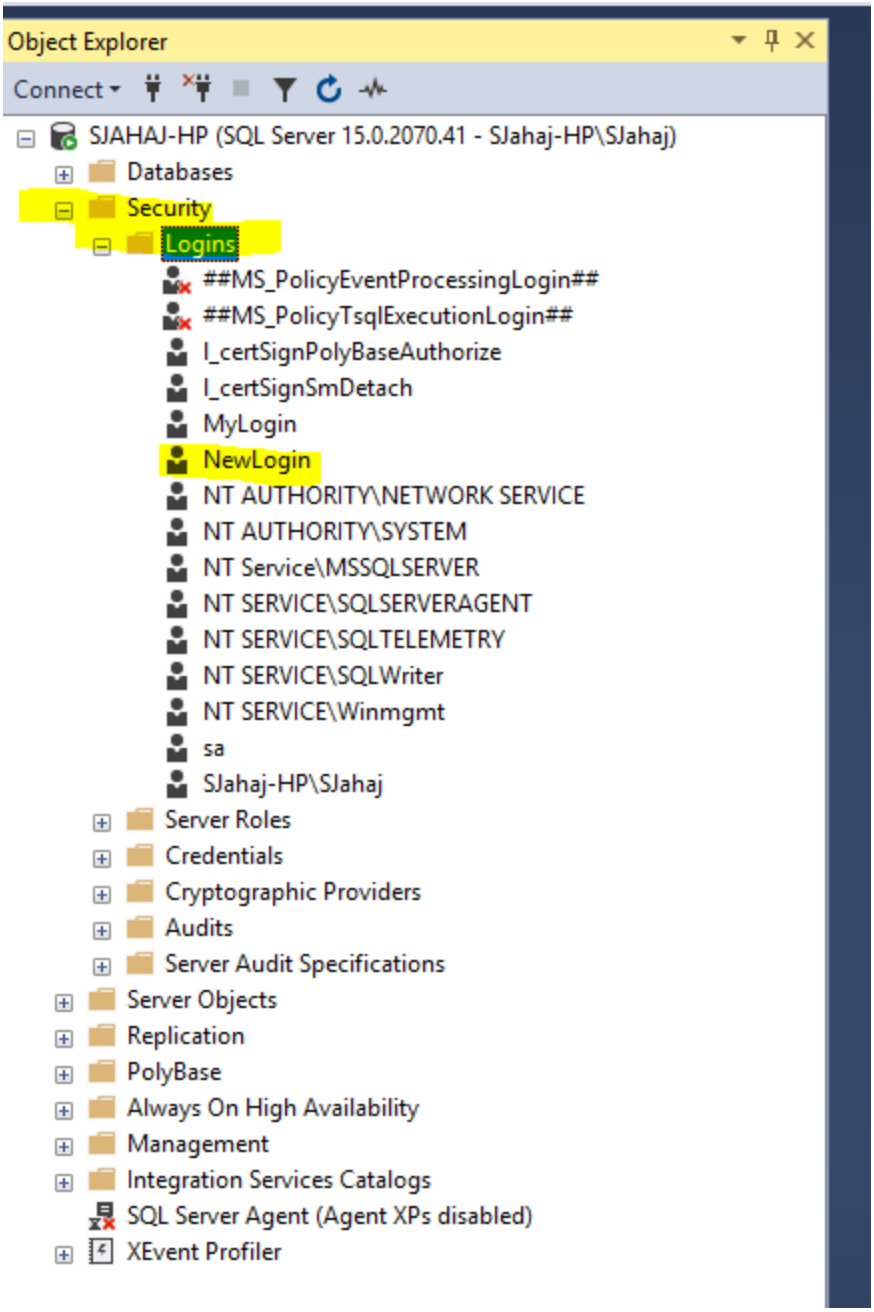


4. Expand Security, right click on Logins, then select New Login …

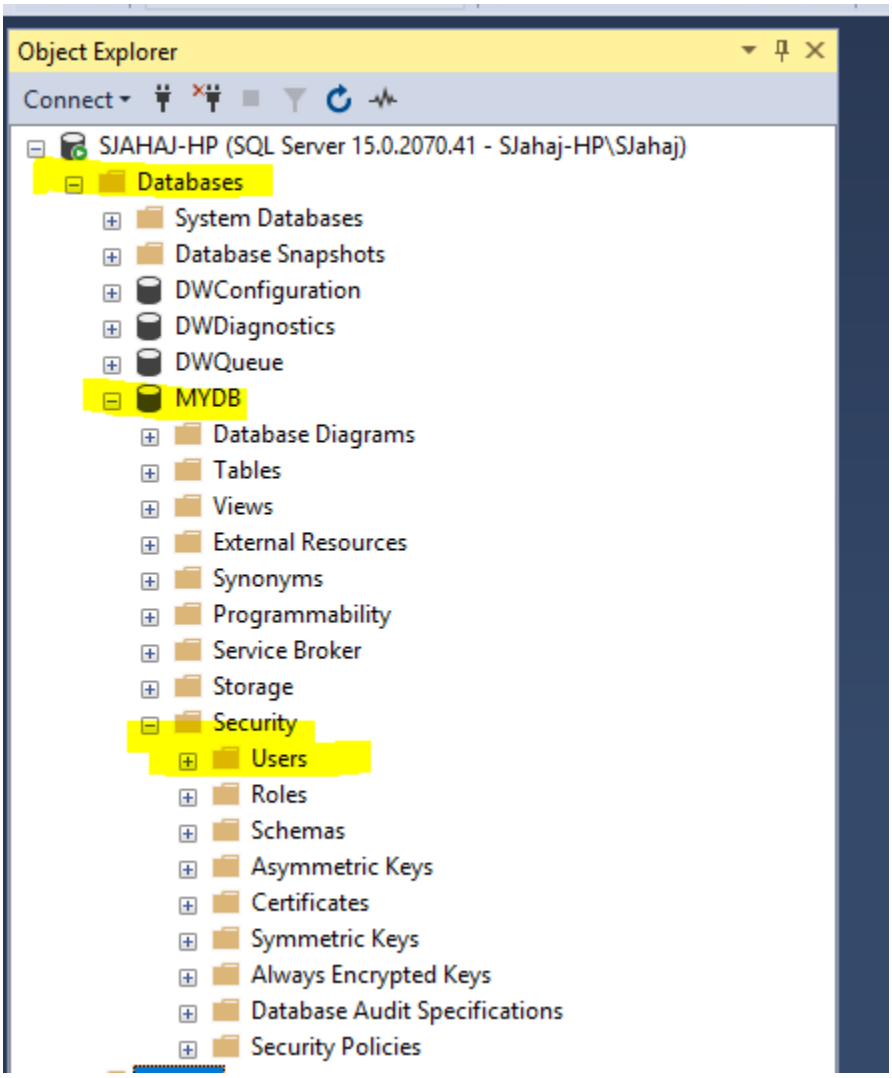


5. Enter the login name, select SQL Server authentication, enter a temporary password, then click OK

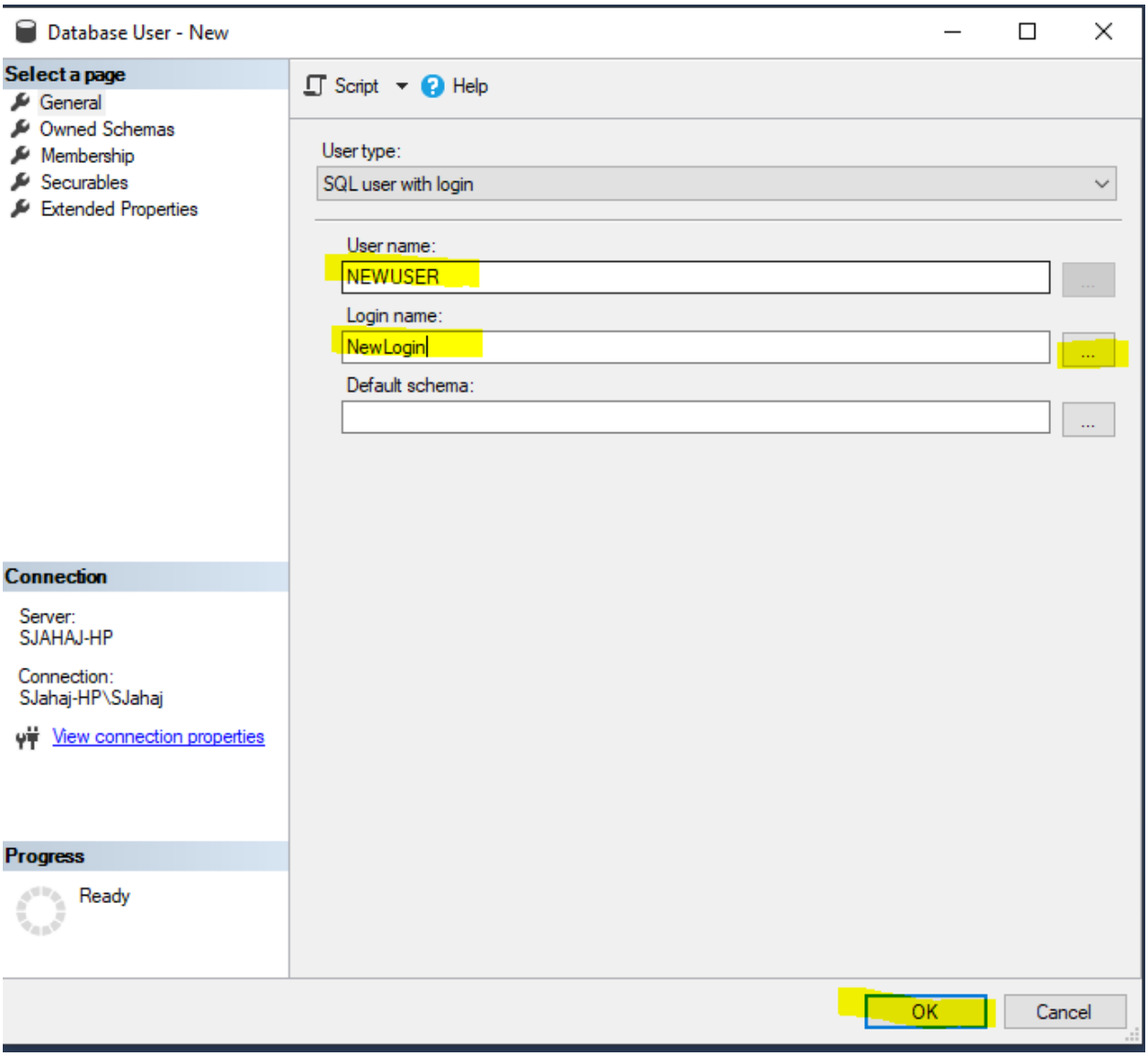



Object Explorer
Connect
