Functional Requirements Document

[Project Name]

Document Information:

Document

Item	Description
Current Version:	
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5.7.4 Recoverability:
5.7.5 System Availability:

5.8 General Performance

5.9 Data Retention:

5.10 Error Handling:

5.11 Validation Rules:
5.12 Conventions/Standards:
5.13 Software Quality Attributes:

6.0 Assumption and Constraints (Business and Technical):
6.1 Assumptions and Other Relevant Facts
6.2 Requirement Constraints & Dependencies

7.0 APPENDIX A - GLOSSARY

1.0 Introduction:

1.1 Purpose:

This document underlies the functional requirements for implementing Online Banking Solution (OBS) for Global Bank Ltd (GBL). The overall OBS covers a wide range of features, which are proposed to be implemented on a phase-wise basis. This document covers the functional requirements for Phase 1 delivery comprising login, transaction, and account view related functions.

1.2 Document Conventions:

This document covers the most critical and priority items for the implementation of the online banking facility by the GBL. The BRD document version 1.0 is considered as the base for the preparation. Any changes in the BRD version 1.0 should be replicated in this FRD document accordingly.

1.3 User Problem/Project Background:

The retail banking industry has undergone tremendous transformation with the advent of online banking services. In 2014, almost 30% of the national banking transactions within banks were executed using an online banking platform. The share is expected to grow at the rate of 5% every year for the next five years. Further, with the massive adoption of plastic money, the digital payment growth rate is expected to be at 40% in 2014.

The bank's business has been growing at the rate of only 4% in the past three years versus the average rate of growth of business banks providing modern facilities, including Internet banking, which has been 10%. Customers prefer to maintain bank accounts with banks with modern facilities. Due to this preference, there is a potential loss of new customers as well as shifting of existing customers.

With increasing real estate prices and cost of staffing, the operating costs of branches are increasing, creating a constraint in opening of new branches as well as maintaining the existing ones. In the past three years, the branch operations cost has escalated by 5% annually, creating a huge impact on profits. In such a scenario, it is imperative for the bank to upgrade its quality of services with the changing environment.

1.4 Solution/Solution Scope:

At present, customers are using banking services through visiting the branches in person. The branches access core-banking solution (CBS) to update and carry out the customers' transactions. All customers' data is maintained in the CBS, enabling customers to operate through any of the branches. The Online Banking Solution (OBS) would be implemented as an additional interface for the customer in conducting banking operations. The OBS would be connected to the CBS for extracting customer (master) data and processing requests. Connectivity with CB is already established for cheque truncation and electronic transfers.

There are a host of features that can be provided through OBS. The development is expected to be completed on a phase-wise basis spanning across two phases initially. The following modules are proposed to be implemented across Phase 1 and Phase 2.

These are the primary and must-have features. Additional features are proposed to be implemented in subsequent phases.

1.4.1 Included in the scope:

The following functionalities are included in the scope for Phase 1 development:

a) Login facility to existing as well as new customers.
b) Facility to set and change the password, set the secret question, and password policies.
c) Online transfer of funds to a beneficiary within the bank (intra-bank)
d) Online transfer of funds to a beneficiary outside the bank using RTGS, NEFT and IMPS facility.
e) Facility to view account summary.
f) Facility to view and download statement of transaction.

1.4.2 Excluded in Scope:

The following functionalities will be developed in Phase 2 and have been excluded from the scope:

- Request for chequebook
- Request for demand draft
- Stop payment of cheque
- Email registration
- Nominee registration

2.0 – References:

a Meeting with MD, CTO and PMO, minutes of the meeting dated July 01, 2015.
b Workshop with Operations and Systems team dated July 20, 2015.
c Policy Note on Future Development Plan by Bank Core Committee.
d CB guidelines are circulars with respect to Online Banking, Electronic Payment services.
e Business Requirement Document (Version 1.0 dated 1.11.2015).

3.0– Methodology: [Solution Approach]

As the project involves integration with multiple development teams, a complex environment and agile methodology will be used for the overall implementation of the project.

