cView App – Phase 2

Instructor: Dr. Raman Adaikkalavan

Points: 40   Assigned: 6/3/15 @ 8 a.m.   Due: 6/10/15 @ 8 a.m.

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.

For Phase 2: From the Hack Michiana Organizers

civic hacker (n): *one who collaborates with others to create, build, and invent open source solutions using publicly-released data, code and technology to solve social, economic, and environmental challenges relevant to their neighborhood, city, state, or country.*

Come work with Hack Michiana and join with thousands of people from across the US for National Day of Civic Hacking! The event will bring together civic hackers, urbanists, developers, designers, community organizers, government staff, and anyone with a passion to make our community better. Let's join together to collaboratively build new solutions to improve our community and local government. Anyone can participate; you don't have to be an expert in technology, you just have to care about your neighborhood and community. Work on a project to benefit our local community, or on one of a multitude of national challenges

WHERE: IU South Bend Education & Arts Building
WHEN: Saturday, 6 June 2015, 9am to 9pm
HOW: Sign up via the EventBrite link - http://www.eventbrite.com/e/hack-michiana-national-day-of-civic-hacking-2015-tickets-16364621022
- There are three levels of participant tickets
    - Regular - $15
    - Student Discount - $7.50 - use code HMSTUDENT
    - Waived - contact Hack Michiana brigade leader Beth Harsch <bharsch@codeforamerica.org> to get a need-based discount
- *The fee provides participants with lunch, snacks, and a tee-shirt, and does not cover all of Hack Michiana's expenses. However, if cost is a limiting factor in your attendance, Hack Michiana still wants all participants from the IUSB community and can waive the fee.*

LEARN MORE:
- Civic hacking video from the Sunlight Foundation - https://www.youtube.com/watch?v=kDFhzNfd-bg
- Hack Michiana & National Day of Civic Hacking - http://hackmichiana.org
- Code for America - http://www.codeforamerica.org
- White House celebrates civic hackers - https://www.whitehouse.gov/champions/civic-hacking-and-open-government

PHASE 2 DESCRIPTION

In the previous phase, 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

For this phase, create a C# app (Console or UI) meeting the following requirements:
- Choose one data set different from Phase 1 and 5 fields
- Create classes (no inheritance, interface, etc.) and Lists of objects of the classes to store the data set
- Your Main() should be as simple as possible and should have menus and object method invocations
- You app should be able to do the following and also use the specified C# components
  - Menu with options
    - Option 1) add an item with values for all 5 fields through user input
    - Option 2) modify an item through user input
      - Display all the stored items and ask the user to choose an item
      - Display all the fields and ask the user to choose a field to modify
      - Get the new value for that field and replace the old value
    - Option 3) search based on user input and display the matched results
      - Display the possible fields and ask the user to choose a field for searching
      - Get the value for the search. Use LINQ and search and display the output.
    - Option 4) delete based on user input
      - Display all the stored items and ask the user to choose an item
      - Delete the chosen item
      - Display all the stored items again
    - Option 5) display all the stored items
      - Override ToString() method of each class and use it for displaying objects.
    - Option 6) exit

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

- ❖ Submit printouts of the source (.cs) and snapshot (.pdf) files