



Low Level Design Template

Project Name

<Date>

Version No.	1.00
Authorized by	



Confidentiality Agreement

<Insert agreement summary here>

Revision History

Version	Date	Author	Reviewer	Approver	Comments
0.1	XXXXXX				Draft Version
0.2	XXXXXX				Suggested some sections like key notes, screen validations and attributes to be added
0.3	XXXXXX				Suggested document format related comments like correction of version, adding one section for open issues etc.
0.4	XXXXXX				Suggested some changes like correct sequence diagram, changes in data design sections etc.
1.00	XXXXXX				Baseline version



Table of Contents

1. Introduction	6
1.1 Scope of the document.....	6
1.2 Intended Audience.....	6
1.3 System overview	6
2. Low Level System Design	7
2.1 Sequence Diagram	7
2.2 Navigation Flow/UI Implementation.....	7
2.2.1 Screen Validations, Defaults and Attributes.....	7
2.3 Client Side Validation Implementation	8
2.4 Server Side Validation Implementation	8
2.5 Components Design Implementation.....	8
2.6 Configurations/Settings.....	9
2.7 Interfaces to other components.....	9
3. Data Design.....	10
3.1 List of Key Schemas/Tables in database	10
3.2 Details of access levels on key tables in scope	10
3.3 Key design considerations in data design.....	10
4. Details of other frameworks being used.....	11
4.1 Session Management	11
4.2 Caching	11
5. Unit Testing	12
6. Key notes.....	13
7. References.....	14



Index of Tables

No table of contents entries found.



Index of Figures

No table of contents entries found.



1. Introduction

1.1 Scope of the document

- *This section will cover details regarding scope of the document*
- *Low level design document will be at component level i.e. for Website portal there will be One LLD*

Sample Content:

This document outlines the Low level design of tax payer registration functionality. It highlights/refers the Use cases in registration process and low level design details of components along with the rationale for the same. This document is reference design document for developers/implementers so that they can develop system with minimal effort

1.2 Intended Audience

- *This section will cover categories of audiences who will be referring/reviewing this document*

Sample Content:

- *Web portal Development Team*
- *Architecture Team*
- *Quality Team*
- *IRD Department*

1.3 System overview

- *This section will capture overview of system application i.e. for what system is being developed*
- *Who are the stake holders of system*
- *What are other external systems through which this will be interacting*

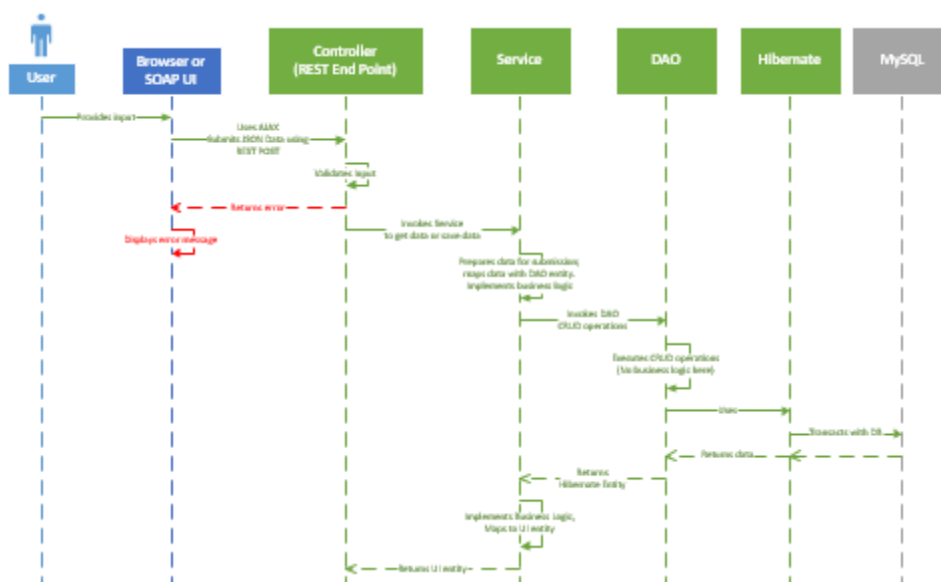
2. Low Level System Design

- *Low level design/implementation approach will be captured*

2.1 Sequence Diagram

- *This section will capture flow of information between all application layers required to meet the requirement*
- *Sequence diagram is input for low level design of components*

Sample Sequence Diagram:



2.2 Navigation Flow/UI Implementation

- *This section will capture the navigation flow i.e. How different screens/pages are being displayed depending upon different conditions involved in implementation*
- *This will provide visualization to developer/implementer for integration of different views/pages In the flow*
- *This section will also include/reference the screen layouts/wireframes*