SJAHAJ-HP (SQL Server 15.0.2070.41 - SJahaj-HP\SJahaj)
Databases
Security
Logins
##MS_PolicyEventProcessingLogin##
##MS_PolicyTsqlExecutionLogin##
I_certSignPolyBaseAuthorize
I_certSignSmDetach
MyLogin
NewLogin
NT AUTHORITY\NETWORK SERVICE
NT AUTHORITY\SYSTEM
NT Service\MSSQLSERVER
NT SERVICE\SQLSERVERAGENT
NT SERVICE\SQLTELEMETRY
NT SERVICE\SQLWriter
NT SERVICE\Winmgmt
sa
SJahaj-HP\SJahaj
Server Roles
Credentials
Cryptographic Providers
Audits
Server Audit Specifications
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler

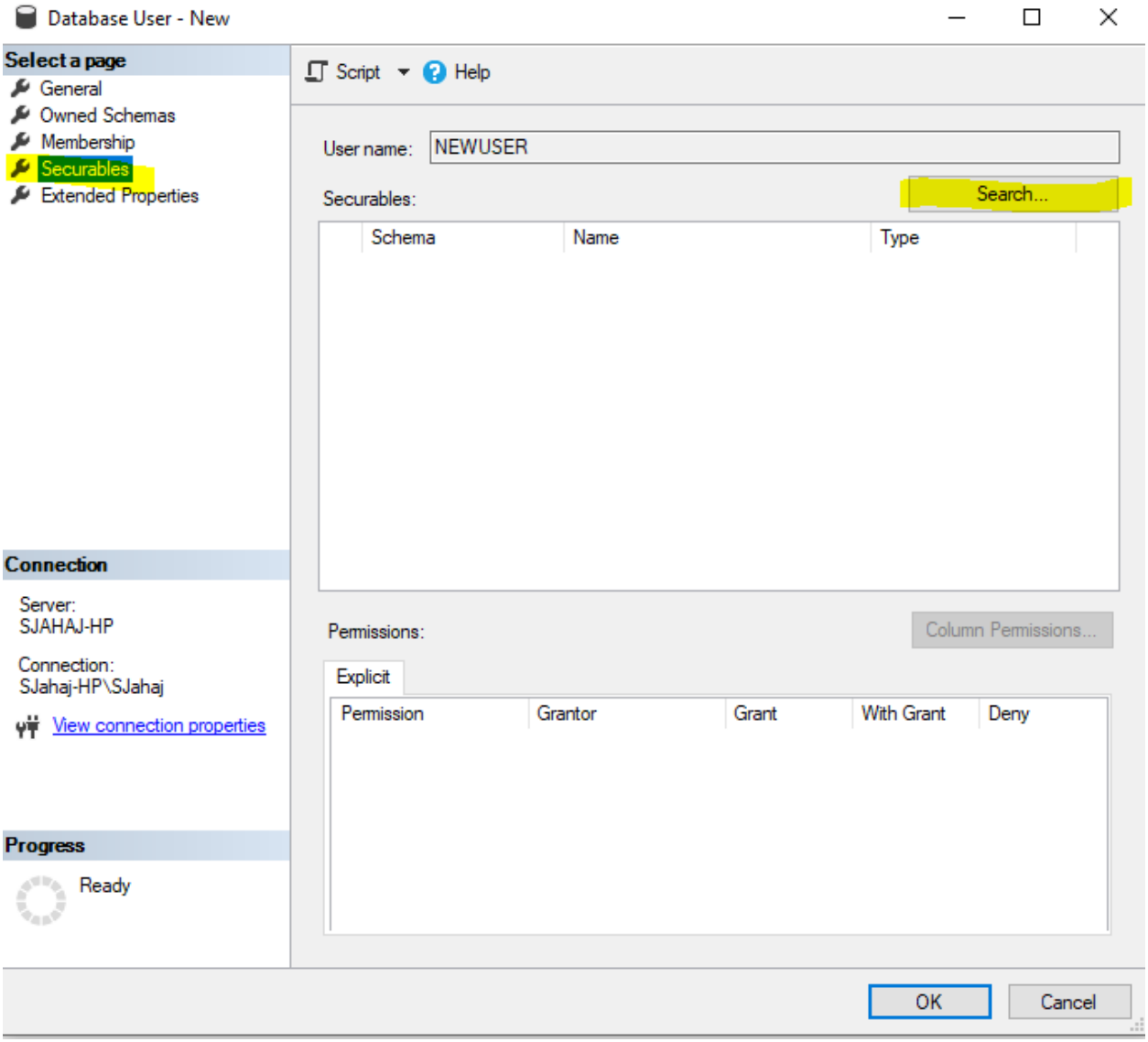
6. Expand Databases, then expand your custom DB, then expand Security

