CSC 3380 Milestone #3 Guidelines

Milestone 3 is due at 11Pm, March 17

Now that you have your system architecture nailed down, you are ready to use top-down design to further flesh out the design of your system. To do this, you will take each system component and create a design for that component by developing a component diagram for it. You will continue the process of "drilling down" until you reach a level of granularity that you can hand off the component to a team member to implement without further refinement of the design. During this process, you may (probably will) find that you need to make some changes to your architecture. That's to be expected.

For milestone 3, your project portfolio should be updated to capture any changes that the team has made and be extended to include the details of component designs. Class diagrams are not required for this milestone

The System Architecture designed for Milestone #2, is the basis for a set of component designs:

- For each component in your System Architecture, you will provide a section in your project portfolio that details the design of that component. The Component Designs will include the following:
    - A short paragraph (2-3 sentences), describing the component's functional responsibilities.
    - Interfaces
        - A short description of each interface
        - Detailed specification of the interfaces.
            - The specification should provide sufficient information that another component that needs to interface with this component knows how to do so.
            - To accomplish this, you should provide the set of formal parameter lists along with secondary storage requirements. For example, if a method in the interface provides the location of a data file as a parameter, then you need to include how the data in the file needs to be formatted.
    - External data sources
        - Identify any external data sources that the component will access
        - Provide the details on how the external data source is accessed (e.g., provide a link to the Spotify API)
    - If the component is not at a level that it can be directly implemented without further design refinement
        - Create a component diagram for the component, to include subcomponents, interfaces, data flow, etc.; The component diagram and corresponding data flow diagram should be similar to the System Architecture, but at the component level;
        - Continue the top-down design process, drilling down until all components in the set of component diagrams are at a level that can be directly implemented without further design refinement

        - Note: Once this step is complete, team members should be able to grad a component design and begin working on implementing it
    - Control Flow
        - Capture the control flow of the system architecture and the top-tier of components in your system. You do not need to capture all control flow of the sub-components of your system
        - Control flow can be captured using algorithms, pseudocode, flow charts, or UML control flow diagrams. Different methods may be better specified using different techniques, so you do not have to pick one method for use by all components.

This work should be divvied up among team members. Each EA diagram in the project portfolio should identify the name of the team member that developed the diagram. Each team member should develop at least one UML component diagram for the milestone deliverable.

Your project portfolio should follow the outline provided at the project kickoff, where highlighted areas denote new document content:

- Description of problem & proposed solution
- Team Structure
    - Team member/ role(s)/ responsibilities
- Requirements
    - Stakeholder Issued Requirements
    - Epics
        - User Stories
            - Acceptance Criteria
- Design
    - System Architecture in Enterprise Architecture
        - User I/O
        - External Data Sources
        - Major Components
            - Interfaces
            - Data Flow
    - **Component Designs in Enterprise Architecture**
        - **Interfaces**
        - **External Data Sources**
        - **Subcomponents, as applicable**
        - **Data Flow**
        - **Control Flow**

You will need to submit the following source code for the milestone submissions, where highlighted areas denote new source code requirements:

- eapx file(s) of System Architecture
- **eapx files of all component designs**
- Zip of all source code implemented at this point