4.0 Solution Overview:

4.1 Solution Perspective:

At present, customers are using banking services by visiting the branches in person. The branches' access core-banking solution (CBS) will update and carry out the customer's transactions. All customers' data is maintained in the CBS, enabling customers to operate through any of the branches. The Online Banking Solution (OBS) would be implemented as an additional interface for the customer in conducting banking operations. The OBS would be connected to the CBS for extracting customer data and processing the request. Connectivity with CB is already established for cheque truncation and electronic transfers.

As per the proposed solution, the customers can interact with the bank either through bank branch front offices or through the Online Internet Banking facility. In the entire structure, the major components and its brief interactions are shown in pictorial diagram below:

4.2 Solution Feature:

The overall solution consists of below mentioned major functional groups

The following diagram lists the functionalities under each of these groups

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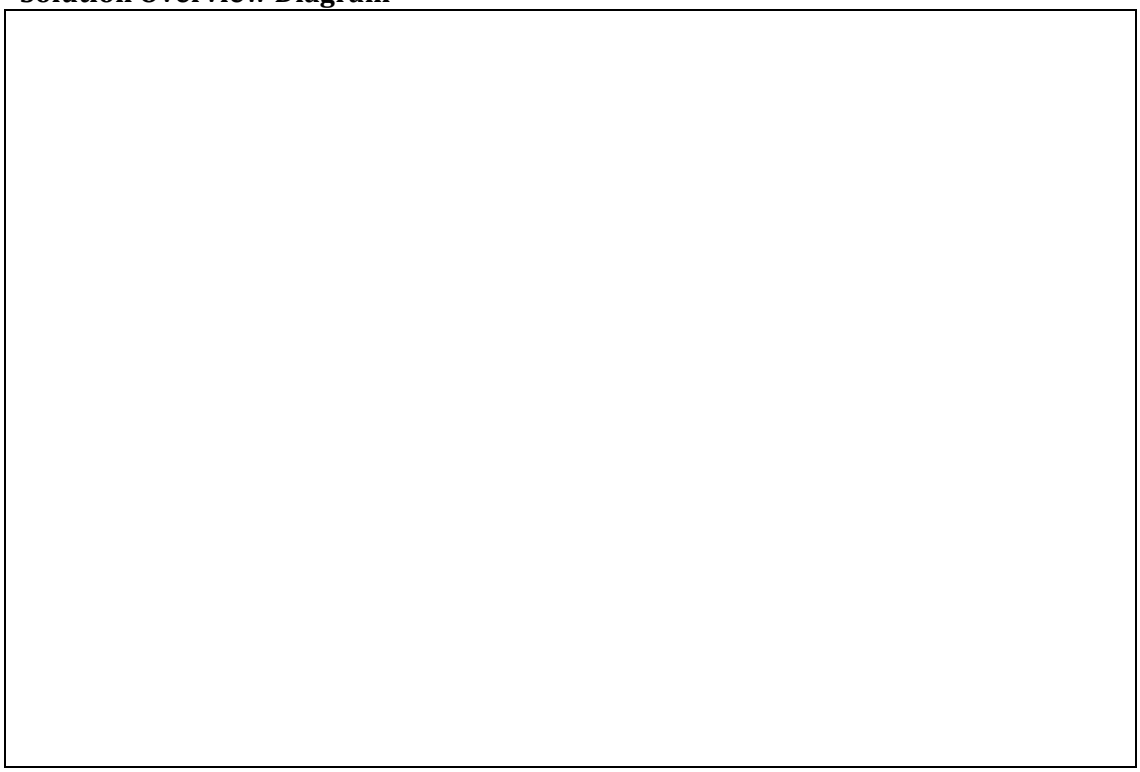
Solution Overview Diagram



Solution Module or phases (draw a table

Solution Users (sample)

Type of User	User Details	Functions
Customer	Customer has account and access to solution	Login, Transact, Account View, and Requests
Front office	Front Office Staff	View customers' details.
Help Desk	Help Desk staff for resolving Customers' queries.	View customers' online Transactions details.
Management	Senior Staff of management	Reports
Administrator	Systems administrator	User Management, Reports
Back Office	Back office for generating Uploads and response feed from CB, printing of Internet PINs.	Upload and download of CB files, IPIN printing files, etc.

