

COMP 3512 Assignment #2

Due Midnight-ish Monday November 18.

Version 1.0, September 23, 2013

Overview

You can work in groups of twos/three for this assignment. It is also possible to work individually, but I do strongly discourage it; please talk to me about this if you are planning on working by yourself. This assignment will allow you to apply the concepts and technologies covered in class to a “real” project situation. In this project, you will design and implement a web application for a fictional site that sells reproductions of famous art classics. Some parts of the site will be available to the public; other parts in the site will eventually (in assignment #3) only be available to site owners. By the end of the assignment you will have a non-trivial web application that can be a tremendous portfolio piece.

If working in a group, each member needs to take responsibility for and complete an appropriate amount of the project work. **Be sure to consult the instructor at least one week prior to the due date if your group is experiencing serious problems in this regard.**

Deliverables Summary

You must implement the use cases as described below in the use case section. As well, the following nonfunctional requirements **must** be met in this milestone:

- 1) The use cases must be implemented in ASP.NET. You will be using a version of the Art database (similar to that from the first assignment).
- 2) Your pages must **not** use the `SqlDataSource` control. Rather you must implement some type of layered architecture (a two-layer or three-layer model). There should be no ADO.NET coding in your presentation layer; you can use one of the approaches covered in Lab 6.
- 3) Be sure to make use of the appropriate features of ASP.NET. Be sure to use Master pages and user controls.

Submitting

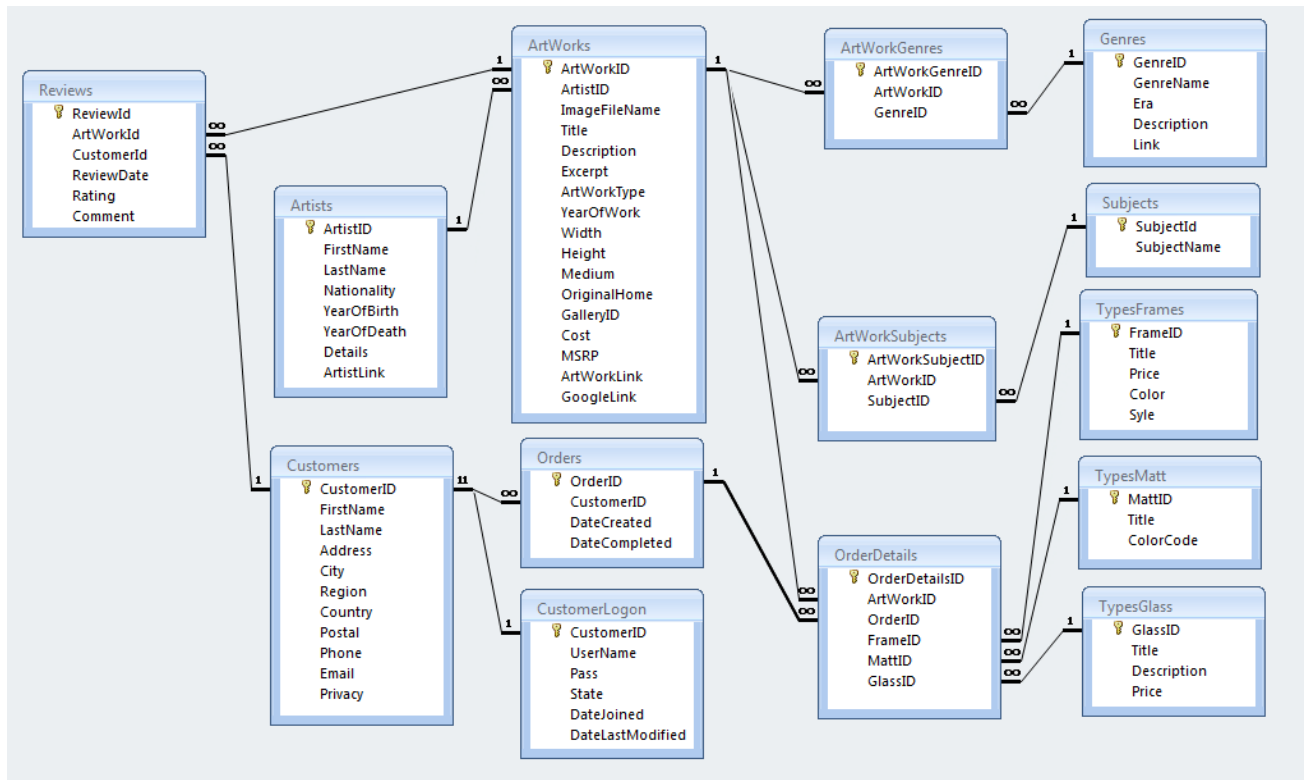
Put your assignment in a folder named `assign2_yourlogin` (e.g., `assign2_fsmi9876`). Put all resources used by your assignment into this folder. Copy this folder to the submit drive in B215. You will lose marks if you do not follow these submission instructions. Be sure to make the home page file name `Default.aspx`.

