Group Project Requirements

Book Store and Shopping Cart

Using the partially developed Project database **BookStore.MDF (https://fiu.instructure.com/courses/233814/files/37889701?wrap=1)** **(https://fiu.instructure.com/courses/233814/files/37889701/download?download_frd=1)** , the team will complete the shopping cart functionality and each member will complete maintenance for one component. Assume that this application is used to purchase Books from a Book Collection. The customer comes to the store and requests to purchase titles. The employee enters the titles and quantities in the application and produces an invoice/receipt for the customer.

Tables and projects you will need to use

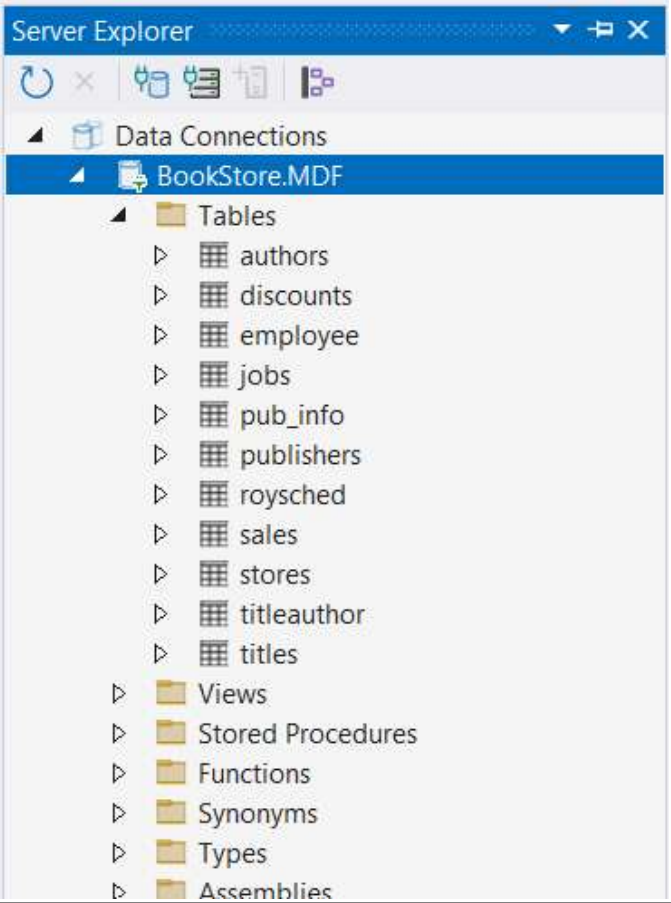
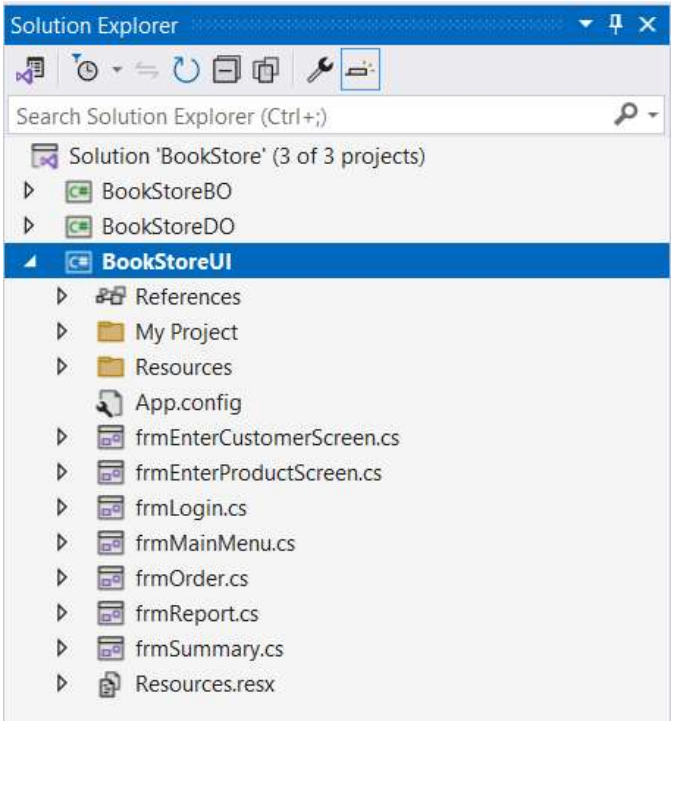
Tables you will need to use:	Projects you will need to use:
	

