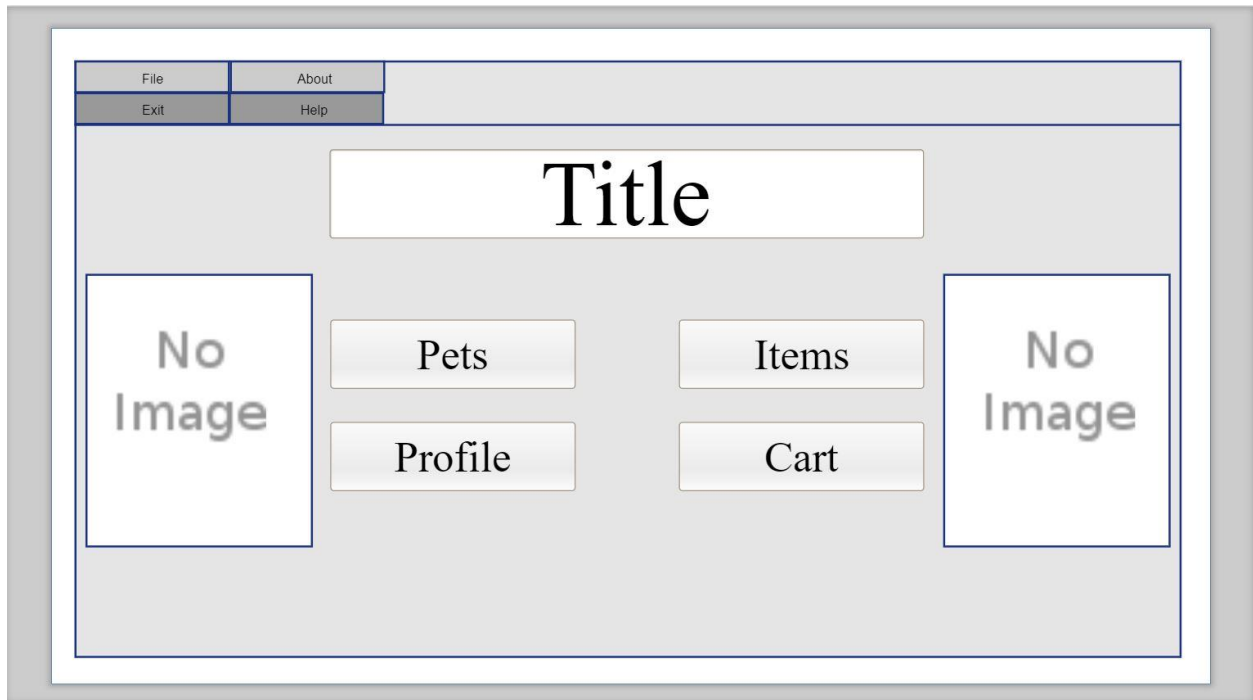# Final

Program-Wide

Input Validation:

- **Ensure all buttons led to their corresponding pages.**
- **Ensure that the loggedin bool was available program wide and checked before administrative only tasks.**
- **Pass the shopping list throughout the program up through the items page then ensure it is cleared for the next order.**

Home Page

Design Changes:

Replaced Items Page with an Order History page to meet the requirement of viewing past orders.

Cart Page

Business Rules:

