

# **Database Management Systems**

## **SQL Server Management Studio**



UNIVERSITY OF  
**MARYLAND**

---

**ROBERT H. SMITH**  
SCHOOL OF BUSINESS

DR. ADAM LEE

# Outline

- Introduction to Microsoft SQL Server
- SQL Integrated Development Environment (IDE)
  - SQL Server Management Studio
- Access SQL Server Off-Campus



UNIVERSITY OF  
MARYLAND

# Microsoft SQL Server

[www.microsoft.com/en-us/sql-server/](https://www.microsoft.com/en-us/sql-server/)

The screenshot shows the Microsoft SQL Server homepage. At the top, there's a navigation bar with the Microsoft logo, a search bar, and links for Data platform, Products, Downloads, Community, Developer, Partner, and All Microsoft. A blue banner at the top features a link to COVID-19 resources. Below the banner, a large image of server racks serves as the background for the main content area. In the center, the text "Introducing SQL Server 2019" is displayed in large white font. Below this, a paragraph describes the product's ability to transform business with a unified data platform, mentioning integrated Spark and Hadoop Distributed File System (HDFS). A "Learn more >" button is located in the bottom left corner of the main content area. At the very bottom, there's a blue footer bar with the text "Three reasons why SQL Server customers continue to choose Azure >".

# How to Access SQL Server

- Use **SQL Server 2019** for consistency.
  - Other version is welcome but not encouraged.
- Access SQL Server 2019 on vSmith:
  - Execute: **SQL Server Management Studio**.
  - Easy-to-use graphical management tool for configuring, managing, and administering SQL Server 2019.
- (Unrecommended optional DIY) to download and install free **SQL Server Management Studio**:
  - Part of: SQL Server 2019 Express.



UNIVERSITY OF  
MARYLAND

# Outline

- Introduction to Microsoft SQL Server
- SQL Integrated Development Environment (IDE)
  - SQL Server Management Studio
- Access SQL Server Off-Campus



UNIVERSITY OF  
MARYLAND

# vsmith.umd.edu

**virtually Smith**   Woei-Jyh Lee ▾

BOOKMARKS CATALOG

All Apps

Virtual

Websites

Clients and Help

Desktop

Smith IT Website Website  [Open](#) [!\[\]\(dc7d17b015a4a5f15a29473bc04652a8\_img.jpg\)](#)

SQL Server Management...  [Open](#) [!\[\]\(6899a0bcd8d53896b1590da3ef0ba47b\_img.jpg\)](#)

Student Desktop  [Open](#) [!\[\]\(fbb4c33308b1281cc99a1e28339a47e4\_img.jpg\)](#)

Tableau - Student Desktop Website  [Open](#) [!\[\]\(fd2d5a6e40a0f88ff10502d9b9473da8\_img.jpg\)](#)

VBIC - Virtual Business Info... Website  [Open](#) [!\[\]\(7b7133394b3901185e9de79a1127d192\_img.jpg\)](#)