Grading

The grade for this assignment will be broken down as follows:

Usability and visual design	15%
Program design and documentation	15%
Features	70%

Database Schema



USE CASE NAME:	Bootstrap Theme and Site Design
DESCRIPTION:	Design site's appearance by customizing Bootstrap
1.	<p>Use the Customize facility in the Bootstrap website (http://getbootstrap.com/customize/), which allows you to create a customized CSS theme for Bootstrap.</p> <p>You may want to make use of a color scheme designer such as http://colorschemedesigner.com, http://www.colourlovers.com, https://kuler.adobe.com, or http://design-seeds.com if you need help coming up with a color scheme. Your color scheme must be different from the default Bootstrap install (and different also from those available from http://bootswatch.com).</p> <p>Your customized theme must use two fonts from the Google Web Fonts collection.</p> <p>Some of the changes you will want to make to your site, such as header and footer treatments, will require additional CSS formatting outside of Bootstrap.</p> <p>Minor style changes to the basic Bootstrap "look" will receive lower marks than those groups that make more substantial changes.</p>

USE CASE NAME:	Home Page
DESCRIPTION:	Home page for the web site
1.	<p>The system displays a logo and navigation system (see Navigation use case). It should also contain a carousel (see Bootstrap site) with at least three slides. Each slide should act as a promotion of what the site offers (i.e., it is marketing).</p> <p>Every page should display a certain number of relevant visual boxes that contain other related data. For the home page: top works/artists (based on sales), new additions (assume the order of the art works table is the order they have been added). From a design standpoint, these other boxes must be encapsulated as user controls.</p>

USE CASE NAME:	Navigation
DESCRIPTION:	The web site's navigation system.
1.	<p>The system must provide a way to navigate to different sections of the site. There should be a primary navigation system with links to Home Page, About Us, Advanced Search, and Browse. The browse must have a submenu (you can use Bootstrap's dropdown navigation) that provides options for browsing artists, art work, genres, or subjects. The primary navigation must be available everywhere in the site.</p> <p>There needs to be a utility menu that is available everywhere in the site. It must have links to View Cart, View Favorites List, My Account, Register and Login. The last three can simply be dummy links (the next assignment will add the ability to login and register).</p> <p>The system should also have a secondary navigation system that displays genres, subjects, and popular artists. The users can then click on any of these and go to either the Single Genre/Subject or the Search Results use case. There are too many artists to display all of them in the secondary navigation. Show just a small subset, namely, the top 10 based on sales and only show those that have works (hint SQL GROUP BY).</p>

USE CASE NAME:	About Us
DESCRIPTION:	Display information about this site
1.	The system will display information about this site. Be sure to mention that this site is hypothetical and was created as a term project for COMP 3512 at Mount Royal College taught by Randy Connolly. As well, be sure to list the group member names and roughly what parts of the project each member implemented.