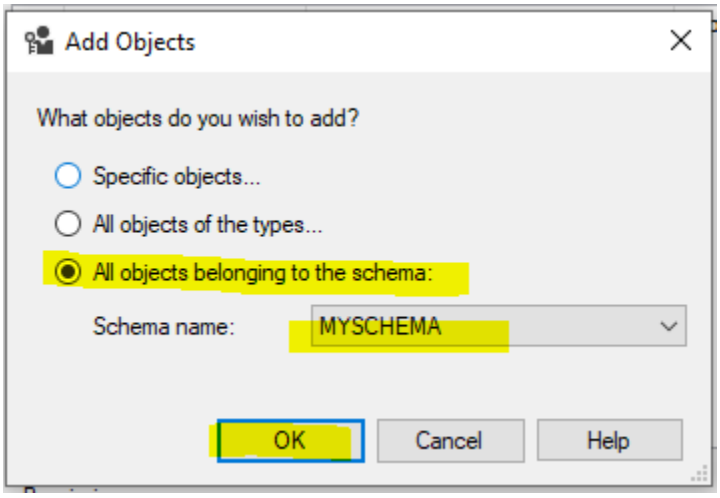


7. Right click on Users, then select New User …
   Enter user name, for Login name enter the newly created login name (or click on the button to the right of the login name, to identify the login name), then click OK