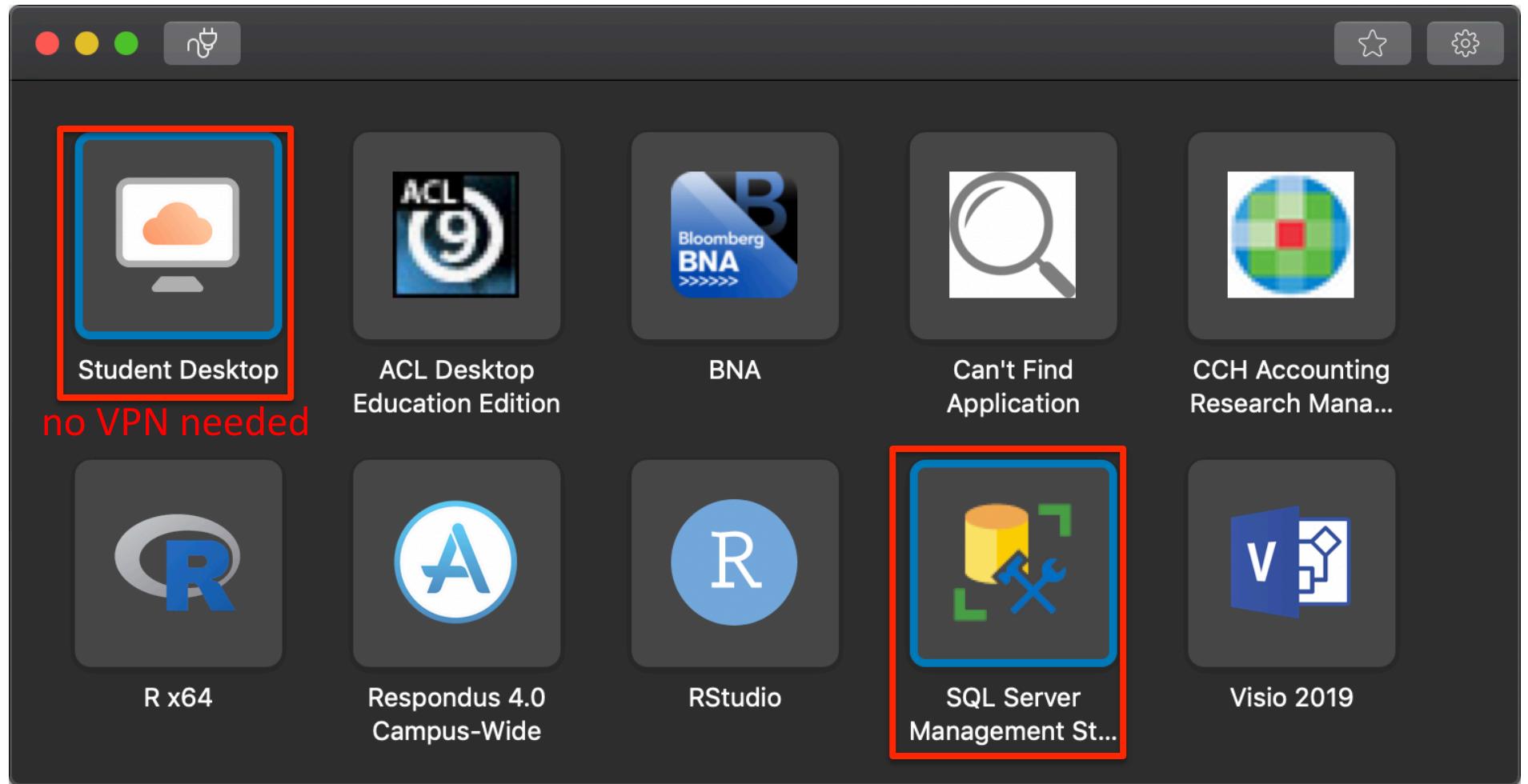
Visio 2019  [Open](#) [!\[\]\(b1ffca44fd38df548190e241b7dad8cb\_img.jpg\)](#)

Word 2019  [Open](#) [!\[\]\(79c30e694a96004cc8ea7b869ccb8c21\_img.jpg\)](#)

