Software Reference Architecture Project

Instructions
In this assignment you will create a Software Reference Architecture (SRA) document for a fictitious Information Technology department of a large government agency. Your SRA should include at least one software framework. You can assume that the data storage is part of software because it normally uses a database.

Before beginning the project read Reference Architecture Description by the Office of the Assistant Security of Defense at
http://dodcio.defense.gov/Portals/0/Documents/DIEA/Ref_Archi_Description_Final_v1_18Jun10.pdf
This explains how to create a Reference Architecture document. This document was primarily created for Network Reference Architecture, but we are going to write a Software Reference Architecture. But we can still learn a lot from this document.

Outline
Please use the following sample outline, which is modified from Appendix A in Reference Architecture Description. Feel free to add sub-sections (ie x.x.x) if needed.

3.3 Data Archiving

4 Software

    4.1 Business Logic
    4.2 User Interface

5 Technical Positions

Additional Instructions
In section 2.3 you need to align your architecture with the priorities of the organization. Consider these four guiding priorities.

1. Like most government agencies cost is a very important factor. Congress can increase or decrease you budget at any time. So, you have to build an architecture that has low maintenance and purchase costs.
2. All government agencies must comply with government regulations. One major one is the Freedom of Information Act (FOIA) which provides government information to people that request it in a timely manor.
3. 508 is a regulation that requires systems to be handicap accessible.
4. Other government regulations prohibit certain types of information to be stored about US citizen beyond a certain date. For example, this type of information can only be stored for 30 days for US citizens.

Hints
This can be a very difficult project. Most organizations have a Software Reference Architecture but there is no real standard. Many organization don't even have it documents or even call it a Software Reference Architecture. But by talking with them you can quickly realize that they have these standards. More mature organizations document their Software Reference Architecture, but there is no real standard format.

Begin by thinking back across all of the courses you have taken. Try to develop a list of common problems that occur when building software. Depending upon the size of your list you might have to narrow it down to major issues.

We have already discussed the benefits of everyone in an organization performing a task the same way. Next think of good solutions to these problems. In many organizations Non-functional Requirements are such solutions.

Remember to write clearly.

Rubric
1. Includes a software framework and the framework is used correctly. (25%)
2. Solve specific recurring problems in a problem space; explain context, goals, purpose and problem solving. (25%)

3. Alignment with priorities. (25%)
4. Clearly written and free of spelling and grammar mistakes. (25%)