USE CASE NAME:	Display Single Artist
DESCRIPTION:	System displays a single artist for view by any user.
1.	This use case is initiated when a user selects a single artist to display (e.g., clicks a link that takes the user to this page).
2.	<p>The system displays information about a single artist. This page will have the functionality of <code>Part02_SingleArtist.aspx</code> from assignment #1, except of course, it will have additional information on it. All of the information in the artists table should be displayed. There should be some way to view all the art works by the artist. (Note, if all you do is simply replicate exactly what you have already done in Assignment 1, then I won't be excessively impressed).</p> <p>This page must allow the user to add the artist to a session-based favourites list (i.e., go to the Add To Favorites use case). In this case, it will be added to the favorite artists list.</p> <p>Every page should display a certain number of relevant visual boxes that contain other related data. For artist page: Related Artists (use birth date and/or nationality). From a design standpoint, these other boxes must be encapsulated as user controls.</p>

USE CASE NAME:	Display Single Art Work
DESCRIPTION:	System displays a single art work for view by any user.
1.	This use case is initiated when a user selects a single art work to display (e.g., clicks a link that takes the user to this page).
2.	<p>The system displays information about a single art work (that is, it must start with the same functionality as your Part03_SingleWork.aspx from assignment 1). Be sure to turn data into hyperlinks when appropriate (e.g., artist, genre, etc). Most of the information in the ArtWorks table should be displayed, except Cost. You should also display the genres and subjects for this art work.</p> <p>Instead of displaying the OriginalHome field, you must display information about the related museum from the Gallery Table. Put the gallery information within a Bootstrap collapsible accordion element (see Javascript section of Bootstrap website). In the third assignment you will be adding a map of the gallery.</p> <p>This page must allow the user to add the art work to a session-based favourites list (i.e., go to the Add To Favorites use case). In this case, it will be added to the favorite art works list.</p> <p>This page must allow the user to add the art work to a session-based shopping cart (i.e., go to the Add To Cart use case).</p> <p>In the next assignment, you will also be integrating the ability to display and add reviews, so make sure your design can accommodate this change.</p> <p>Every page should display a certain number of relevant visual boxes that contain other related data. For works page: Related Works (use genre and/or subject), Other Customer Purchases (use order and order details table to display other works that customers also purchased who purchased the current work). From a design standpoint, these other boxes must be encapsulated as user controls.</p>

USE CASE NAME:	Simple Search
DESCRIPTION:	System allows user to search for artists or art works from a single search box.
1.	This use case is initiated when a user enters text into search box and hits some type of submit button or link. Note: this search box should be accessible everywhere in the site.
2.	<p>The system will search for results that match the art work title. The search should be a wildcard search (i.e., Like “searchvalue%”).</p> <p>The system goes to the Search Results use case.</p>

USE CASE NAME:	Advanced Search
DESCRIPTION:	System allows user to search for artists or art works that match a set of criteria
1.	This use case is initiated when a user selects an advanced search link/button.
2.	<p>The system allows the user to specify what kind of result they are looking for: artist or art work. The system will allow the user to specify different search criteria depending upon what kind of result they are looking for.</p> <p>If they are looking for matching artists, then the search criteria will be: artist name.</p> <p>If they are looking for matching art works, then the search criteria will be: art work title, year of work range, and cost range.</p> <p>The user can select art work criteria or artist criteria but not both at the same time.</p> <p>The system goes to the Search Results use case.</p>

USE CASE NAME:	Search Results
DESCRIPTION:	System displays a listing of search results
1.	This use case is initiated after the user makes a search request or clicks a listing-type link.
2.	The system will display, depending on the type of search, matching artists or art works, or both. Each result should have either the artist name and art work title as a link to the appropriate page. You must also add other information to each art work search result, such as images, or add to favorite or cart links.
3.	Provide the ability to change the sort order of the artists or art works. For the artist list, sort by last name but provide option for ascending or descending. For the art works list, provide option to sort by title, MSRP, or year, and provide option for ascending or descending.