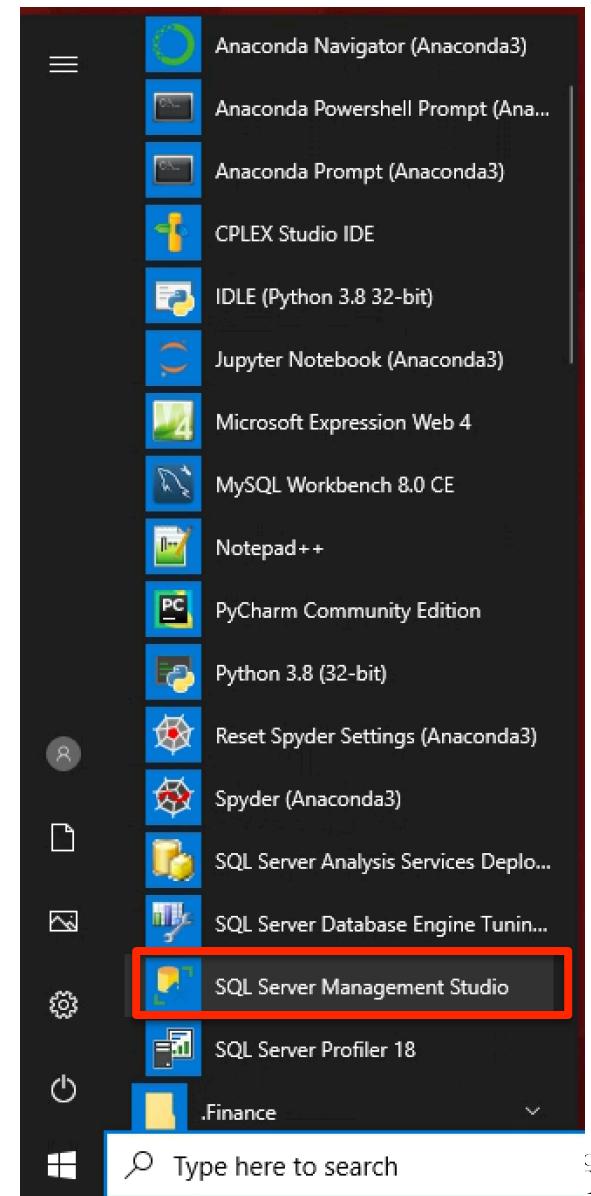
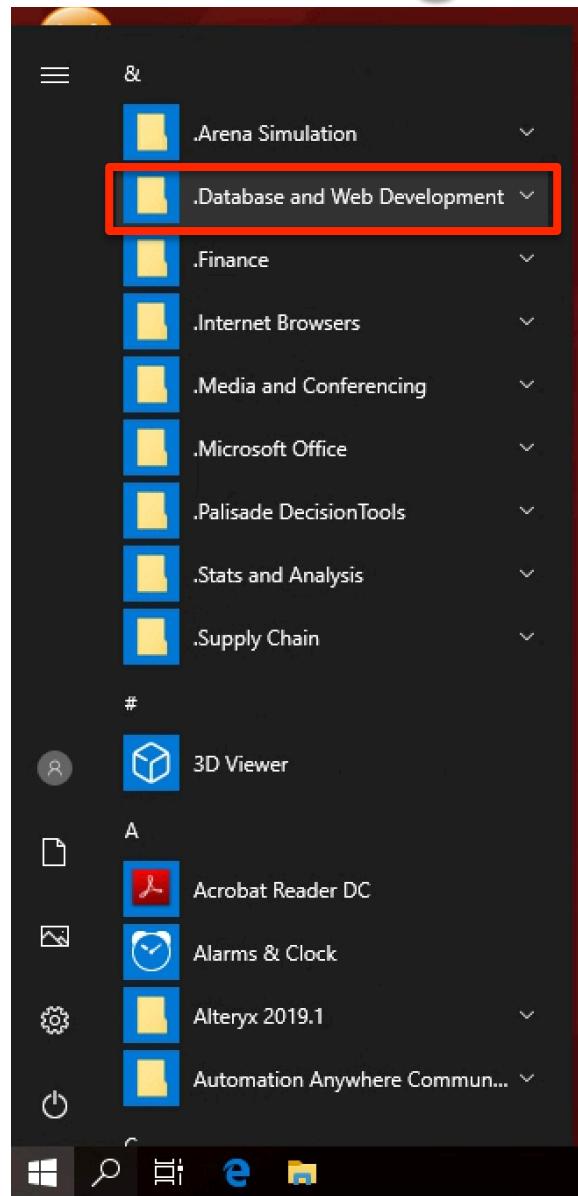
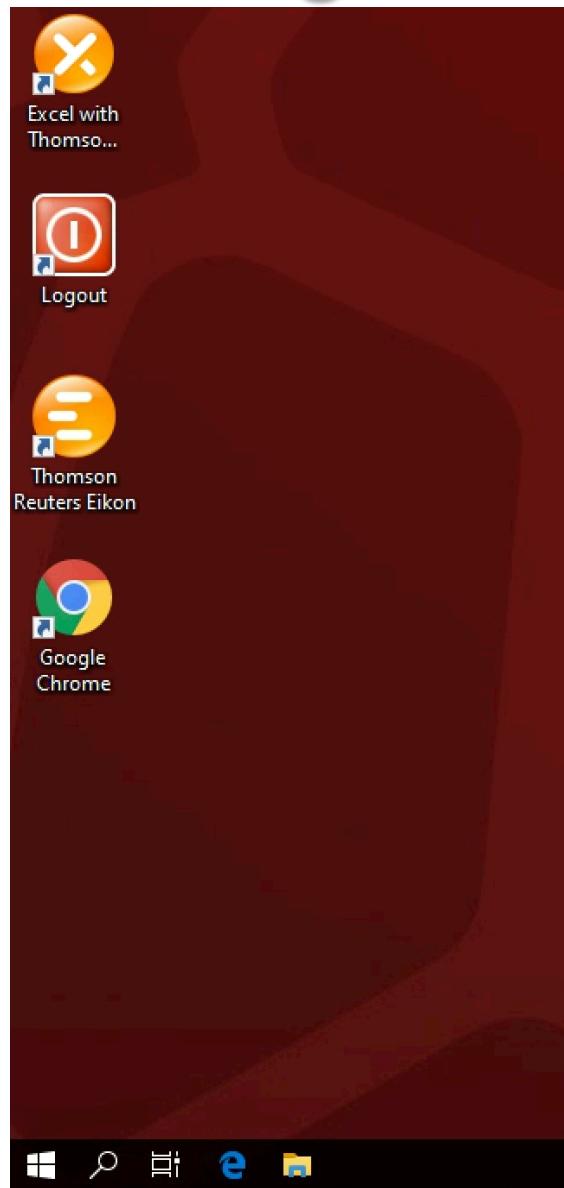
WRDS  [Open](#) [!\[\]\(3e10b079638aada38b869e4be8f90d9d\_img.jpg\)](#)

