Software Systems Development [Fall 2018]

Programming Assignment 4

Objectives

1. Understand and practice the use of classes, objects, and lists
2. Understand and practice working with files/directories
3. Understand and practice GUI, bindings, and user control in WPF

Due Date: Sunday, November 11th, 2018 (at 11:59pm).

Machine Details: Complete this assignment by yourself on your own machine or on C4 lab machines. Make sure your application compiles and executes properly on Microsoft Visual Studio environment.

Assignment Description: For this assignment, you will acquaint yourself with the advanced GUI in WPF as well as the basics of C# (e.g., objects and lists). In this assignment, you will build a "PetShop" system that includes the followings:

1. **Create an Account Window**. This window asks the user to enter her/his information: name, username, password, email, address, payment method/information, and if s/he is a shopper or seller.
2. **Login Window**: The login window allows the user to login to his/her account. If the person logging into the application is a seller, then they need to see the seller page. If the person logging into the application is a shopper, then they should see the shopper page.
3. **Shopper Home Window**: The home window should contain a welcome message (e.g., Welcome to the Animal R Us PetShop), MenuBar, GridView, Review Order button, and Place Order button:
    a. **MenuBar** should show, as menu items, the name of the logged in person (e.g., You logged in as Ghada), summary of the shopper's cart (e.g., 2 items = $500) along with the "File" menu item that has the following 3 options: save, save as, and exit.
    b. **GridView** should have a list or matrix of pets. For example:

Pet: Parrot
Available: 2
Price: $150

Pet: Puppy
Available: 1
Price: $300

Pet: Turtle
Available: 4
Price: $15

Pet: Hamster
Available: 10
Price: $20

Pet: Cat
Available: 1
Price: $200

Pet: Fish
Available: 10
Price: $7

Pet: Rabbit
Available: 3
Price: $50

Pet: Bird
Available: Sold
Price: $17

Add to Cart option should be shown when the shopper clicks on one of these pets. Another option would be for the shopper to enter the quantity in a box followed by clicking on "**Add to Cart**" button. You need to make sure that the shopper entered quantity does not exceed what is available in the stock. Your cart's summary in the MenuBar should get updated whenever the shopper adds a pet to the cart. At the bottom of the grid, the shopper should see two buttons:

c. **Review Order** button should direct the shopper to a window that shows a summary of the items in his/her cart: number of items, their names, cost for each item, and the total cost. It should also have an option that allows the shopper to delete an item from his/her cart.
d. **Place Order** button should direct the shopper to a window that displays a confirmation of the transaction and the receipt; the shopper can save/save as the receipt or send it to his/her email. Note that your application should update the list of pets after each order. For example, if the shopper bought 2 turtles out of 4 (see above), you will need to change "available" from 4 to 2.

4. **Seller Home Window**: This window should have the following options: add a new pet, remove an existing pet, edit an existing pet, and PetShop theme change. For full credit, you need to design and implement just the "Home Window" of the seller without actually implementing the functionality of each of these options

Your application should make use of the upcoming topics we will cover in the class (i.e., files, bindings, and user control) as well as the topics we have covered so far.

Programming, Formatting, Grading, and Submission Notes:

- Please do not copy source code from the internet or other students in class. We will use specific tools (e.g., Jplag and MOSS) to detect plagiarized code.
- Your application will be graded on both correctness and style, so include good comments, well-chosen variable, windows, and fields names, etc. For full credit, your code must not be significantly more complicated than necessary.
- Upload and submit your files for Assignment 4 in Canvas. You may submit your assignment in Canvas as many times as you like; we will grade your latest submission.
- Late assignment will not be graded unless you have a legitimate reason (e.g., letter from a doctor). Please consult me or the TA, in advance, to arrange an extension.

Have Fun Coding! ☺