4.4 Operating environment:

Operating environment for customer:

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Operating environment for bank:

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Design and Implementation Constraints:

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4.6 User Documentation: [User Manual]

The following user documents will be provided:

- User guide for customers Trouble Shooting for customers User guide for the end users

5.0 Solution Requirement:

5.1 FUNCTIONAL REQUIREMENT

5.1.1 Functional Requirements- I

Requirement ID	
Requirement	
Description	
Dependency	
Success Criteria	
Exceptions	
Input Data	
Output Data	
Data Format	
Business Rule	
Assumptions	
Constraints	
Comments	

5.1.2 Functional Requirements - II

Requirement ID	
Requirement	
Description	
Dependency	
Success Criteria	
Exceptions	
Input Data	
Output Data	
Data Format	
Business Rule	
Assumptions	
Constraints	
Comments	

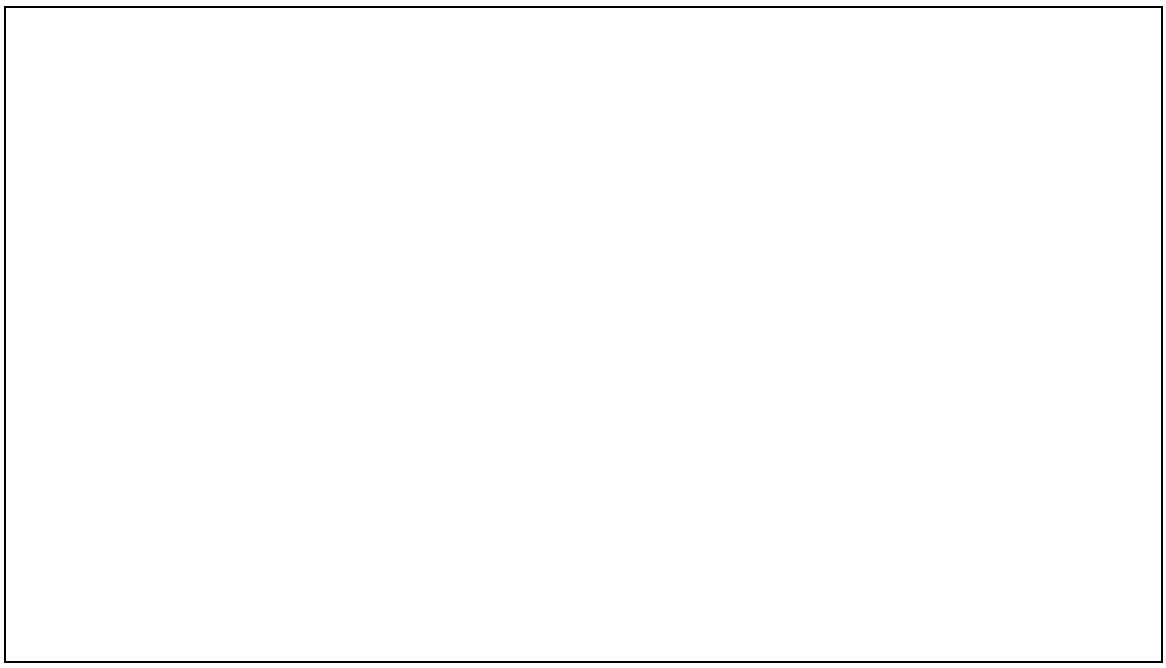
5.1.3 Functional Requirements – III

Requirement ID	
Requirement	
Description	
Dependency	
Success Criteria	
Exceptions	
Input Data	
Output Data	
Data Format	
Business Rule	
Assumptions	
Constraints	
Comments	