**required VPN** **no VPN needed**

# VMware Horizon Client



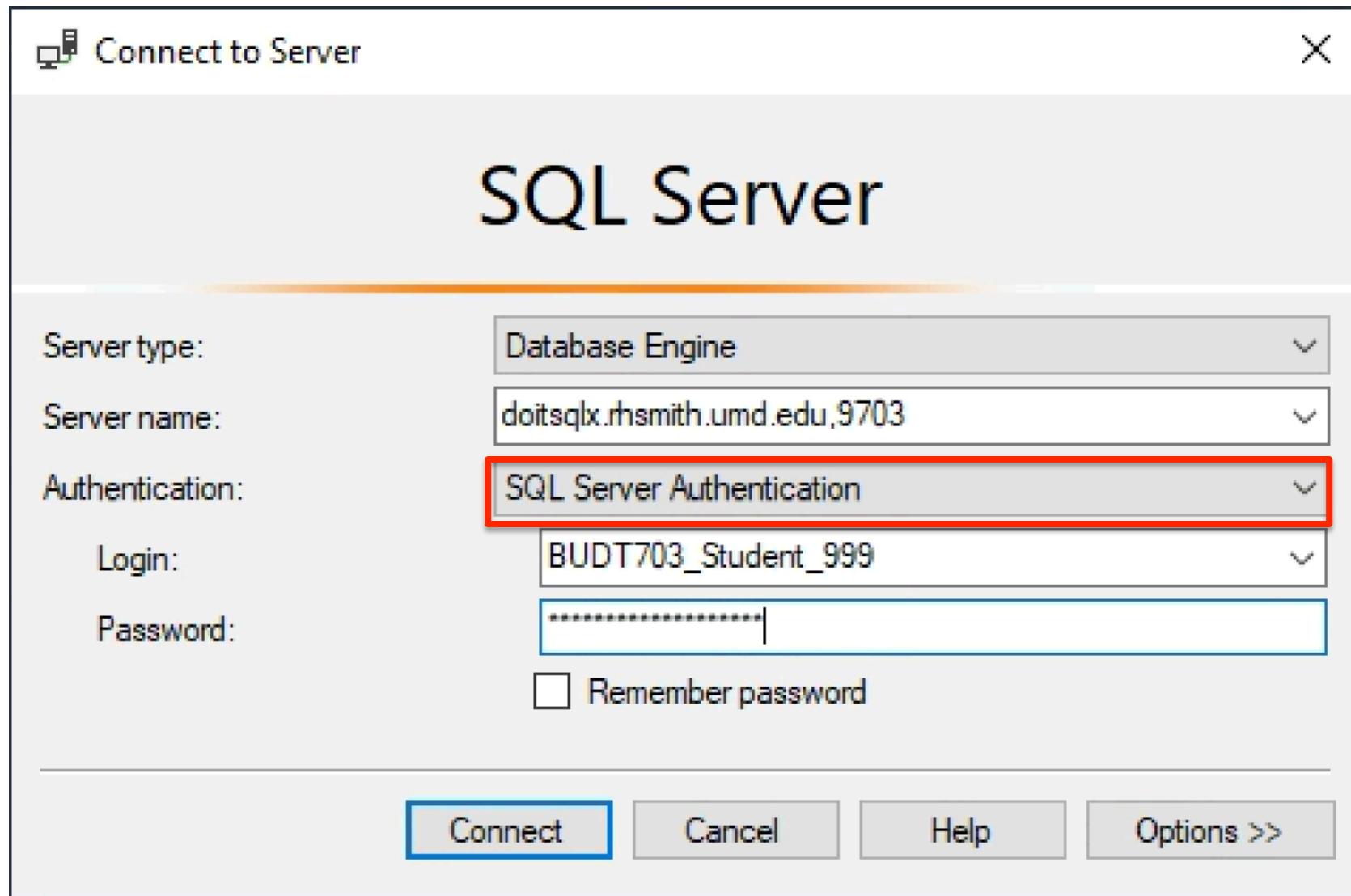
# Locating SQL Server Management Studio



# Starting SQL Server Management Studio



# Logging into SQL Server Management Studio



UNIVERSITY OF  
MARYLAND

# Logging into SQL Server Management Studio

- Start – .Database and Web Development – SQL Server Management Studio

- Server type: Database Engine
- Server name: doitsqlx.rhsmith.umd.edu,9703
- Authentication: SQL Server Authentication
- Username: BUDT703\_Student\_nnn
- Password: BUDT703\_Student\_nnn

*nnn represents the number  
for your specific login.*

***USERNAME AND PASSWORD ARE CASE SENSITIVE.***

- Please change your password to protect your work.

