Software Design Description (SDD) IEEE 1016

For reference: <https://www.dropbox.com/s/gtserxb2frn5d1e/1016-2009.pdf?dl=0>

Note: for any section not used, explain why that section was omitted.

**Section 1: Introduction (Purpose, scope, definitions, references)**

This section can be very similar to your SRS. Just provide enough detail to give an overview of the project and give the developers an idea behind the history of the project and the involved stakeholders.

**Section 2: Requirements**

This section will also come from your SRS and should be numbered the same as they were in your SRS, but the presentation can differ if needed. The idea is to provide the information in such a way that your developers won’t have to go back to the SRS if they want to see the original requirements.

**Section 3: Data design (if appropriate)**

A detailed description of how the data will be stored and/or transformed by the application. Diagrams and graphs are better than narrative.

**Section 4: Architecture**

A detailed description for the chosen architecture for the system and why it was the chosen architecture. This should be a known architecture or a combination of known architecture. You’ll want to research to see what is most appropriate to your design.

<https://en.wikipedia.org/wiki/Architectural_pattern>

<https://towardsdatascience.com/10-common-software-architectural-patterns-in-a-nutshell-a0b47a1e9013>

**Section 5: Component design**

Your design should be modularized. This section should describe that modularization. This should be a big picture overview of the different components of the system as well as a class design assuming you are using OO design. Your final product doesn’t have to match this exactly, but I would suspect it is close. You’ll need to do a compare/contrast at the end of the semester to explain how your final product matched your design.

**Section 6: OO design**

I’m assuming you are all writing in some form of OO design. In this section, create UML like diagrams outlining all your class objects. These should map back to your component level design.

**Section 7: Interface design**

System interface design: This should lay out all of the components of your system and how they interface with each other. Remember this document is for developers so you want high technical detail.

User interface design: I think interface design is extremely important even in the beginning to help bring the design together. This should include a mock-up of the interface, and any other details the developers will need to know.

**Section 8: Pattern(s) used**

Describe the patterns or patterns used in your design or that you plan to use in your design. You’ll have a chance to revisit this for your final package.

**Section 9: Design Concept Review**

Explain how your design will reflect the 14 design concepts presented in class.

**Section 10: Architectural design considerations**

Explain how your design addresses the 5 architectural design considerations.

**Section 11: Component design principles**

Explain how your design accounts for the 7 component design principles.

You may copy from your SRS without citations.

Include a cover page, revisions history, and version number.

Include author, co-author, editor, etc..

Include a signoff section for each team member to approve the final document

Make sure your final document is professional, complete, and correct.