Section 1: Introduction

Title

* 1. Describe the purpose of this document

Record all the design process and results.

* 1. Describe the scope of this document

System design specification and database design and web design.

* 1. Describe this document's intended audience

Software developer and programmers.

* 1. Identify the system/product using any applicable names and/or version numbers.

none

1.5 Provide references for any other pertinent documents such as:

• Related and/or companion documents

• Prerequisite documents

Software requirement specification

• Documents which provide background and/or context for this document

• Documents that result from this document (e.g. a test plan or a development plan)

1.6 Define any important terms, acronyms, or abbreviations

Section 2: System Overview

Provide a general description of the software system including its functionality and matters related to the overall system and its design.

This system will provide a web-based platform for students to exchange books.

Section 3: Design Considerations

3.1 Assumptions and Dependencies

3.2 General Constraints

3.3 Goals and Guidelines

3.4 Development Methods

Section 4: ArchitecturaI Strategies

4.1 Use of a particular type of product (programming language, database, library, etc.)

PHP

MySQL

4.2 Reuse of existing software components to implement various parts/features of the system

4.3 Future plans for extending or enhancing the software

4.4 User interface paradigms (or system input and output models)

HTML, CSS

4.5 Hardware and/or software interface paradigms

none

4.6 Error detection and recovery

none

4.7 Memory management policies

4.8 External databases and/or data storage management and persistence

MySQL

4.9 Distributed data or control over a network

Web based

4.10 Generalized approaches to control

Web based

4.11 Concurrency and synchronization

Web based

4.12 Communication mechanisms

http protocol

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Section 5: System Architecture

This section should provide a high-level overview of how the functionality and responsibilities of the system were partitioned and then assigned to subsystems or components.

5.1 component-1 (subsystem-1) name or description

5.2 component-2 (subsystem-2) name or description

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5.n component-n (subsystem-n) name or description

Section 6: DetaiIed System Design

6.1 module-1 name or description

6.2 module-2 name or description

• Definition

The specific purpose and semantic meaning of the component. This may need to

refer back to the requirements specification.

• Responsibilities

The primary responsibilities and/or behavior of this component. What does this

component accomplish? What roles does it play? What kinds of services does it provide to its clients? For some components, this may need to refer back to the requirements specification.

• Constraints

Any relevant assumptions, limitations, or constraints for this component. This

should include constraints on timing, storage, or component state, and might include rules for interacting with this component (encompassing preconditions, postconditions, invariants, other constraints on input or output values and local or global values, data formats and data access, synchronization, exceptions, etc.)

• Composition

A description of the use and meaning of the subcomponents that are a part of this

component.

• Uses/Interactions

A description of this component collaboration with other components. What other

components is this entity used by? What other components does this entity use (this would include any side-effects this entity might have on other parts of the system)? This concerns the method of interaction as well as the interaction itself.

• Resources

A description of any and all resources that are managed, affected, or needed by

this entity. Resources are entities external to the design such as memory, processors, printers, databases, or a software library. This should include a discussion of any possible race conditions and/or deadlock situations, and how they might be resolved.

• Processing

A description of precisely how this component goes about performing the duties

necessary to fulfill its responsibilities. This should encompass a description of any algorithms used; changes of state; relevant time or space complexity;

concurrency; methods of creation, initialization, and cleanup; and handling of exceptional conditions.

• Interface/Exports

The set of services (resources, data, types, constants, subroutines, and exceptions)

that are provided by this component. The precise definition or declaration of each such element should be present, along with comments or annotations describing the meanings of values, parameters, etc. .... For each service element described, include (or provide a reference) in its discussion a description of its important software component attributes (Classification, Definition, Responsibilities, Constraints, Composition, Uses, Resources, Processing, and Interface).

Section 7: GraphicaI User Interface Design

GUI Design. Picture copy/paste

Section S: GIossary

An ordered list of defined terms and concepts used throughout the document.