cView App – Phase 4

Instructor: Dr. Raman Adaikkalavan

Points: 25 Assigned: 6/17/15 @ 8 a.m. Due: 6/24/15 @ 8 a.m.

!!! START TODAY !!!

PROJECT DESCRIPTION

From Phase 1: Open source software spurs innovation and competition. Open data allows citizens to learn more about their city, state, country, and even more. It allows them to explore all services offered, status of various items, financial health, and much more. Currently, many government entities have made their data open (see http://www.data.gov), so that citizens can use them. As software developers, one of the main goal is to convert data to meaningful information and make them easily accessible to general public. For instance, look at some of the current apps that process open data @ http://www.data.gov/applications

Fortunately, City of South Bend has made its data open https://data.southbendin.gov/

This semester, we will build an app that allows us to explore some of this data, and present them in a meaningful way. Our main goal is to explore C# programming and we will use this app building experience to learn C# and many of its features. This app will be built via multiple phases throughout the semester.

From Phase 2: In phase 1, you visited South Bend Open Data website and explored various data sets available. You should have explored the following three data sets:

1) Business Licenses: https://data.southbendin.gov/Business/Business-Licenses/imxu-7m5i
2) Parks and locations: https://data.southbendin.gov/Parks-Recreation/Parks-Locations-and-Features/yf5x-7tkb
3) Public facilities: https://data.southbendin.gov/Health-Human-Services/Public-Facilities/jeef-dsq9

In phase 2, you created a C# app (Console or UI) by creating classes (no inheritance, interface, etc.) and Lists of objects of the classes to store one data set different from Phase 1 and 5 fields

From Phase 3: In phase 4, you created an OOP cView App that read inputs from CSV and performed manipulations.

PHASE 4 DESCRIPTION

For this phase, create a C# app (ASP.NET) meeting the following requirements:

- Convert Phase 3 to ASP.NET
- Use the same data from Phase 3.
  - Store each csv file into three separate tables (Park, Business, and Facility) in the IU Microsoft SQL Server database.

        - For each CSV file choose 50 rows randomly (there are multiple ways to import CSV to SQL Server. Here is an example. http://blog.sqlauthority.com/2012/06/20/sql-server-importing-csv-file-into-database-sql-in-sixty-seconds-018-video/)
    - Create ADO.NET Entity Framework Model for all the DB tables and manipulate the tables via the auto created classes.
    - For the menu use a Menu.aspx page. Each menu item should have its own page. For instance, Search will have Search.aspx Do not implement Load and Exit functionalities.
        - For displaying data use list view or grid view, etc. No need to be fancy. Just a clean and understandable interface will be goal for the UI. Make sure the functionalities work.
    - For the statistics option, use LINQ to calculate all the following statistics and display
        - Total Number of Parks
        - Total Number of Parks grouped by Park Types
        - Total Number of Businesses
        - Total Number of renewals for each Business
        - Total Number of Facilities that has the substring "Fire"
- **Only for Graduate Students:**
    - Include Authentication. There should be a login page where users should be able to login. The data for each user should be separately maintained in the three tables. If need add separate table for storing user information, and also additional fields for these basic tables for storing used IDs.
    - If any page is opened directly, take them to the authentication page first. You can accomplish this using session variables.

CHECKLIST

- Include program (Name, Assignment Info, Date, Your Info, Language Used, etc.) and function (input, output, purpose) headers
- Include comments for each logical block
- Use constants where required. Avoid using literals.
- Check for valid inputs
- You application must use only the C# components (or things closely related) discussed so far in this course. If you are not sure, send me a message well ahead of time for my inputs.

SUBMISSION

- Name the project as cView-P#-yourName (where # is the phase number)
- Run your program. Capture the screen shots to demonstrate the program's execution using Sniptool or other software and store the screen shots in a word document. Convert the word document to a PDF and name the PDF as cView-P#-yourName.pdf Submit the PDF file with screen shots.
- Zip the entire cView-P#-yourName Visual Studio folder and upload the zip file cView-P#-yourName.zip to Oncourse
- Upload cView-P#-yourName.pdf to Oncourse
- Zip and upload the .csv files (cView-P#-CSV-yourName.pdf to Oncourse

- Upload your SQL commands used to create tables vas cView-P#-SQL-yourName.txt to Oncourse
- Submit printouts of the source (.cs), sql (.txt), and snapshot (.pdf) files