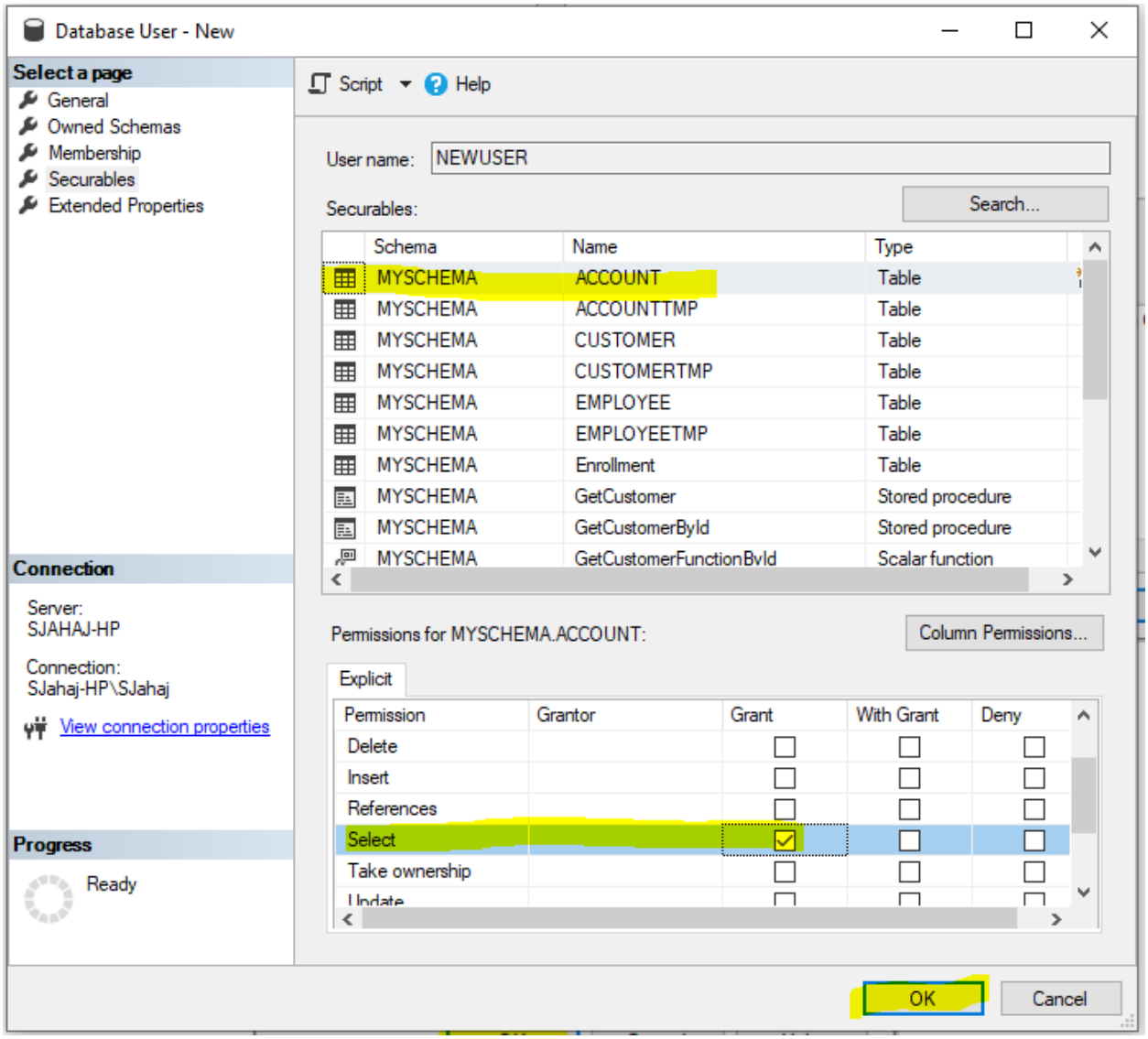


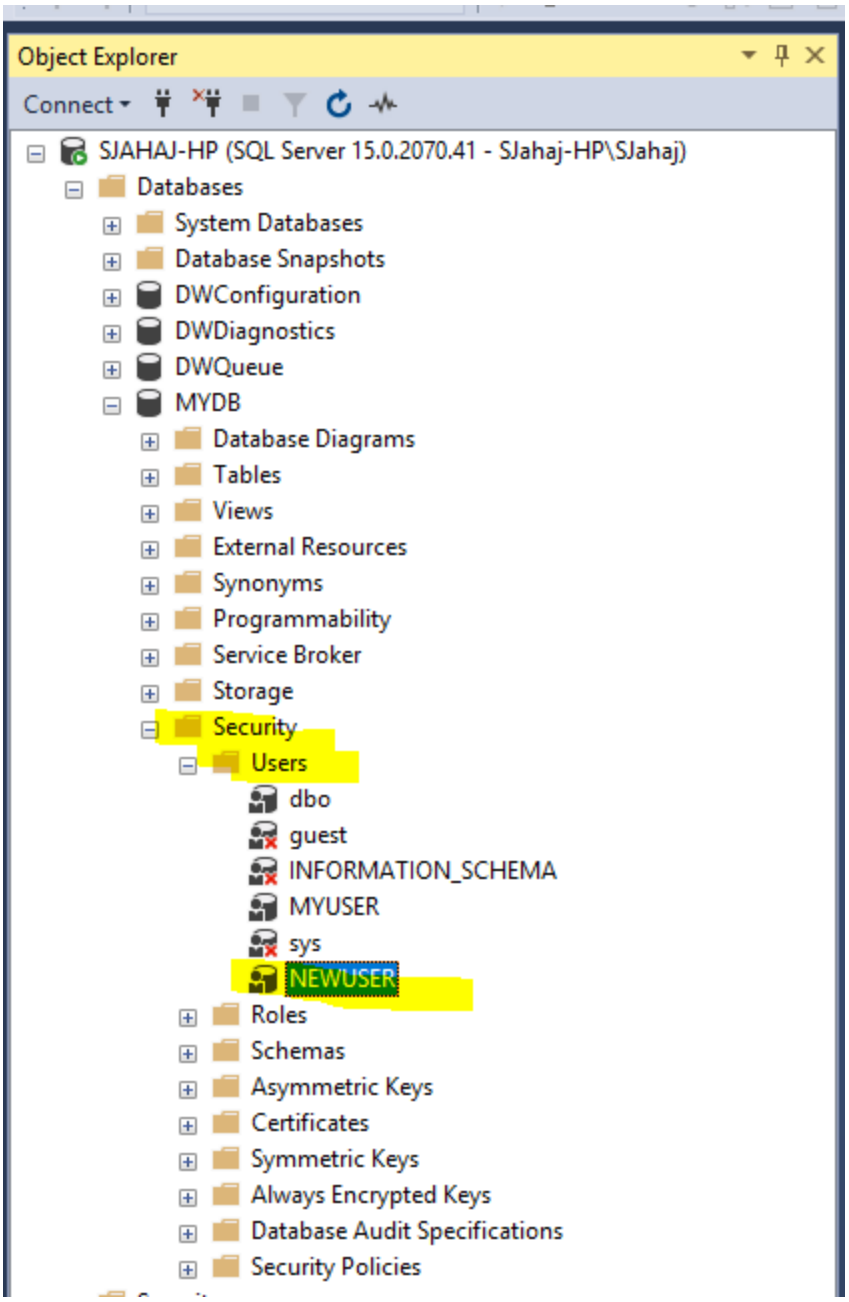
8. Select Securables on the same dialog, then click on Search …