- As a logged in system user, I want to be able to place an order for my shopping cart items using my credit card and receive an on-screen order confirmation message. ** Assumption is that orders can only be placed in the US. **
- As a user I want to be able to see a list of all orders I have placed with the Pet Store.
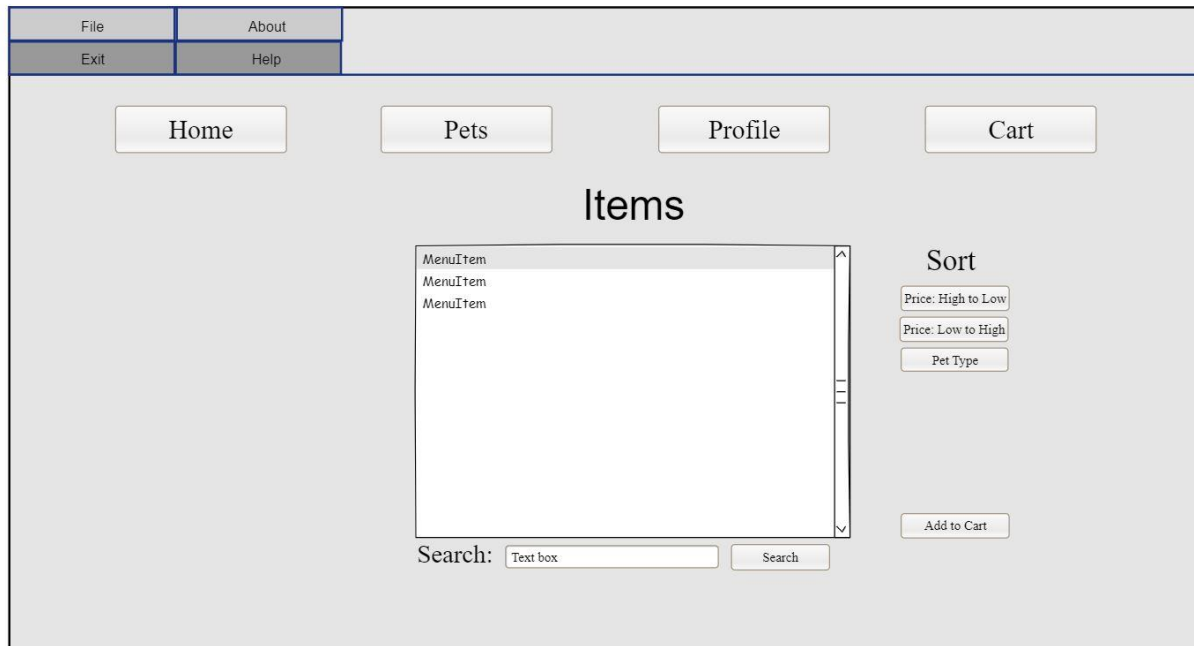
Input Validation:

- **Quantity Button:** Quantity button and in progress shopping cart have been moved to the Pets page for easier adding and removing of items.
- **Remove Button:** Moved to Pets Page
- **Card# TextBox:** Luhn's Algorithm, check for no entry, whitespace.
- **CVV TextBox:** Check for no entry, whitespace, and ensure length of string == 3.
- **Exp dateTimePicker:** Ensure the expiration date is today or later. Check for empty field and whitespace.
- **Name TextBox:** Check for no entry, whitespace, and ensure length of string > 0.
- **Address TextBox:** Check for no entry, whitespace, and ensure length of string > 0.
- **City TextBox:** Check for no entry, whitespace, and ensure length of string > 0.
- **PostalCode TextBox:** Check for no entry, whitespace, ensure length of string is == 5, parse the postal code to an int to validate it doesn't contain letters or symbols.

- **Email textbox:** Checks for inclusion of an @ symbol, exclusion of empty fields, a string less than 3 characters (including @), and exclusion of whitespaces (" ").
- **SecurityCode TextBox:** Check for no entry, whitespace, ensure length of string is >= 3, parse the security code to an int to validate it doesn't contain letters or symbols.
- **Submit Button:** Validates the above fields and returns a bool showing their validity. Parses all numerical fields to Ints or Longs to ensure they are numeric only.

Design Changes:

I have included additional fields to gather more customer info at checkout as well as removed some fields to reduce confusion about the purpose of this page. The removed fields can now be found on the Pets page.

