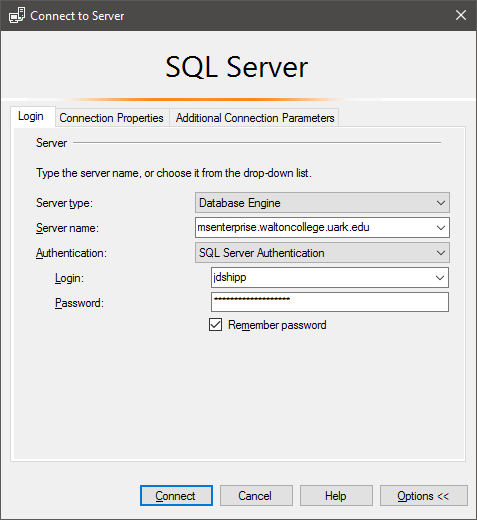
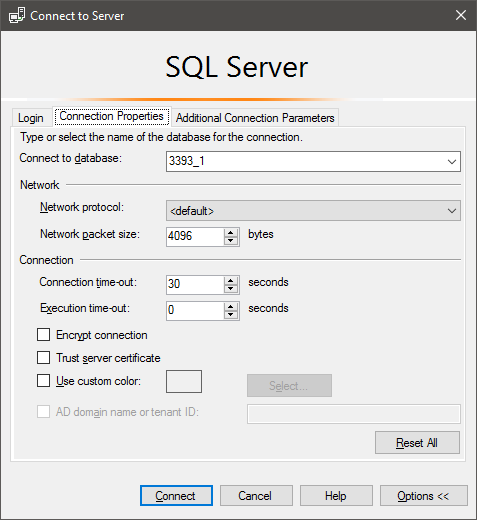
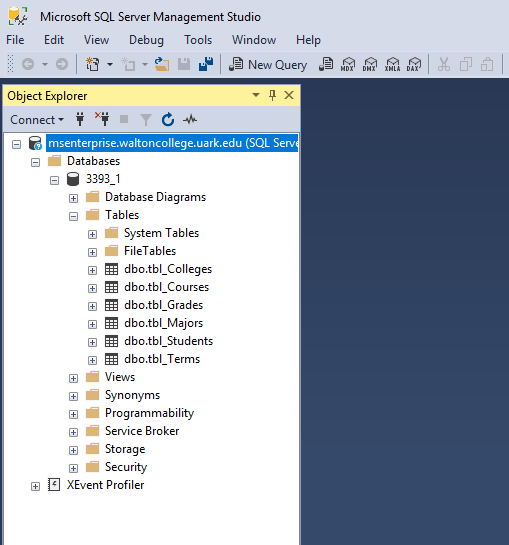
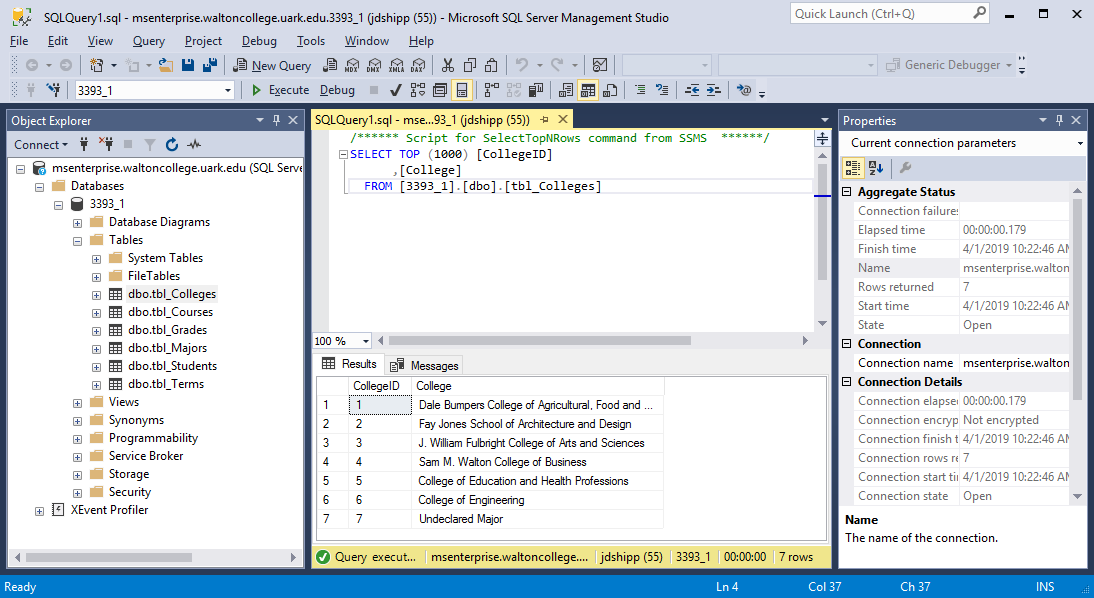
Project 4