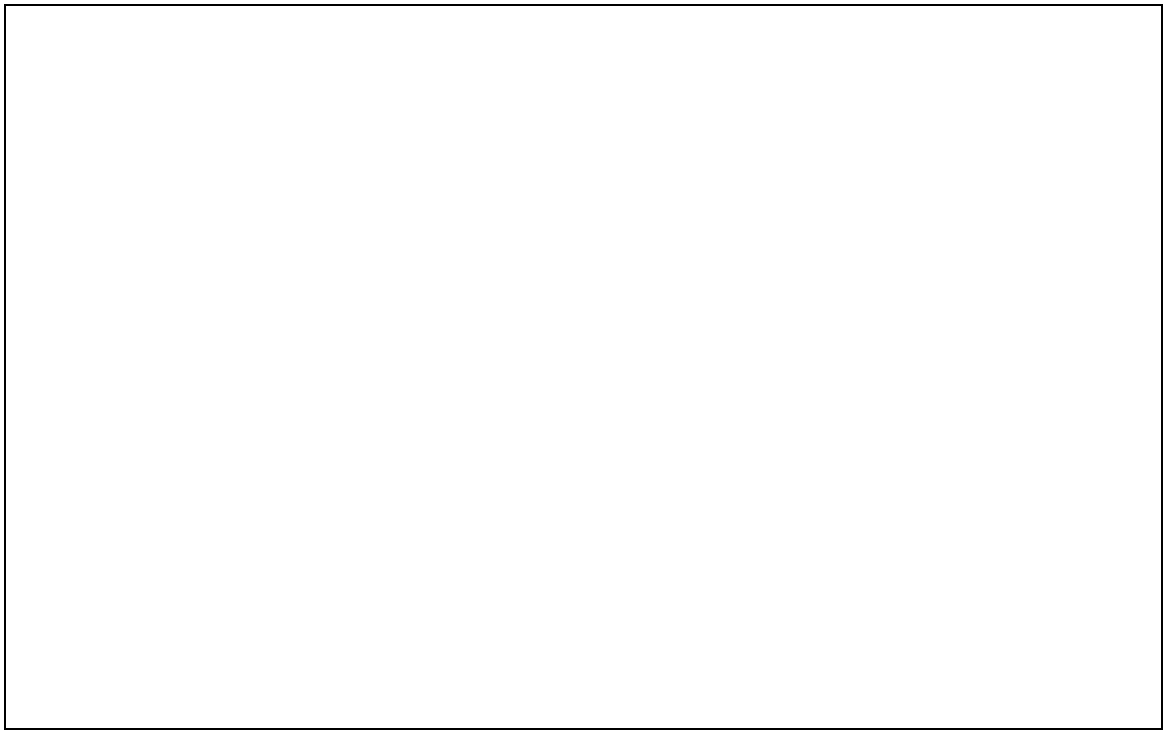
5.1.4 Functional Requirements – IV

Requirement ID	
Requirement	
Description	
Dependency	
Success Criteria	
Exceptions	
Input Data	
Output Data	
Data Format	
Business Rule	
Assumptions	
Constraints	
Comments	