USE CASE NAME:	Add To Favorites
DESCRIPTION:	Way to add an item to the user's favorites.
1.	Initiated when user clicks the Add item to favorites link/button.
2.	<p>The system will add the item to the appropriate favorites (i.e., artist or art work) list and then either go to the View Favorites use case or indicate visually somehow that the item has been added to the favorites.</p> <p>The favorites list only needs to last as long as that session. In the next assignment, where we will be adding user log ins, we will persist these favorites to user profiles.</p>

USE CASE NAME:	View Favorites
DESCRIPTION:	Way to view and modify the contents of user's favorites list.
1.	Initiated when user adds an item to the favorites list, or when user clicks the view favorites link/button.
2.	The system will display a listing of the contents of each of the two favorites list (with the same behaviour as the Search Results use case). Allow the user to modify the favorites list's contents (i.e., remove artist or art work).

USE CASE NAME:	Add To Cart
DESCRIPTION:	Way to add an art work to the user's shopping cart.
1.	Initiated when user clicks the Add item to Cart link/button.
2.	<p>The system will add the art work to the shopping cart list and then either go to the View Cart use case or indicate visually somehow that the item has been added to the Cart.</p> <p>Note: you will need to find out from the user the artwork's frame, glass, and matt options (from the database) each time a painting is added to the cart. Whether you do this on a separate page or on the same page the user was on when the Add To Cart button was clicked, is up to you. Note: the user should also have the option to have no frame, glass, or matt.</p> <p>The cart only needs to last as long as that session.</p>

USE CASE NAME:	View Cart
DESCRIPTION:	Way to view and modify the contents of user's shopping cart.
1.	Initiated when user adds an item to the cart, or when user clicks the view cart link/button.
2.	<p>The system will display a listing of the contents of the shopping cart list (with the same behaviour as the Search Results use case). Allow the user to modify the cart's contents (i.e., remove art works and change the quantity; if you want you can allow the user to also alter the frame, glass, and matt options. There should be a place to see the subtotal for each item in the cart as well as the total cost.</p> <p>Note: the subtotal = (MSRP + Frame Price + Glass Price + Matt Cost) * Quantity</p> <p>The matt cost is the same regardless of which matt was selected. Each matt costs \$25. The frame and glass prices are found in the database.</p> <p>Warning: this is probably the most difficult of all the use cases.</p>

USE CASE NAME:	Browse Genres
DESCRIPTION:	Section home for browsing genres
1.	The system displays a list that displays all the genres, along with their genre image (see art-images/genres) sorted by Era then GenreName. Each should be a link to Single Genre case.

USE CASE NAME:	Browse Subjects
DESCRIPTION:	Section home for browsing subjects
1.	The system displays a list that displays all the subjects, along with their subject image (see art-images/subjects) sorted by SubjectName. Each should be a link to Single Subject case.

USE CASE NAME:	Single Genre
DESCRIPTION:	Displays information for a single genre
1.	<p>The system displays information from genre table for specified single genre.</p> <p>It must also display list of all art works for that genre with the same functionality as the Search Results case (hint encapsulate this functionality as user control so no code duplication between pages).</p>

USE CASE NAME:	Single Subject
DESCRIPTION:	Displays information for a single subject
1.	<p>The system displays list of all art works for that subject with the same functionality as the Search Results case (hint encapsulate this functionality as user control so no code duplication between pages).</p>

Guidance

This is substantial assignment and your group will likely need to invest 50-70 hours into it. I would recommend the following process.

1. This is a data-driven site, so I would recommend beginning by constructing the data access layer: you can use that provided in Lab6 as your starting point. To begin, create data access objects for Artist, ArtWork, Genres, Subjects, and Galleries. The architecture provided in lab6 gives you `GetAll()` and `GetByID()` functionality already. You will need to add additional methods that match the functionality required by the use cases. For instance, the ArtWorks data access object, will also need methods such as `GetForArtist()`, `GetForGenre()`, `GetForSubject`, `GetTopSellers()`, and `GetOtherCustomerPurchases()`. All these other methods are simply wrappers for different SQL statements. Some of these methods can be implemented as you need them.
2. Write testers for each data access object so that you know each works as expected.
3. Construct your user interface using master pages and user controls.
4. Customize the bootstrap design.
5. Implement the search results page.
6. Add session abilities for favorites lists.
7. Add session abilities for shopping cart.
8. Implement the edit cart as the very final case. If you can't integrate the frame, matt, and glass information into the cart, try at least to complete the rest of the case .