***BE SURE TO CHOOSE A PASSWORD THAT YOU WON'T FORGET!***



UNIVERSITY OF  
MARYLAND

# Using SQL Server Management Studio

The screenshot shows the Microsoft SQL Server Management Studio interface. The left pane is the Object Explorer, displaying the database structure of 'BUDT703\_DB.Student\_001'. The central pane is the Query Editor, containing a script for deleting data from various tables. The bottom pane is the Data Grid, showing the results of the executed query.

**Query Editor:** The central pane where SQL scripts are written and executed. It displays the following script:

```
-- Script from 9780132662253 11e  
-- ERD Figures 2-22, A-1, A-2, A-4, A-5  
-- Revised 2014.9.12 AL  
  
USE BUDT703_DB.Student_001;  
  
BEGIN TRANSACTION;  
  
DELETE FROM Salesperson_T;  
DELETE FROM DoesBusinessIn_T;  
DELETE FROM Territory_T;  
DELETE FROM OrderLine_T;  
DELETE FROM Order_T;  
DELETE FROM Customer_T;  
DELETE FROM Supplies_T;
```

**Object Explorer:** The left pane showing the database structure. A callout points to the 'Tables' node under 'BUDT703\_DB.Student\_001'.

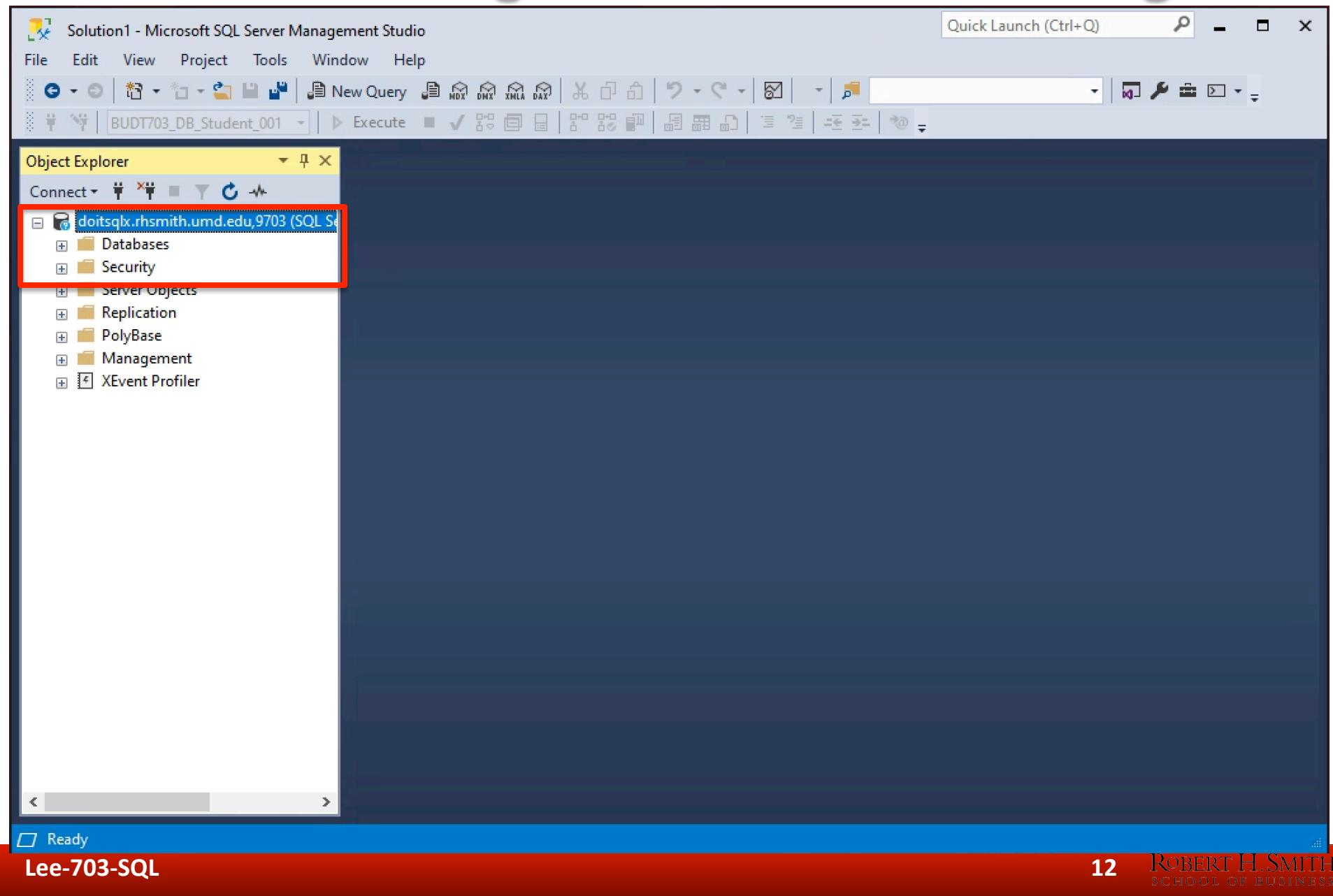
**Data Grid:** The bottom pane displaying the results of the executed query. The results show five rows of data from the 'Salesperson\_T' table.