NOTES: DATAGRIDVIEW

Scenario: You have been approached by the Walton College of Business to create an application to manage student data that is stored in the Hog Country University database.

1. Create a new project (C# Windows Form Project), **HogCountryUniversity**.
2. Download the Walton\_DB.cs database helper class, and import it into your project:
   1. Right click the project name in Solution Explorer
   2. Click Add
   3. Click Existing Item
   4. Browse to where you downloaded the Walton\_DB.cs file
   5. Select the file
   6. Click Add
   7. The Walton\_DB.cs file should now be visible in Solution Explorer
   8. Double click the Walton\_DB.cs file in the Solution Explorer
   9. In the first Method OpenConnection(), find the line and make the following changes:
      1. lo\_Connection.ConnectionString = "Data Source=msenterprise.waltoncollege.uark.edu;Initial Catalog=3393\_Shipp\_Fall2019;user id=jdshipp;password=BizDevPassXXXXXXXX!;Persist Security Info=False;";
      2. Change the following:
         1. Initial Catalog=3393\_Shipp\_Fall2019 \*\*\* Change the term to the current term if needed
         2. user id=jdshipp \*\*\* Change this to your uark login id (without the @uark.edu)
         3. password = BizDevPassXXXXXXXX! \*\*\* Change the XXXXXXXX to your student id (without any leading zeros)
   10. Now you can use any of the functions in the helper class using the class name followed by the method. For example: Walton\_DB.ExecSqlString, or Walton\_DB.FillDataTable\_ViaSql.
   11. This is a shared database used by the whole class, and possibly other classes – you will see other student’s data
3. I recommend using the multiple “Panel” hide / show method to design the interface. This will be demonstrated in class.
4. In your **HogCountryUniversity** application include the following:
   1. Include a MenuStrip that contains the following:
      1. File
         1. Main Menu
            1. Takes user to the Main Panel (Picture of Old Main building only)
         2. Exit
            1. Exit the project
      2. Students
         1. Takes user to Student Panel
         2. Users will use this interface to add students to the database
         3. The interface should include:
            1. Textbox to enter the student’s name
            2. Combobox to select the College
            3. Combobox to select the Major (values only become available after selecting the College – as Majors are associated to the College)
            4. Button to Add the Student
            5. DataGridView to show the Students
            6. The application should check for errors before allowing a user to add a student
      3. Grades
         1. Takes user to the Grade Panel
         2. Users will use this interface to add grades for students to the database
         3. The interface should include:
            1. Combobox to select the student
            2. Combobox to select the course
            3. Combobox to select the Term
            4. Combobox to select the Grade
            5. Button to add the Grade
            6. DataGridView to display list of student’s grades
         4. The application should check for errors before allowing a user to add a grade
5. Database Information
   1. Database is shared by entire class. You will see other student’s data, and they will see yours. Database name is 3393\_Shipp\_Fall2019 (Change term to the current term: Fall2019, Spring2020, etc.)
   2. Use the database as a test environment while developing the application. Your final submission will include connecting your application to another database (production database) – please see rubric below for more information
   3. Use Microsoft SQL Server Management Studio to view and access the raw data in the database
      1. Open Microsoft SQL Server Management Studio in the VMWare environment
      2. Server Type: Database Engine
      3. Server Name: msenterprise.waltoncollege.uark.edu
      4. Authentication: SQL Server Authentication
      5. Login: your uark login (without the @uark.edu)
      6. Password: BizDevPassXXXXXXXX! XXXXXXXX is your student id without any leading zeros
      7. Check Remember password  
         