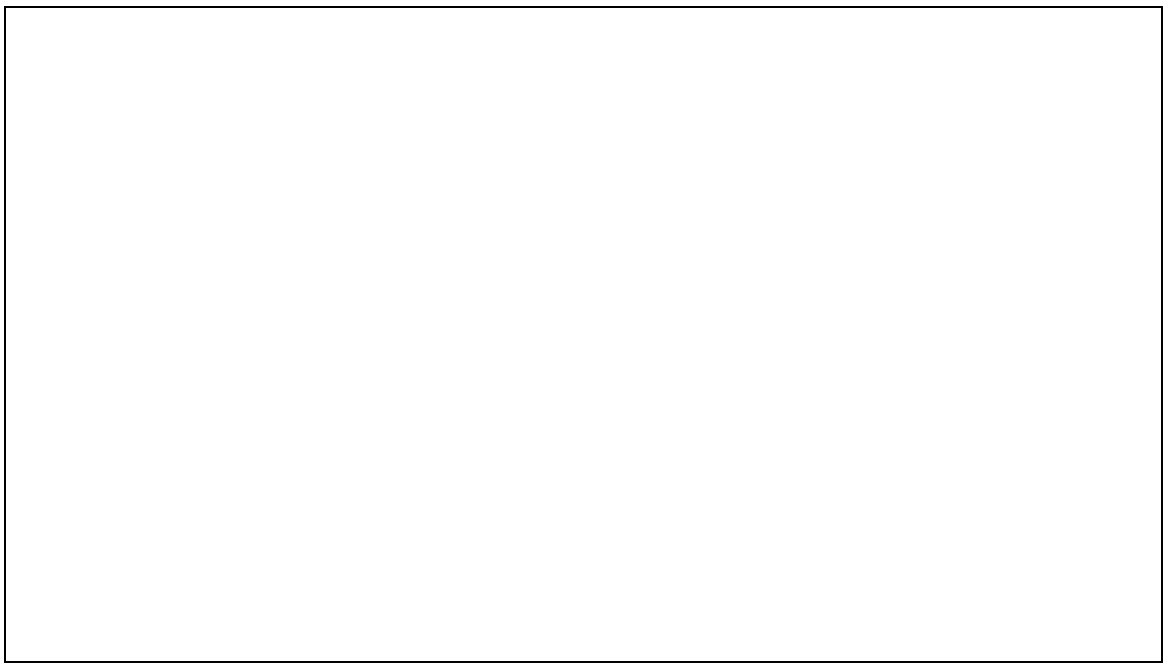
5.2 CONTEXT DIAGRAM



5.3 Data Flow Diagrams -



5.4 LOGICAL DATA MODEL



5.5 DATA DICTONARY

Table Name	Business Name	Column Attributes	Data Type	Size	Description

5.6 –NON-FUNCTIONAL REQUIREMENTS

5.6.1 - Interface Requirements:

The user interfacing the Online Banking System must have following basic features available on his/her desktop

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Specific Interface requirements:

Login

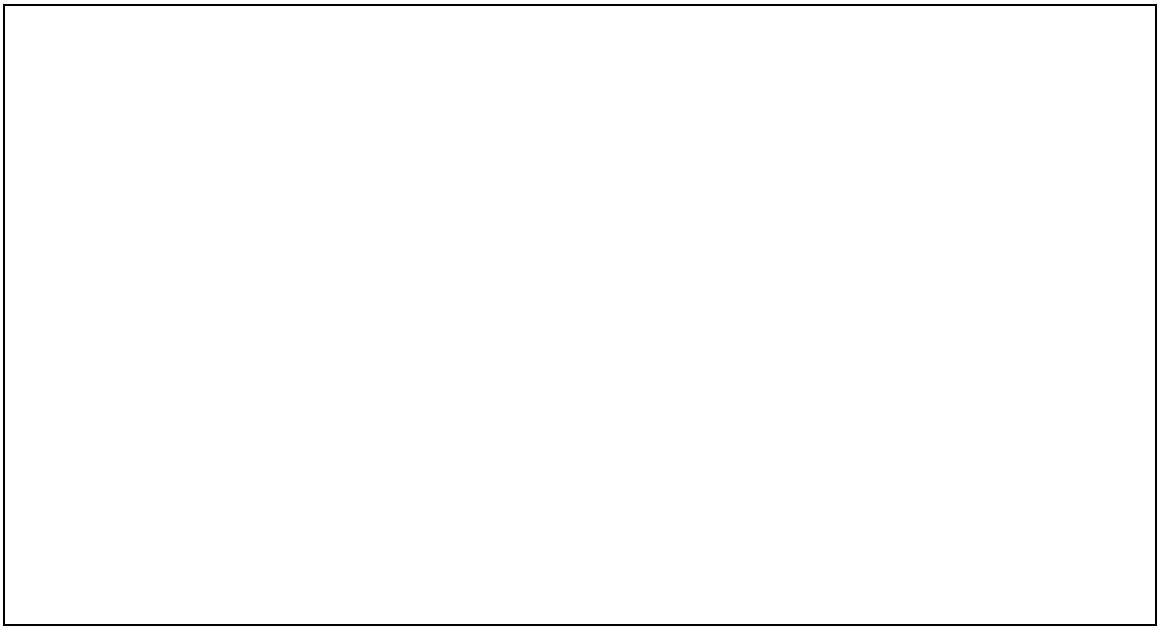
First time users should be directed to the home page of the solution wherein there should be an option to login. On selection of the login, a screen should be displayed with option to capture the user ID and password. In the case of a first-time login, after entering the user details, the system should prompt the user to set the new password and secret question and answer to reset the password.