	salespersonID	salespersonName	salespersonPhone	salespersonFax	territoryID
1	1	Doug Henny	8134445555		1
2	2	Robert Lewis	8139264006		2
3	3	William Strong	5053821212		3
4	4	Julie Dawson	4355346677		4
5	5	Jacob Winslow	2238973498		5

**Execution Status:** The status bar at the bottom indicates 'Query executed successfully.' and provides details about the execution: doitsqlx.rhsmith.umd.edu, 97..., AD\adamlee (135), BUDT703\_DB.Student\_001, 00:00:02, 137 rows.

**Bottom Bar:** Shows the status 'Ready', line number Ln 5, column Col 27, character Ch 27, and the letter INS. The page number is 11.

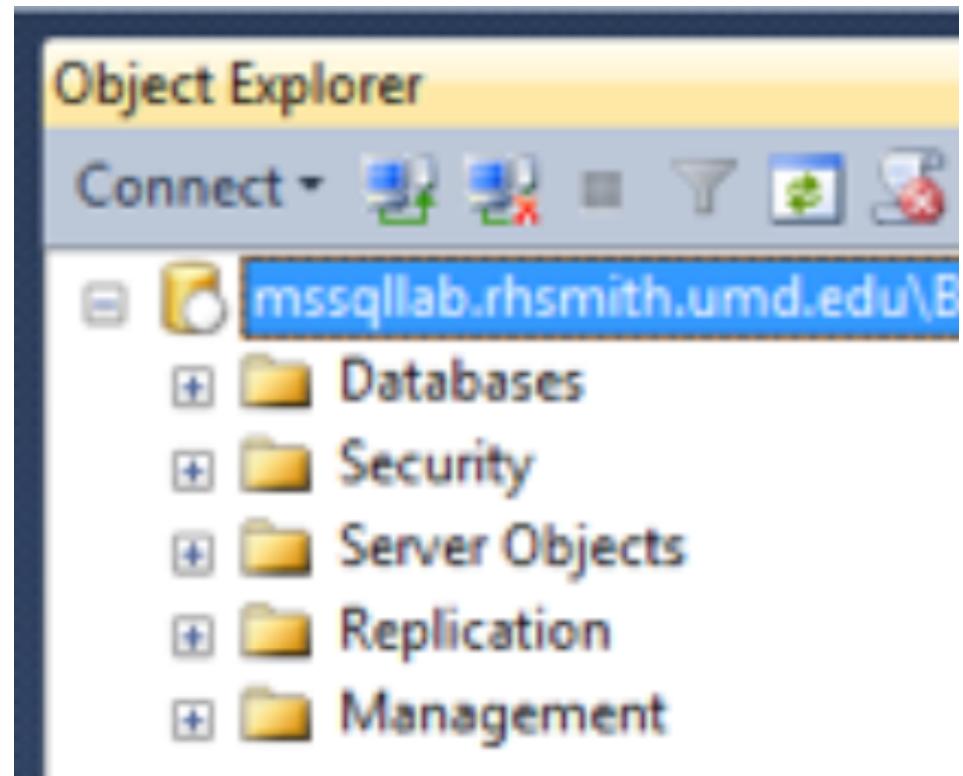
# SQL Server Management Studio - Post Login



# Database Server Object Explorer

- Following successful login to the SQL Server, a tree-like browser with the below database objects shows up:

- Databases
- Security
- Server Objects
- Replication
- Management



# DB Objects that Were Not Used this Semester

## ■ Server Objects

- Houses all information regarding:
  - ◆ Backup Devices: Lists all configured user DB backup destinations.
  - ◆ Linked Servers: Lists all other DB servers linked with the current engine.
  - ◆ Triggers: Lists all triggers pertaining to linked servers and backup devices.

## ■ Replication

- Houses all information regarding:
  - ◆ DB replication rules and back-up clusters, currently configured on the engine.

## ■ Management

- Houses all system-level database management information:
  - ◆ Policy Management: Lists all configuration settings.
  - ◆ SQL Server Logs: Lists all the DB activity logs by user session and date.
  - ◆ Legacy: Lists all legacy data conversion history.



UNIVERSITY OF  
MARYLAND

# Understanding DB Objects

## ■ Databases

- Houses all databases under the DB engine with which the connection is established.
- **BUDT703\_DB\_Student\_nnn**
- Note: Some or more databases may not be accessible depending on user security privileges.