Items Page -> Order History
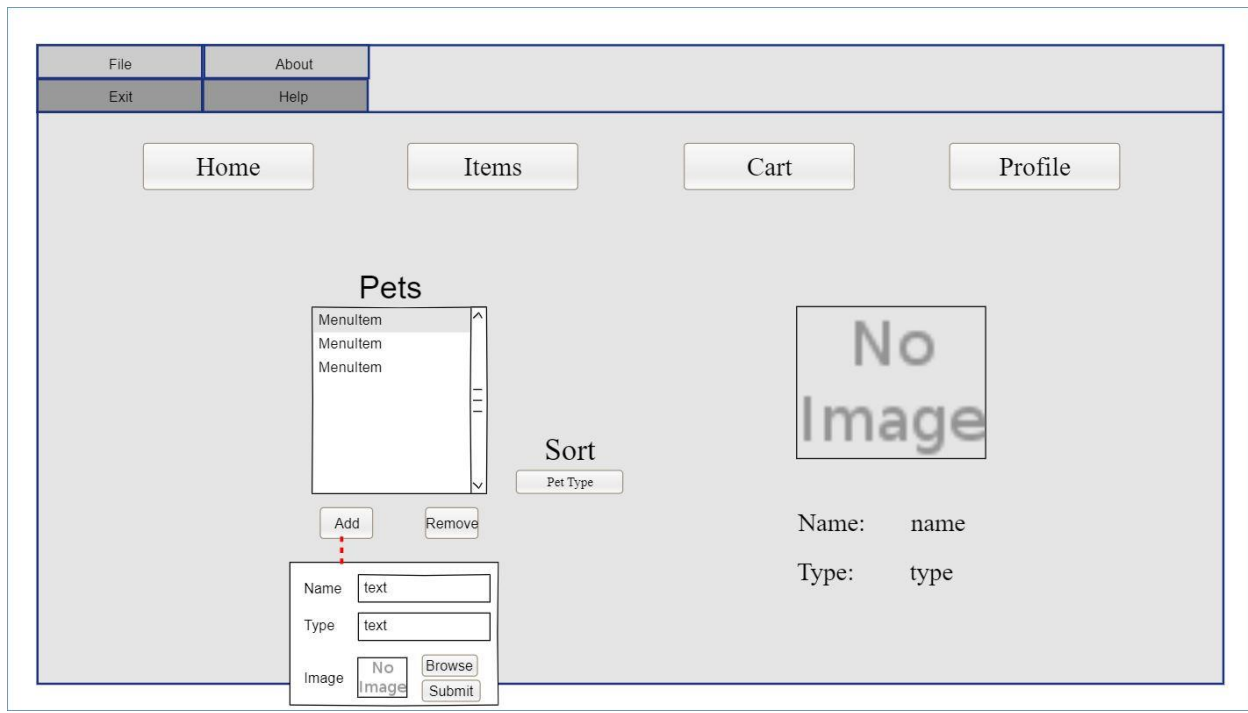
Business Rules:

- As a user I want to be able to drill into one of the orders from the list and see the order line details.

Input Validation:

- **Details Button:** Only Display a past order if a valid item is selected in the Order ListBox and only then if the item is contained in a dictionary.

Design Changes:

- Moved assorted Sort buttons, add to cart button, and search textbox and button to the pets page as that's where the database table is located in the redesign.
- Changed Items to Order History as I realized creating another database of items was unnecessary for the requirements.

Pets Page

Business Rules:

- As a logged in system user, I want the ability to add pets (to the store to sell).
- As a logged in system user, I want the ability to remove pets from the store.
    - As a logged in system user, I want to be able to update the quantity of an item in my shopping cart.
    - As a logged in system user, I want to remove orders from my shopping cart.
    - As a logged in system user, I want to view all items that have been placed in my shopping cart.

Input Validation:

- A bool value will be used to ensure customer is logged in before being able to do administrative tasks. (ie: checkout, add to database, etc)
- **Remove Button:** Ensure a list item is selected then remove the item from the ListBox. If no item is selected nothing happens.
- **Name TextBox:** Check for no entry, whitespace, and ensure length of string > 0.
- **Type TextBox:** Check for no entry, whitespace, and ensure length of string > 0
- **Cost TextBox:** Check for no entry, whitespace, and ensure length of string > 0, parse the price to a double to ensure it's a valid number and allow for decimals.
- **Quantity always defaults to 1.**

- **Name Box:** Check for no entry, whitespace, and ensure length of string > 0.
- **Type Box:** Check for no entry, whitespace, and ensure length of string > 0
- **Cost Box:** Check for no entry, whitespace, and ensure length of string > 0, parse the price to a double to ensure it's a valid number and allow for decimals. Ensure math is correct when calculating cost by the quantity of the item.
- **List Button:** Check that the chosen item is not already in the shopping cart.
- **Remove Button:** Will only remove an item if one is specified in Name Box.
- **Update Button:** Will correctly update the item quantity and item total price by multiplying the base price times the new quantity. If specified quantity is 0, the item is removed from the shopping list and the concurrent name list to allow for it to be added back to the cart if necessary.
- **Sort Button:** Correctly sorts the data table by pet type
- **Search Button:** Searches the data table for a name specified in the Name TextBox. Allows for multiple results.

Design Changes:

- ImageBox was unneeded and thus removed.
- Database as well as supporting methods have been moved to Pets from Items to provide a smoother customer experience by having all relevant information on a single page.

File		About					
Exit		Help					

Home   Items   Pets   Cart

Log In   Create An Account

ID: [Text box]   New ID: [Text box]
Pass: [Text box]   Pass: [Text box]
        [Submit]   [Create]

Login Page

Business Rules:

- As a system user, I want the ability to create a user profile.