2.2.1 Screen Validations, Defaults and Attributes

This section will capture the validations, default values of fields which has not been covered in SRS

2.3 Client Side Validation Implementation

- *This section will capture the implementation approach for handling client side validations*
- *Some code snippets for implementation of client side validation i.e.JS frameworks based implementation can be captured In this section*

2.4 Server Side Validation Implementation

- *Server side validations should also be there in any web portal apart from client side validation as attacker can disable java script in the browser*
- *This section will captured the implementation approach for server side validations*

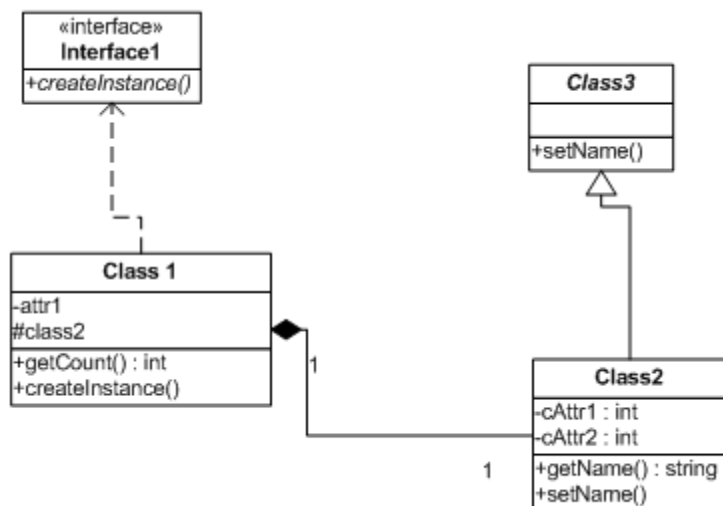
2.5 Components Design Implementation

- *This section will capture low level design of the components(in different layers) involved in sequence diagram*
- *Here components are being referred for set of independent implementations which can be integrated to achieve complete functionality. For example: <> Web portal can have user authentication component, digital signing component, component for caching data, email/SMS messaging client component, components for validation of user data from CBDT database, MCA DB and UAID DB*

2.5.1 Component 1

A. Class Diagram

- *This will list down all the classes involved for implementing the component*
- *This also depicts relationship of different classes*
- *More details on classes for particular component can be found in java document*





B. Pseudo Code

This section will capture the pseudo code for algorithms (if any) involved in implementation of component.

C. Other Implementation Details

This section will capture other implementation details which has not been covered under above mentioned heads

2.5.2 Component 2

2.6 Configurations/Settings

This section will capture the details of different settings/configurations being used in system application

Sample Content:

All the configuration of different parameters will be stored in properties file in the form of key value pair. This property file will be loaded to server during start-up

2.7 Interfaces to other components

This section will capture the design details of interfaces to other components

- .
- .
- .



3. Data Design

3.1 List of Key Schemas/Tables in database

This section will capture the details for list of key schemas/tables through which module in scope is interacting.

3.2 Details of access levels on key tables in scope

This section will capture the access level i.e. Read, insert, update etc. details of module on key tables/schemas

3.3 Key design considerations in data design

This section will capture the key design considerations taken while designing the data model/selecting the data access mechanism etc.



4. Details of other frameworks being used

4.1 Session Management

- *This section will capture the details for list of fields which are being stored in session*
- *This section will also captures the details like session expiry time, which page need to be displayed when if session get expired/invalidated*

4.2 Caching

- *This section will capture the details like what are the key fields of tables which are being cached*
- *This will also capture details like whether data is being stored in local cache or in distributed cache*
- *This will also capture caching expiry time etc.*



5. Unit Testing

- *This section will capture the details for list of unit test cases being used for testing particular component*
- *Reference of unit test case document can be given in this section*



6. Key notes

This section will elaborate on exception handling, any assumptions, and any other constraints that were not covered in above sections.



7. References

This section will list down the documents which has been refereed while creating this document

S.No.	Document Name	Version	Date



Appendix 1. Comments Matrix

Since there is no formal tool finalized currently for logging comments on various document deliverables, Comments Matrix is being put here to ensure comments are being tracked and resolved. Once a formal tool is identified, this process might change for future deliverables.

S. No.	Department Review Comments	Date Raised	Vendor Remarks	Status
1				
2				



Appendix 2. Open Issues

This section should list the open issues which have not been resolved at the time of submission of the document for review.

ID	Item	Responsibility	Status
1		Vendor/Department	Open