## ■ Security

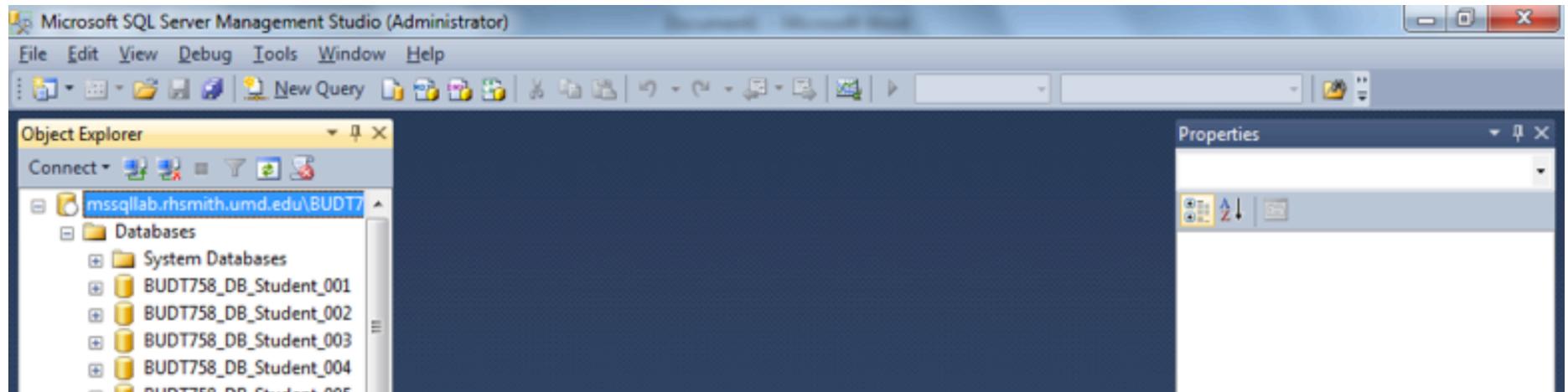
- Houses all information regarding:
  - ◆ Logins: Lists all configured user logins on the engine.
  - ◆ Server Roles: Lists all DB action privileges such as database/table creation, deletion, disk administration etc.
  - ◆ Credentials: Lists aliases and other DB credentials.

Right click on  
your username to  
change password.

