

Design Document Version 0.0

Description of Project

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Version History

REVISION CHART			
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Table of Contents

1	Introduction	7
1.1	Purpose of this document	7
1.2	Document Overview	7
1.3	Identification	7
1.4	Scope	7
1.5	Relationship to Other Plans	8
1.6	References	8
1.7	Methodology, Tools, and Techniques	8
1.8	Policies, Directives and Procedures	8
1.9	Key Stakeholders	8
1.10	Points of Contact	8
2	Design Overview	9
2.1	Background Information	9
2.2	System Evolution Description	9
2.3	Technology Forecast	9
2.4	Application Overview	9
2.5	Current Process	9
2.6	Proposed Process	9
2.7	Business Context	10
2.8	Constraints	10
2.9	Risks	10
2.10	Issues	10
2.11	Assumptions	11
2.12	Dependencies	11
3	Scope of Work	12
3.1	System-wide design decisions	12
3.2	System Functions	12
3.3	Similar System Information	12
3.4	User Characteristics	12
3.5	User Problem Statement	12
3.6	User Objectives	13
3.7	Performance Requirements	13
3.8	Security Requirements	13
3.9	Hardware Interfaces	13
3.10	Communications Interfaces	13

3.11	Software Interfaces	13
3.12	Design Constraints	13
3.13	Data Dictionary	14
3.14	Data Analysis	14
3.15	Output Specifications	14
3.16	Decision Tables	15
3.17	Logical Database Model	15
3.18	Data Conversion	15
3.19	Value Definitions	15
3.20	External System Dependencies	16
3.21	Data Validation	16
3.22	Data Migration and Transformation	16
4	System Design	17
4.1	System Architecture	17
4.2	Modules and Interaction	17
4.3	Data Design	17
4.4	Internal Data Structure	17
4.5	Global Data Structure	17
4.6	Temporary Data Structure	17
4.7	Database description	18
4.8	Object-Oriented Design	18
4.8.1	Object Decomposition	18
4.8.2	Method Decomposition	18
4.9	Procedural Approach	18
5	Detailed Design	19
5.1	System Structure	19
5.1.1	Architecture diagram	19
5.1.2	Alternatives	19
5.2	Description for Component n	19
5.2.1	Processing narrative for component n	19
5.2.2	Component n interface description	19
5.2.3	Component n processing detail	19
5.3	Software Interface Description	20
5.3.1	External Machine Interfaces	20
5.3.2	External System Interfaces	20
5.3.3	User Interface	20
5.4	[Module X]	21
5.4.1	Data Model	21
5.4.2	User Interfaces and Functionality	21
6	Interface Design	22

6.1	Interface Description	22
7	User Interface Design	25
7.1	User interface	25
7.1.1	Screen images	25
7.1.2	Objects and actions	25
7.1.3	Interface design rules	25
7.2	Components available	25
7.3	User Interface Development Description	25
8	Non-Functional Requirements	26
8.1	Performance	26
8.2	Security	26
8.3	Licenses	26
8.4	Language	26
8.5	Others	26
9	Testing	27
9.1	Test Plan Objectives	27
9.2	Test Strategy	27
9.3	System Test	27
9.4	Performance Test	27
9.5	Security Test	28
9.6	Automated Test	28
9.7	Stress and Volume Test	28
9.8	Recovery Test	28
9.9	Documentation Test	28
9.10	Beta Test	28
9.11	User Acceptance Test	28
9.12	Environment Requirements	29
9.12.1	Data Entry workstations	29
9.12.2	MainFrame	29
9.13	Test Schedule	29
9.14	Control Procedures	29
9.14.1	Reviews	29
9.14.2	Bug Review meetings	29
9.14.3	Change Request	30
9.14.4	Defect Reporting	30
9.15	Testing Functions	30
9.16	Resources and Responsibilities	30
10	Deliverables	31
10.1	Schedule	31

10.2	Suspension / Exit Criteria	31
10.3	Resumption Criteria	31
10.4	Dependencies	32
10.4.1	Personnel Dependencies	32
10.4.2	Software Dependencies	32
10.4.3	Hardware Dependencies	32
10.5	Test Data	32
10.6	Risks	32
10.6.1	Schedule	32
10.6.2	Technical	32
10.6.3	Management	32
10.6.4	Personnel	32
10.6.5	Requirements	33
10.7	Documentation	33
10.8	Approvals	33
11	Appendices	34
11.1	Requirements Traceability Matrix	34
11.2	Packaging and Installation	34
11.3	Design Metrics	34
11.4	Glossary of Terms	34

Index of Tables

Table 1	— Risks	10
Table 2	— Issues	10
Table 3	— Assumptions	11
Table 4	— Dependencies	11
Table 5	— Data Analysis	14
Table 6	— Decision Tables	15
Table 7	— Value Definitions	15
Table 8	— External System Dependencies	16
Table 9	— Roles and Responsibilities	30
Table 10	— Schedule	31
Table 11	— Approvals	33
Table 12	— Glossary of Terms	34

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.