**Software design document Deliverables**

Follow the design template at the end + have a look at design document sample posted.

Sections 1-3 can be reused from the requirements/specification document.

**Software Design**

1. **Introduction (reuse from specification document)**  
     
   This section provides an overview of this entire document.  
   1. Project Overview  
      Describe the client, the problem to be solved, and the intended users. Explain the context in which your software will be used, i.e. the big picture. (1 – 3 paragraphs).
   2. Project Scope  
      Mention the *most* important features of the system, inputs, data stores, and outputs. Do not discuss implementation details. Note any major constraints. (1 – 5 paragraphs)
   3. Document Preview  
      Describe the purpose, scope of this document, and intended audience of this document. Mention the major sections that follow. Provide references to companion documents. (1 - 2 paragraphs)
2. Overall Description (reuse from Specification document)
3. System Features (reuse from Specification document)
4. **Design**

4.1 Architectural design  
 Provide a summary of the contents of this section. (1 – 2 paragraphs)

* + 1. General Constraints  
       Describe global limitations or constraints that have a significant impact on your system design. Examples include hardware and software environments, interface requirements, external data representations, performance requirements, network requirements, etc. (1 – 3 paragraphs)
    2. Program Structure  
       Describe the architectural model chosen and the major components. Architectural style being used and + justifications + architectural views (as many as needed)
    3. Alternatives Considered  
       Discuss the alternative architectural models considered and justify your choice for your architectural design. (1 – 2paragraphs)
    4. Include Architectural views (4+1 views) – note, not all views will be necessary.
  1. Design overview – Class Model  
     Section Overview  
     Provide a summary of the contents of this section. (1 – 2 paragraphs)  
     1. General Constraints  
        Describe global limitations or constraints that have a significant impact on your system design. Examples include hardware and software environments, interface requirements, external data representations, performance requirements, network requirements, etc. (1 – 3 paragraphs)
     2. Program Structure  
        Describe major components. Including a class model. GoF patterns used (if any) and why
     3. Alternatives Considered  
        Discuss the design decisions and justify them

1. **Detailed Design**
   1. Section Overview  
      Provide a summary of the contents of this section (1 paragraph)

5.2 Detailed Design

* **Note:** Each group member should pick a meaningful class and provide a detail design for this class ( I would like to see each team member to describe 3-4 methods – no set/get functions
  + Pre/post conditions
  + Constraints
  + Dependencies to other classes/methods
  + Pseudo code => intermediate representation of the implementation
  + Algorithms => specify any algorithms if applicable
  + Data structures accessed => make sure that any major data structure accessed is clearly described.

1. **User Interface Design**
   1. Section Overview  
      Provide a summary of the contents of this section. (1 paragraph )
   2. Interface Design Rules  
      Describe and justify the conventions and standards used to design your interface. You may be able to re-use some of the material prepared for CS 480 documents in this section. (1 – 2 paragraphs)
   3. GUI Components  
      Note the GUI components or API's provided in the development environment that you plan on using. (1 paragraph + table)
   4. Detailed Description  
      Provide a detailed description of the user interface including screen images. You may prefer to reference an appendix containing the screen snapshots. (1 – 4 pages)
2. **Conclusion**  
   Provide an ending to this document with a mention of implementation and testing strategies resulting from this design (1 –2 paragraphs)