

## **Design Document Version 0.0**

*Description of Project*

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## Version History

REVISION CHART			
Version	Author(s)	Description of Version	Date Completed

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Prepared by:

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# 1 Introduction

Provide a brief introduction to the system for which this design is being undertaken.

## 1.1 Purpose of this document

---

Describe the purpose of the document and its intended audience.

## 1.2 Document Overview

---

Outline the main sections in this document, e.g.:

- Chapter 1 – Describe the contents of this chapter.
- Chapter 2 – Describe the contents of this chapter.
- Chapter 3 – Describe the contents of this chapter.
- Chapter 4 – Describe the contents of this chapter.
- Chapter 5 – Describe the contents of this chapter.

## 1.3 Identification

---

Include a full identification of the system and software to which this document applies, including, identification number(s), title(s), abbreviation(s), version number(s), and release number(s).

Identify all standards (ANSI, ISO, IEEE, etc) that apply to the design document.

## 1.4 Scope

---

Describe the scope of the design document (and also what is outside of scope); scope of the requirements definition effort and outline the requirements elicitation team, e.g. users, customers, and developers.



## 1.5 Relationship to Other Plans

---

Describe this document's relation to other plans, such as:

- Program Management Plan
- Configuration Management Plan
- Software Quality Assurance Plan

## 1.6 References

---

List any documents that are related to the document, e.g. technical specifications and administration guides. Include the version number, if appropriate.

## 1.7 Methodology, Tools, and Techniques

---

Describe the software tools (or techniques) required for performing the design documents tasks, e.g. software for managing changes requests.

## 1.8 Policies, Directives and Procedures

---

Outline the policies and procedures that apply to this document. Identify any external constraints or requirements placed on this document by policies, directives, or procedures.

## 1.9 Key Stakeholders

---

Outline the project's key stakeholders, for example:

- John Q Public, the client's representative
- Jane Q Public, Head of IT Dept.
- James Q Public, Head of QA Dept.

## 1.10 Points of Contact

---

List the main points of contact for this document, e.g. for troubleshooting purposes. Include the type of contact, contact name, department, telephone number, and e-mail address.

List the organizations that require coordination between the project and its specific support function (e.g., Development Dept, Testing Dept., Marketing Dept.). Include a schedule for coordination activities.

---

## 2 Design Overview

Give a brief introduction to the proposed system or application. Outline how the system will fit into the company's business and technology environments, and discuss any strategic issues if appropriate.

### 2.1 Background Information

---

Outline any background information that is relevant to the propose design.

### 2.2 System Evolution Description

---

Outline the step-by-step procedure to migrate the existing system(s) to a more efficient system, or alternately moving an existing system to a future implementation.

### 2.3 Technology Forecast

---

**[Optional]** Outline the emerging technologies that are expected to be available in a given timeframe(s), and how they may impact the future development of system the architecture.

### 2.4 Application Overview

---

Describe how the product was defined after the requirements elicitation process.

### 2.5 Current Process

---

Describe the current process that is in place (if applicable).

### 2.6 Proposed Process

---

Describe the proposed process. Reference any supporting documents, if relevant.

## 2.7 Business Context

---

Identify the organization and project stakeholders sponsoring the product development, including the organization's mission statement, goals, and objectives.

## 2.8 Constraints

---

Detail any constraints that were placed upon the requirements elicitation process, such as schedules, costs, or the software engineering environment used to develop requirements.

## 2.9 Risks

---

Identify the risks associated with the document, including contingency strategies.

Risk	Low	Med.	High	Contingency

*Table 1 — Risks*

## 2.10 Issues

---

List any outstanding issues that may affect the design document.

Ref	Issue	Action
1.		
2.		
3		

*Table 2 — Issues*

## 2.11 Assumptions

---

List all assumptions regarding the design effort.

Ref	Assumption	Impact
1.		
2.		
3		

*Table 3 — Assumptions*

## 2.12 Dependencies

---

List the main dependencies regarding the design effort.

Ref	Dependency	Action
1.		
2.		
3		

*Table 4 — Dependencies*

---

## 3 Scope of Work

In this chapter, describe the business and technical requirements that the customer has requested. Outline the scope of work, including the inputs, processing functionality, and outputs.

### 3.1 System-wide design decisions

---

Provide a functional decomposition chart detailing the functions performed by the systems and the information flow among system functions.

Use a Physical Data Model to illustrate the implementation of the data of the Logical Data Model, e.g., message formats, file structures, physical schema.

Divide this section into paragraphs as required to present system-wide design decisions, e.g. system behavioral design.

### 3.2 System Functions

---

Provide an overview of the system's main functionality. Include a graphical representation if appropriate.

### 3.3 Similar System Information

---

Describe the relationship of the system with any other systems. Confirm if it is stand-alone solution or a component of a larger system. In the latter case, outline the relationship among the systems.

### 3.4 User Characteristics

---

Describe the features of the user community, and their proficiency with software systems etc.

### 3.5 User Problem Statement

---

Describe the major problem(s) experienced by the user community.

## **3.6 User Objectives**

---

Outline the users' objectives and requirements for the new system. Where appropriate, include a "wish list" of desirable features.

## **3.7 Performance Requirements**

---

Describe the performance requirements.

## **3.8 Security Requirements**

---

Describe the security, privacy, and control requirements.

## **3.9 Hardware Interfaces**

---

Describe interfaces to hardware devices.

## **3.10 Communications Interfaces**

---

Describe the network interfaces.

## **3.11 Software Interfaces**

---

Describe any additional interfaces not captured in the sections above.

## **3.12 Design Constraints**

---

Specify any constraints for the design team using this document.

- Standards Compliance
- Hardware Limitations
- And others as appropriate

### 3.13 Data Dictionary

---

Outline the data elements to be included in the physical schema. Each data element requires the following information:

- Data Element Name
- Data Format/Length
- Data Type
- Definition
- Specifications
- Synonyms
- User Defined Name
- User Synonyms

### 3.14 Data Analysis

---

Describe the data elements, characteristics, and their behavior values.

Data Element	Characteristics	Behavior

*Table 5 — Data Analysis*

### 3.15 Output Specifications

---

Describe the output specifications that exist for this project.

### 3.16 Decision Tables

---

Outline the decision tables required to make decisions during processing.

Business Data Condition	Action	Output

Table 6 — Decision Tables

### 3.17 Logical Database Model

---

Describe the logical database model. Include a graphical representation, if appropriate.

### 3.18 Data Conversion

---

Describe the process to convert the existing data from the legacy system, e.g. storage details, conversion process, database details, and location.

### 3.19 Value Definitions

---

Describe the value of each unit of code in the system.

Field	Code	Value

Table 7— Value Definitions



### 3.20 External System Dependencies

---

Describe the dependencies the new system has on other [external] systems.

External System	Dependency

*Table 8 — External System Dependencies*

### 3.21 Data Validation

---

Discuss the process/procedures to maintain data integrity within the database.

### 3.22 Data Migration and Transformation

---

Provide a data migration map and data migration/transformation plan.

Outline the various options for managing 'bad data.'

Describe the process to move existing data and transform/migrate it into the correct values/format of the new application.