

# Software Design Document Template

CptS 322—Software Engineering

18 March 2005

The following annotated template shall be used to complete the Software Design Document (SDD) assignment of WSU-TC CptS 322. The instructor must approve any modifications to the overall structure of this document.

## **Template Usage:**

Text contained within angle brackets (<’, >’) shall be replaced by your project-specific information and/or details. For example, <Project Name> will be replaced with either ‘Smart Home’ or ‘Sensor Network’.

Italicized text is included to briefly annotate the purpose of each section within this template. This text should not appear in the final version of your submitted SDD.

This cover page is not a part of the final template and should be removed before your SDD is submitted.

## **Notes:**

The *Decomposition description*, *Dependency description*, and *Interface description* sections are effectively describing the architectural design of your document. The *Detailed design* section provides the detailed design of your project.

If a section or subsection does not apply, do not eliminate the section or subsection heading. After the heading simply state something to the effect of “does not apply”, “no requirements specified”, etc. At your discretion you may remove sub-subsections (e.g., only one module or entity needs to be described, see the book for examples).

## **Acknowledgements:**

This document is based in part upon the outlines given text by Braude, which in turn is based upon the IEEE Software Design Document (SDD) standard 1016-1987 (reaffirmed 1993).

<Project Name>

## Software Design Document

<Version>

<Date>

<Your Name>

Lead Software Engineer

Prepared for  
WSU-TC CptS 322—Software Engineering Principles I  
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Spring 2005

<Project Name>

## Revision History

<b>Date</b>	<b>Description</b>	<b>Author</b>	<b>Comments</b>
<date>	<Version 1>	<Your Name>	<First Revision>

## Document Approval

The following Software Design Document has been accepted and approved by the following:

<b>Signature</b>	<b>Printed Name</b>	<b>Title</b>	<b>Date</b>
	<Your Name>	Lead Software Eng.	
	A. David McKinnon	Instructor, CptS 322	

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## **1. Introduction**

*The introduction to the Software Design Document (SDD) document should provide an overview of the complete SDD document. While writing this document please remember that this document should contain all of the information needed by a software engineer to adequately implement the software product described by the design requirements listed in this document.*

### **1.1 Purpose**

*What is the purpose of this SDD and the (intended) audience for which it is written.*

### **1.2 Scope**

*What is the scope of this SDD? What will be covered, what will not be covered, etc.*

### **1.3 Definitions, Acronyms, and Abbreviations**

*This subsection should provide the definitions of all terms, acronyms, and abbreviations required to properly interpret the SDD. This information may be provided by reference to one or more appendixes in the SDD or by reference to other documents.*

## **2. References**

*This section should:*

- (1) Provide a complete list of all documents referenced elsewhere in the SDD, or in a separate, specified document.*
- (2) Identify each document by title, report number - if applicable - date, and publishing organization.*
- (3) Specify the sources from which the references can be obtained.*

*This information may be provided by reference to an appendix or to another document.*

## **3. Decomposition Description**

*See the book's example SDD in Chapter 5 for guidance in completing this section.*

<Project Name>

### **3.1. Module decomposition**

#### **3.1.1. Module 1 description**

#### **3.1.2. Module 2 description**

### **3.2. Concurrent process**

#### **3.2.1. Process 1 description**

#### **3.2.1. Process 2 descriptions**

### **3.3. Data Decomposition**

#### **3.3.1. Data entry 1 description**

#### **3.3.2. Data entry 2 description**

### **3.4. State Model Decomposition**

#### **3.4.1. State model 1 description**

#### **3.4.2. State model 2 description**

### **3.5. Use Case Model Decomposition**

#### **3.5.1. Use case model 1 description**

#### **3.5.2. Use case model 2 description**

## **4. Dependency Description**

*See the book's example SDD in Chapter 5 for guidance in completing this section.*

### **4.1. Intermodule dependencies**

### **4.2. Interprocess dependencies**

### **4.3. Data dependencies**

### **4.3. State dependencies**

### **4.3. Data dependencies**

## **5. Interface Description**

*See the book's example SDD in Chapter 5 for guidance in completing this section.*

<Project Name>

## **5.1. Module interface**

### **5.1.1. Module 1 description**

### **5.1.2. Module 2 description**

## **5.2. Process interface**

### **5.2.1. Process 1 description**

### **5.2.2. Process 2 description**

## **6. Detailed Design**

*See the book's example SDD in Chapter 6 for guidance in completing this section.*

### **6.1. Module detailed design**

#### **6.1.1. Module 1 detail**

#### **6.1.2. Module 2 detail**

### **6.2. Data detailed design**

#### **6.2.1. Data entity 1 detail**

#### **6.2.2. Data entity 2 detail**

## **7. Change Management Process**

*Identify and describe the process that will be used to update the SDD, as needed, when project scope or requirements change. **Who** can submit changes and by **what means**, and **how** will these changes be approved.*

## **A. Appendices**

*Appendices may be used to provide additional (and hopefully helpful) information. If present, the SDD should explicitly state whether the information contained within an appendix is to be considered as a part of the SDD's overall set of requirements.*

*Example Appendices could include (initial) conceptual documents for the software project, marketing materials, minutes of meetings with the customer(s), etc.*

### **A.1 Appendix 1**

### **A.2 Appendix 2**