Input Validation:

- **Login:**
  - **ID TextBox:** Check for no entry, whitespace, and ensure length of string > = 8. Check if ID is taken by a previous user.
  - **Password Box:** Check for no entry, whitespace, and ensure length of string >= 8.
  - **Submit Button:** Validate ID and Password text fields. If valid, logs the user into the system.
- **Create Account:**
  - **New ID TextBox:** Check for no entry, whitespace, and ensure length of string >= 8. Check if ID is taken by a previous user.
    New Password Box: Check for no entry, whitespace, and ensure length of string >= 8.
  - **Create Button:** Validate ID and Password text fields. If valid, creates an account on the system. If not error provider alerts the user to the field(s) causing issues.

Design Changes:

- I made the page a single column versus the original 2 column design.
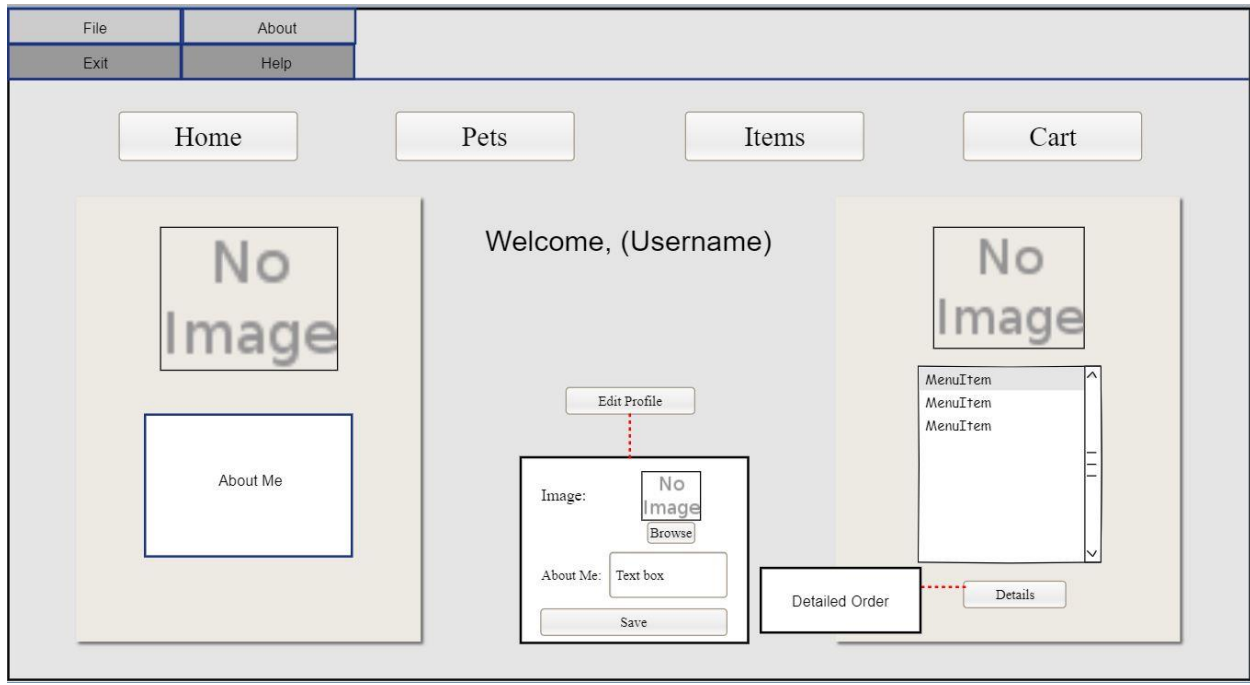
Profile Page

Business Rules:

- As a system user, I want the ability to update a user profile.

Input Validation:

- **About Me TextBox:** Field must be <= 180 characters.
- **Name TextBox:** Field must be <= 30 characters.
- **Role TextBox:** Field must be <= 30characters.
- **Logout Button:** Hides the Profile Form.
- **Home Button:** Hides the Profile Form and opens a new Home form with Order History Enabled.

Design Changes:

- Removed two buttons from the page because there is no reason to access these pages from the profile.
- Added the name and role input fields to make each individual profile more personal.
- Added an update button to save changes to the profile.
- Removed the Images as they were unneeded.
- Moved the Details box and button to the Order History page as that page was specifically designed for this information.