Figure info: bookstore sql server database, including tables for authors, discounts, employee, jobs, pub_info, publishers, roysched, sales, stores, titleauthor, titles

The database tables and fields are already defined, you can use the **data-table.sql (https://fiu.instructure.com/courses/233814/files/37889704?wrap=1)**

(https://fiu.instructure.com/courses/233814/files/37889704/download?download_frd=1) data-dictionary.sql (https://fiu.instructure.com/courses/233814/files/37889652?wrap=1) (https://fiu.instructure.com/courses/233814/files/37889652/download?download_frd=1) SQL to produce dictionaries. You can run SQL against the database within Visual Studio server explorer.

For each table, you will need to:

- Create classes as needed. Follow the patterns for classes as shown in the class samples. Can use either the ADO.NET or Entity Framework approach for the Object-Relational Mapping (ORM).

The following functionality is required:

- Design a maintenance screen for tables, to enter Titles, Authors, Publishers, Stores and Employees
- Design a shopping cart order screen that includes these features:
  - Must provide a means to search for and select a product by partial title by getting the information from the database.
  - Must allow a single purchase to include multiple titles, and any quantity of each product.
  - Must show the current order subtotal, tax, and total when each product is added to the order. Whenever a title is added or updated in the order, adjust the totals for product cost, tax, and total order cost shown on the form.
- When the user commits the order, using a single ord_num, insert records to the Sales table for each item ordered.
- Sales ord_num values should be automatically assigned in increasing sequence.
- Design a summary screen to display invoice/receipt “report” showing the order, the items ordered, total product cost, tax, and total order cost. This should displayed for confirmation after order.
- Design a screen that allows for selection of start / end date, time ranges and button to produce a formatted “report” file containing all items sold within a selected time range. Include Ord_Num, TitleId and Title, qty, ord_date, and total value of sold products. Sort by ord_date.
- Ensure that menu allows access to maintenance, order and report screens.

Purpose of Assignment

As part of a team, should work together to generate an object-oriented design, multi-tier application and database called BookStore to purchase from titles with shopping cart. Each member should agree on the common functionality and base classes, and then each member should implement one of the maintenance components; Titles, Authors, Publishers, Stores or Employees. The team should work together on the Order and Report functionality. The design should include the classes, associated data, operations of the classes, and the multi-tier application that uses C# .NET logic to implement each of the classes. Will need to design and implement the GUI using Windows forms and controls to create the objects, provide access to each object’s data properties and processing methods.