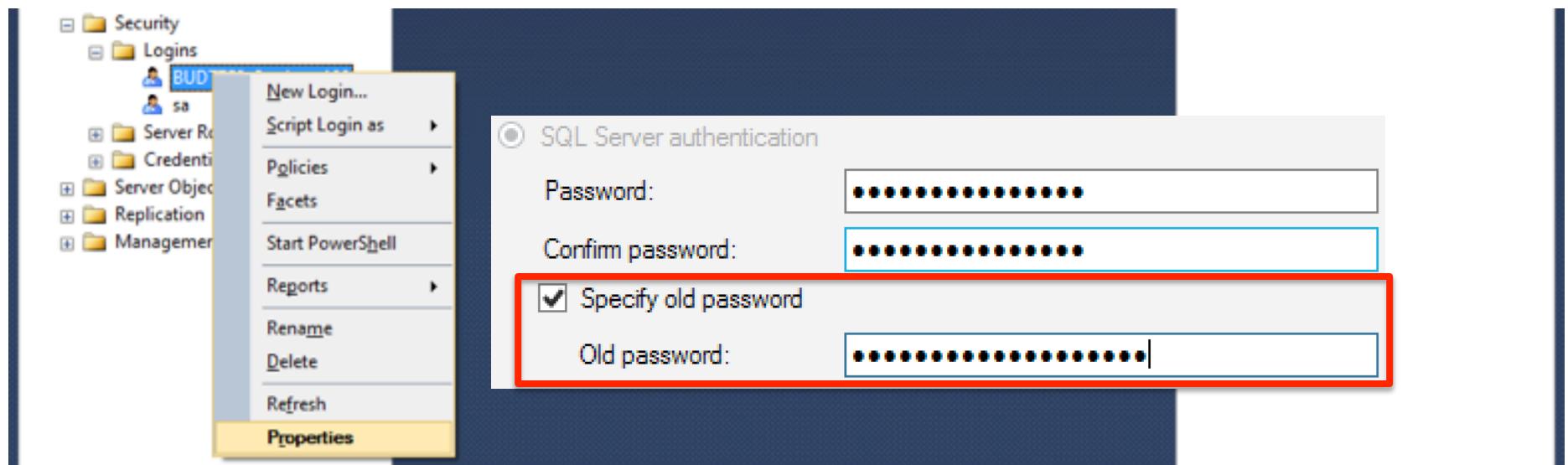


UNIVERSITY OF  
MARYLAND

# Databases and Security – Change Password

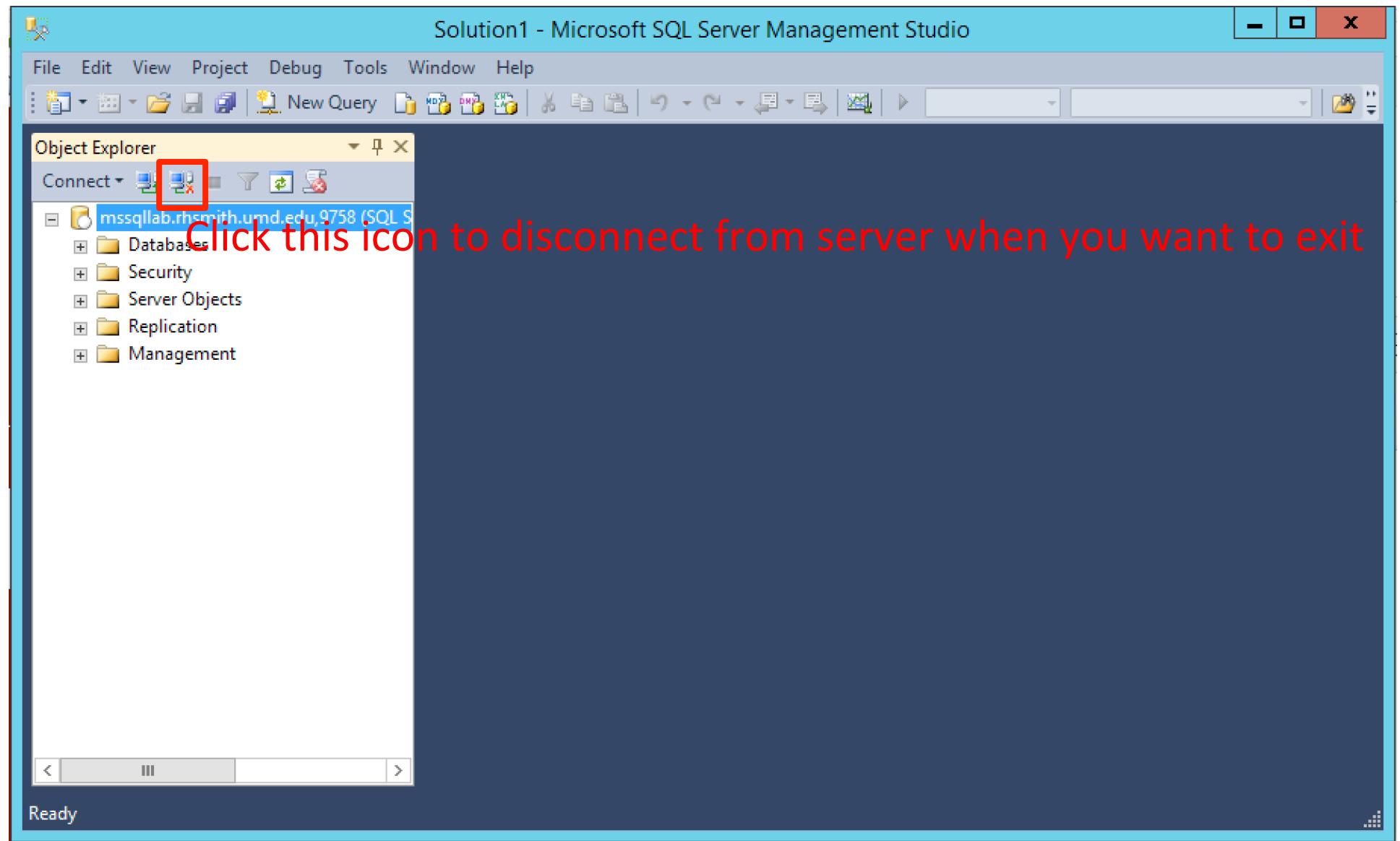


- Change your password (by specifying old password):



- Disconnect then re-connect with your new password!

# Disconnect from SQL Server



# Outline

- Introduction to Microsoft SQL Server
- SQL Integrated Development Environment (IDE)
- Access SQL Server Off-Campus



UNIVERSITY OF  
MARYLAND

# Virtual Private Network (VPN)

- To access `doitsqlx.rhsmith.umd.edu`,`9703` from off-campus locations, your computer has to obtain a campus IP by using the University GlobalConnect VPN.
- [terpware.umd.edu](http://terpware.umd.edu)
  - Network
  - GlobalConnect VPN Client



UNIVERSITY OF  
MARYLAND