      8. Click the options button in lower right corner
      9. Make sure the Connection Properties tab at the top is selected
      10. Connection to database: 3393\_Shipp\_Fall2019 (Change Term to the current Term)  
          
      11. Click Connect
   4. The following tables are already created for use in the application:
      1. Tbl\_Colleges (pre populated with UA Colleges)
      2. Tbl\_Courses (pre populated with UA Courses)
      3. Tbl\_Grades
      4. Tbl\_Majors (pre populated with UA Majors)
      5. Tbl\_Students
      6. Tbl\_Terms (pre populated with UA Terms)  
         
   5. Your application will read from the Tbl\_Colleges, Tbl\_Courses, Tbl\_Majors, and Tbl\_Terms tables to populate the comboboxes
   6. Your application will write to the Tbl\_Students and Tbl\_Grades tables as you add students and grades
   7. Your application will use all of the tables to summarize the information in the DataGridViews
   8. To view a table in Microsoft SQL Server Management Studio 17, connect first using the steps above, the right click a table and click “Select Top 1000 Rows”. The top pane in the view shows the SQL statement used to show the top 1000 rows of the table your right clicked on. The bottom pane shows the data in the table.  
      
   9. Use the following SQL Statements to populate your comboboxes:
      1. Students: SELECT StudentID, StudentName FROM tbl\_Students order by StudentName
      2. Courses: SELECT CourseID, Course FROM tbl\_Courses order by Course
      3. Colleges: SELECT CollegeID, College FROM tbl\_Colleges order by College
      4. Majors: SELECT MajorID, Major FROM tbl\_Majors where CollegeID = 1  
         \*\*\*CollegeID will be determined by which College is selected in the College Combobox
      5. Terms: SELECT TermID, Term FROM tbl\_Terms order by Term
   10. Use the following SQL Statements to populate your DataGridViews:
       1. Students: SELECT tbl\_Students.StudentID, tbl\_Students.StudentName, tbl\_Colleges.College, tbl\_Majors.Major FROM tbl\_Students INNER JOIN tbl\_Colleges ON tbl\_Students.StudentCollege = tbl\_Colleges.CollegeID INNER JOIN tbl\_Majors ON tbl\_Students.StudentMajor = tbl\_Majors.MajorID
       2. Grades: SELECT tbl\_Students.StudentName, tbl\_Courses.Course, tbl\_Terms.Term, tbl\_Grades.Grade FROM tbl\_Grades INNER JOIN tbl\_Students ON tbl\_Grades.Student = tbl\_Students.StudentID INNER JOIN tbl\_Courses ON tbl\_Grades.Course = tbl\_Courses.CourseID INNER JOIN tbl\_Terms ON tbl\_Grades.Term = tbl\_Terms.TermID
   11. Use the following Code / SQL Statements to add students to the database:
       1. Walton\_DB.ExecSqlString("INSERT INTO tbl\_Students (StudentName, StudentCollege, StudentMajor) VALUES ('" + txtName.Text.Trim() + "'," + CollegeID.ToString() + "," + MajorID.ToString() + ")")
       2. This assumes the name of the textbox with the student’s name is txtName, the integer variable CollegeID contains the appropriate college id, and the integer variable MajorID contains the appropriate major id. \*\*\*
   12. Use the following Code / SQL Statements to add grades to the database:
       1. Walton\_DB.ExecSqlString("INSERT INTO tbl\_Grades (Student, Course, Term, Grade) VALUES (" + StudentID.ToString() + "," + CourseID.ToString() + "," + TermID.ToString() + ",'" + Grade + "')")
       2. This makes similar assumptions as with adding students to the database
6. Rubric (Grading Guide) 35 points
   1. Submit Project (5 points)
   2. Menustrip Menu Selections Functional (5 points)
   3. Students Panel Functional (10 points)
   4. Grades Panel Functional (10 points)
   5. Change your application to point to the “Production Database” (3393\_Shipp\_Fall2019p) and add yourself as a student. Add four grades for yourself for the following courses: Abnormal Psychology, Media Law, College Physics II, and Business Application Development. (5 points)
   6. Bonus points are at my discretion. Please describe in your project submission what you have done for any bonus points.