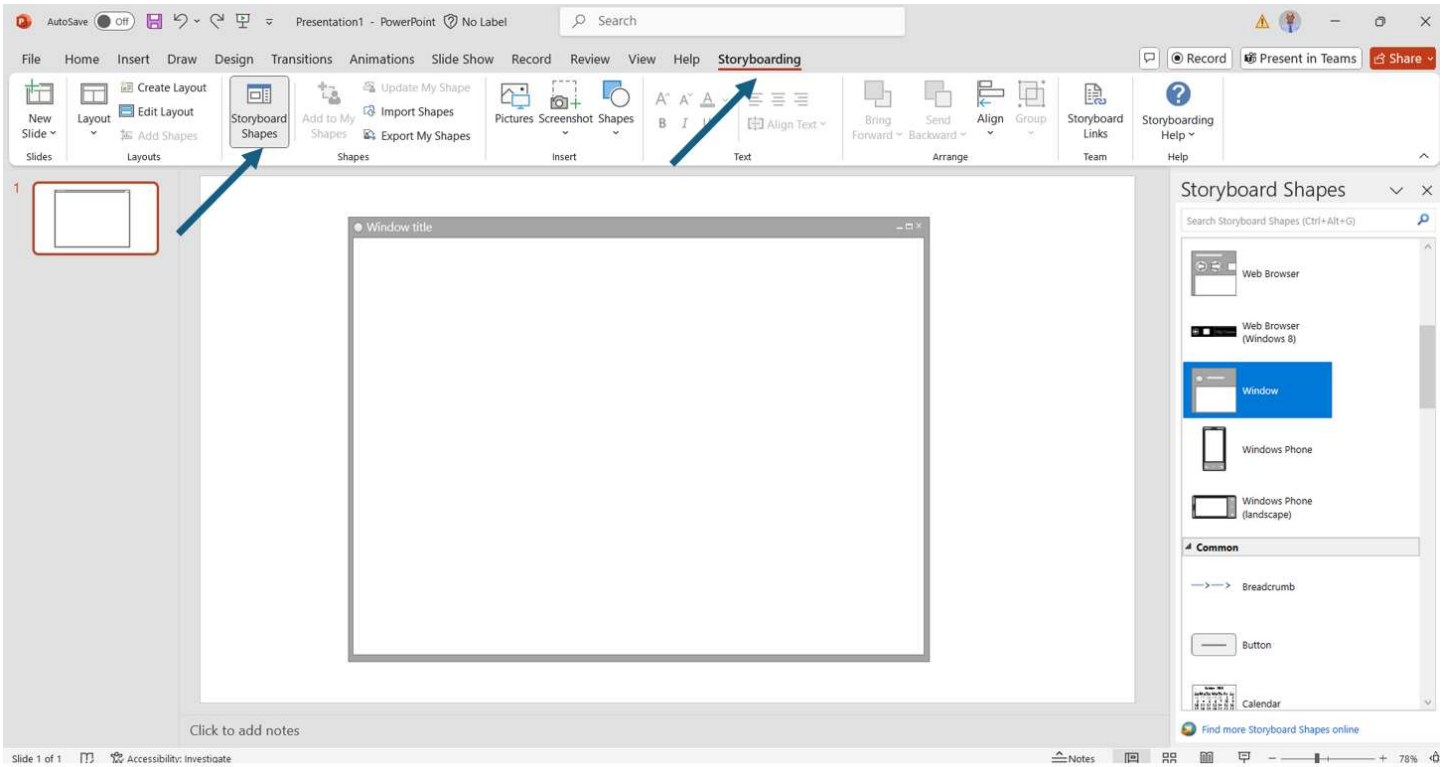
Group Project - Phase 1 (10 points)

- Review the requirements and be sure that you understand them.
- Generate an object-oriented design for a system that keeps tracks of Book Collection, including classes and inheritance. Identify each of the classes, associated data, and operations for the classes.

Example for Microwave

Top-Level Objects	Communicates With	Incoming Messages	Outgoing Messages
Door	Control Panel		Open Closed
Control Panel	Door Oven Controller Display Panel	Open Closed Oven On Oven Off	Time Start Clear Power Setting
Display Panel	Control Panel	Oven On Oven Off Power Setting Time	

- Identify the database, tables and table adapters or stored procedures for data storage.
- Install the Microsoft PowerPoint **Storyboarding Feature (https://go.microsoft.com/fwlink/?LinkId=832491&clcid=0x409)** or use Microsoft Paint.
- Design a GUI that will create the objects and provide access to each object's processing methods for screen design.



Group Project - Phase 2 (10 points)

You should complete the following steps and review with your group to submit by **Monday 11/24***:*

1. Review the structure of the database, paying attention to the fields that link the tables together.
2. Design your screens in Visual Studio based on the requirements and on the structure of the database. Click on each column in a database table and use the Properties window to see its data type and its length (if varchar).

   For textboxes, set the MaxLength property to ensure that the user cannot enter more characters than the database will allow.

   For combos, set the DropDownStyle to DropDownList to ensure that users can only select from values in a reference table.

   Use MaskedTextbox controls for standard formatted fields such as phone numbers, zip codes, date of birth.

   Use DateTimePicker controls for dates that are close to the current date.

   Follow the posted screen design guidelines and naming conventions used in class.

3. Write code to validate the input and test it. Copy the code for the generic routines for validation and for clearing the screen that we developed in other samples, and paste it into a code module in your program. Add additional code as needed.

Group Project - Phase 3 (10 points)

1. Review the structure of the classes. Create the classes in Visual Studio for the tables you must use in your project. Follow the code patterns for the provided classes.
2. Review the structure of the provided stored procedures. Creating any additional stored procedures that you will need.
3. Coding the actual processing actions of your screens.

Group Project - Phase 4 (10 points)

1. Coordinate the final project by adding classes and screens from your partner(s) into the final project.
2. Test every feature carefully, and correct any deficiencies.

NOTE: Ensure you .ZIP then submit all code and database.

If you have any problems, please contact me by email, phone or text for assistance. Please try to keep pace and not fall behind on this project, as time is short.