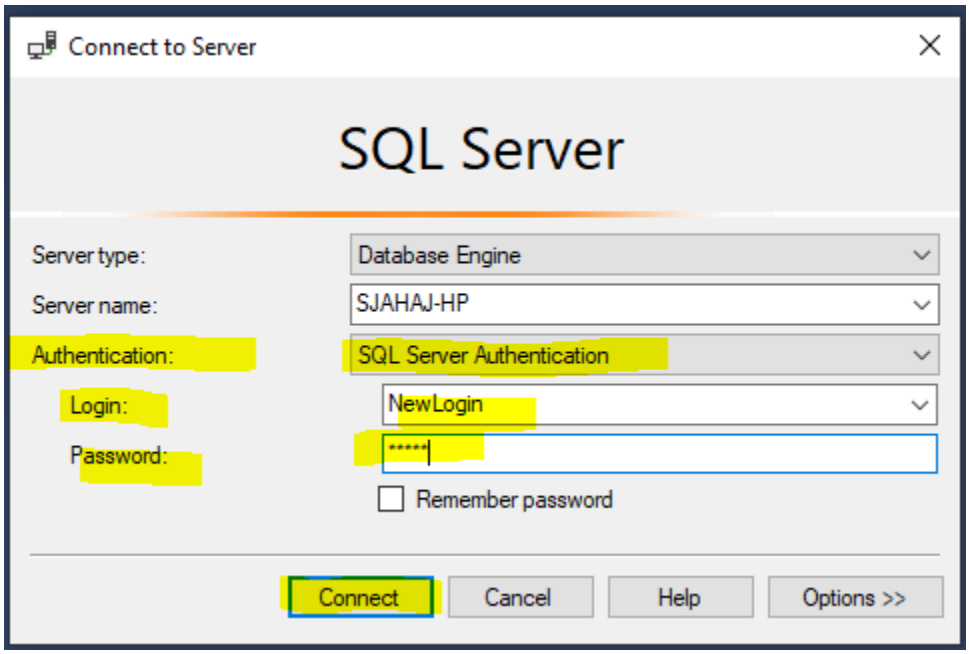


9. Select the list of Securables and their permissions, then click OK

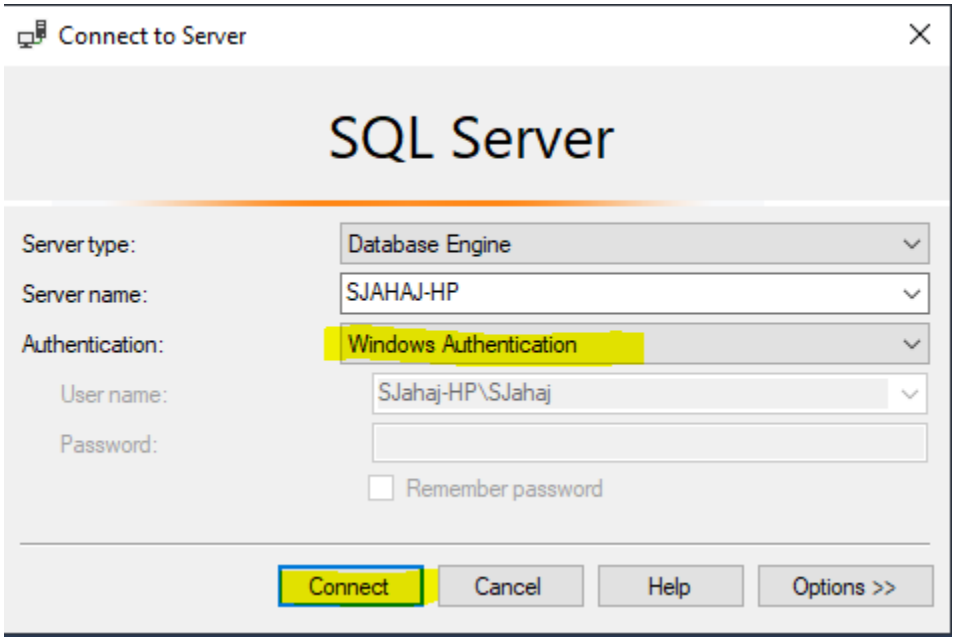



Object Explorer
Connect
SJAHAJ-HP (SQL Server 15.0.2070.41 - SJahaj-HP\SJahaj)
Databases
System Databases
Database Snapshots
DWConfiguration
DWDiagnostics
DWQueue
MYDB
Database Diagrams
Tables
Views
External Resources
Synonyms
Programmability
Service Broker
Storage
Security
Users
dbo
guest
INFORMATION_SCHEMA
MYUSER
sys
NEWUSER
Roles
Schemas
Asymmetric Keys
Certificates
Symmetric Keys
Always Encrypted Keys
Database Audit Specifications
Security Policies

10. In the Object Explorer, right click on the server name, then select Connect …
    Change the Authentication mode to SQL Server Authentication, and then enter the new login name and password created from step 5



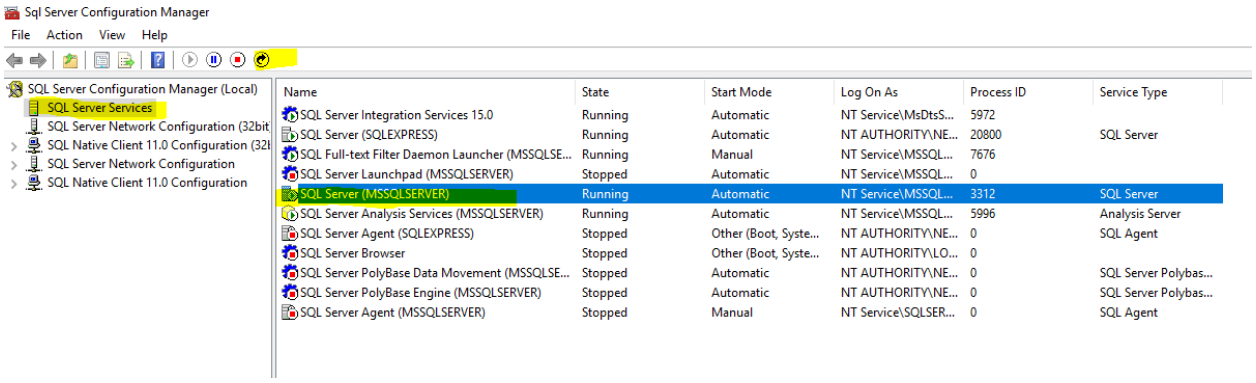
- If the connection fails, connect with Windows Authentication



- Open a new SQLQuery window (right click on your custom DB, then select New Query), then execute the following statements

