

CVB815 Winter 2016 Assignment 2**Due Date: Friday April 15th, 2016****Preamble**

This assignment is part two of the Innovation Order Tracking Systems. It uses the assignment created from part one, mainly the library you created in the first assignment. In addition, this assignment provides a graphical user interface (GUI) to interact with your library. Add features to the library to provide support to store and manipulate this application's data with a database.

Learning Outcomes

By doing this assignment, you will learn to:

- a) Understand the difference between a library and a user interface.
- b) Reuse code to understand the importance of good design.
- c) Create a GUI interface based on Microsoft User Experience Interaction Guidelines.
- d) Interact with data through ADO.Net.
- e) Understand Win Forms.
- f) Use Data Controls in .Net.
- g) Manage time to deliver a final presentation of the library with its GUI client using Win Forms.

Requirements

1. The assignment uses the library created from the first assignment and provides a graphical interface to that library. It uses ADO.Net for database access, .Net controls for the user interface
2. Use the following checklist to help you design the application:
 - Use stored procedures to: insert, edit, and delete records in the database.
 - Validate email addresses using following format: someone@somewhere.com, and some.one@some.where.com.
3. Create a user interface that is easy and intuitive to use. The user interface has the following criteria:
 - Uses different controls, NOTE: Two labels count as one control, but a label and a LinkLabel count as two controls, as they are two different .Net objects.
 - Has help for the user, help can be read from a plain text.
 - Has an about dialog box.

- Has a master-detail view of records. Master detail views show all details that match a given criteria, for example: display all orders placed by a specific customer.
- Uses exception handling.
- Uses collection classes, preferably with generics, in VB.Net.
- Uses one object from VB.Net's My namespace.
- Uses regular expressions in VB.Net.
- Generates events for the library clients to trap and handle. These events are trapped by delegates or event handlers

Notes about the requirements

1. The specifications are kept (vague and) flexible to give you complete freedom to design your application's look and feel.
2. Create an interface that you think meets the needs of a fictional user based on the Microsoft recommended guidelines.
3. At the minimum: your library does the following:
 - a. Manage records of customers and their orders, the products they ordered and their billing information.
 - b. Ensure that editing of records follows commonly understood practices like no numbers for names, email address should have @ and so on.
 - c. Prohibit invalid data from entering the library from the user interface. This means validity checks should be done for all input data. For example: instead of asking a user to enter a date into a textbox control, have them pick a date from the calendar control. This solution looks good, to the user, and avoids the hassle, for you the developer, of getting invalid dates.
 - d. Your interface uses WinForms to interact with the library.
 - e. ADO.Net should be used for database access.
 - f. You can use an external open source code to help you with your design and bonus features but give credit to your sources

Requirements for the README

The README can be a plain text file, or a popular document format such as: .doc, .docx, .rtf or .pdf. Your readme file addresses the following:

1. Show screen captures of your assignment in action.
2. What bugs, if any, are present in your assignment?
 - a. What workarounds would you recommend to handle those bugs?
 - b. Having bugs is not necessarily a bad thing, because it can show that you are realistic about the known issues with your application.

Evaluation

Your program will be evaluated on how easy it is to understand and use.

As the assignment does not specify implementation details, the architecture and design of your library is important.

Did you use pair programming to complete the library? Working in groups of two has a slight advantage than working alone because pair programming brings advantages that one cannot get when working alone.

While pair programming is ideal, sometimes it is not possible to work with a team member so I will accept work done by only one student. In that case, I expect that the student hand-in good quality work.

Minimum requirements

1. A README file that details your experiences, a list of bugs and list of features implemented. Also, list the Microsoft's Windows recommended interface guidelines followed.
2. The library implements all the OOP design features and the interface has different controls, uses a master-detail interface, and provides database access.
3. The evaluation for this assignment is on the user interface that interacts with the library. The minimum requirement is to provide a Win Form based interface to interact with your library.
4. You may use open source licensed code, not proprietary code and not code taken from student projects, in your library provided you give credit to the source and you know what that code is doing. Be sure that you understand any code you have not written, -
5. Keep in mind that you are demonstrating knowledge of VB, .Net, and GUI interface design, and not creating the world's best Order Tracking Application, so feel free to experiment, explore and make mistakes.

Submission

Upload the assignment zip file to Blackboard on the submission link by the due date.

Team Work

- You may work in groups for this assignment or if you prefer you may do this assignment by yourself.
- You could team up with another student if that student also worked alone in the first assignment. In that case, be sure to share your code with the other student.