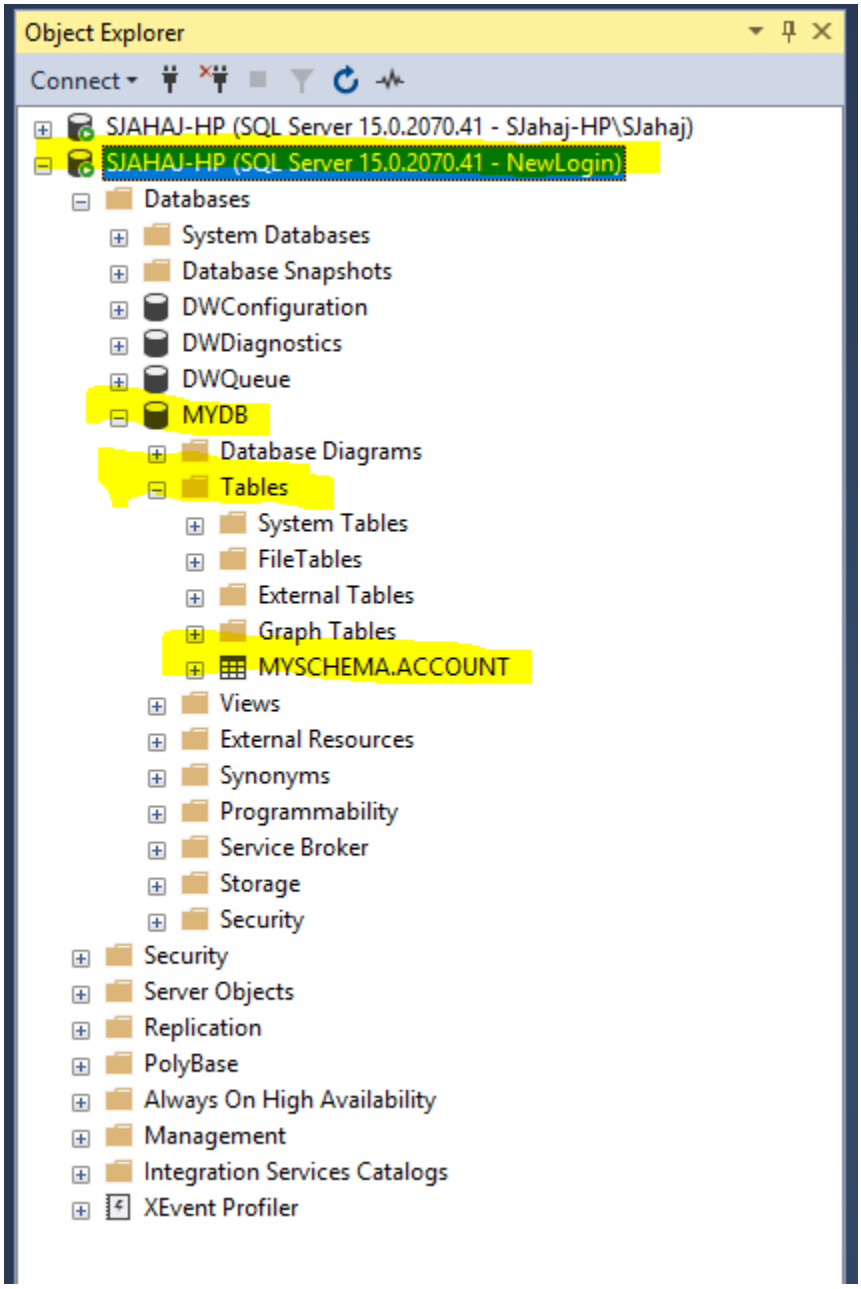
  sp_configure 'show advanced options', 1;
  go
  reconfigure
  go
  sp_configure 'user connections', 0
  go
  reconfigure
  go

- Restarting MS SQL Server service is required. Shutdown Microsoft SQL Management Studio.
- Start SQL Server Configuration Manager, restart the service (menu option Action →Restart)



- Start Microsoft SQL Server Management Studio, connect as shown in step 10

11. Verify the list of securables from step 9 are available



Part II

DDL and DCL commands

In order to execute the commands successfully, the following DB objects should exist

Schema: MYSCHEMA
Tables: ACCOUNT, CUSTOMER, EMPLOYEE, and MAP

```
-- create login
CREATE LOGIN MYLOGIN WITH PASSWORD = '12345';

-- create user
CREATE USER MYUSER FOR LOGIN MYLOGIN;

-- assign grants
GRANT SELECT ON MYSCHEMA.ACCOUNT TO MYUSER;
GRANT INSERT ON MYSCHEMA.CUSTOMER TO MYUSER;
GRANT UPDATE ON MYSCHEMA.EMPLOYEE TO MYUSER;
GRANT SELECT ON MYSCHEMA.MAP TO MYUSER;
GRANT DELETE ON MYSCHEMA.MAP TO MYUSER;
```

-- start the MS SQL Server Management Studio, change the Authentication mode to SQL Server Authentication, and then enter the new login name and password created from above.

```
-- revoke grants
REVOKE SELECT ON MYSCHEMA.MAP FROM MYUSER;
REVOKE DELETE ON MYSCHEMA.MAP FROM MYUSER;
REVOKE UPDATE ON MYSCHEMA.EMPLOYEE FROM MYUSER;
REVOKE INSERT ON MYSCHEMA.CUSTOMER FROM MYUSER;
REVOKE SELECT ON MYSCHEMA.ACCOUNT FROM MYUSER;

-- drop user
DROP USER MYUSER;

-- drop login
DROP LOGIN MYLOGIN;
```