Forgot IPIN?

Password Reset

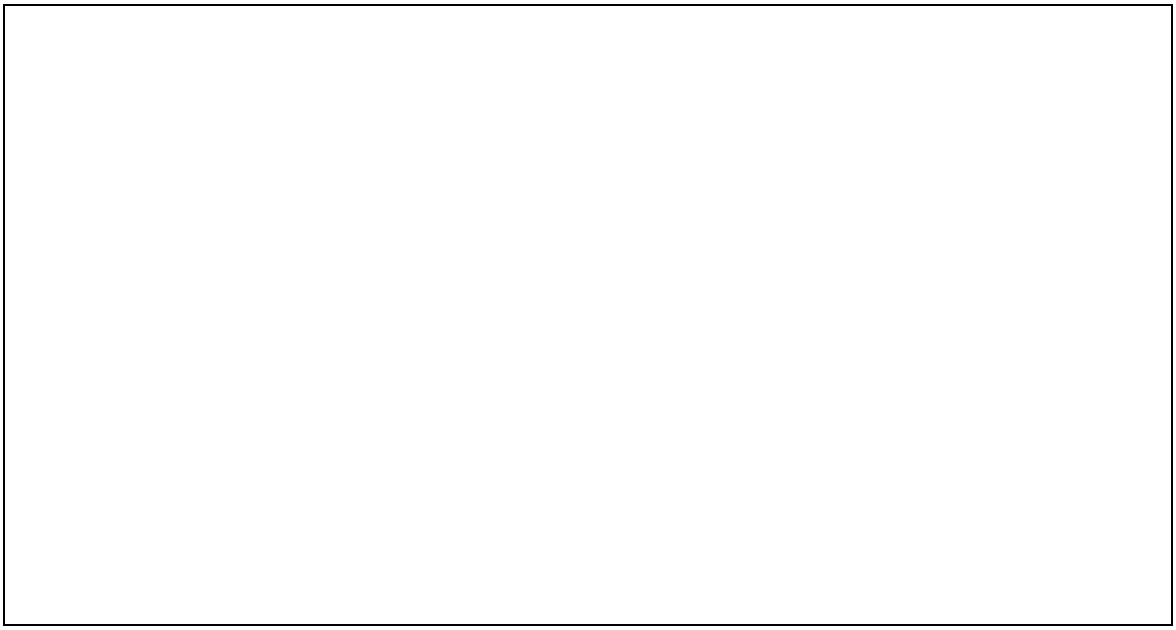
Report

Upon login, the menu will be displayed for account view, transactions, etc. For reports, the user will select the report menu. The following screen indicating the option of various reports should be displayed with various options. The customer should be able to click the option s/he wants to use.



Reports Screen – post execution

Based on selection of the menu, the screen should be displayed to capture the report details as below:



5.6.2 Hardware Interfaces:

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5.6.3 Software Interfaces:

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5.6.4 Communications Interfaces:

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5.6.5 Data Conversion Requirements:

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5.7 Security &Safety Requirement

5.7.1 Security and Privacy:

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5.7.2 Audit Trail:

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5.7.3 Reliability:

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5.7.4 Recoverability:

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5.7.5 System Availability:

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5.8 General Performance

5.8.1 Capacity:
System should able to handle the following volumes on the daily basis:

- Maximum user login at same time – 2000.
- Minimum request for IPIN printing - 50,000 per day.
- Minimum 0.5 million transactions per day.
- Response time should be not more than 2 seconds 100% of the time.

5.9 Data Retention:

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5.10 Error Handling:

Appropriate error message should be displayed to users on exceptions and errors. End-of-day exception report should be generated for all exceptions.

Deployed applications should generate necessary logs for each activity and function carried out in the system. Logs are applicable for and not limited to third party software, but also to the application developed.

5.11 Validation Rules:
The following validations should be implemented:

- Batch Totals Check
- Digits Consistency Checks
- Control Totals
- Data Type Checks

5.12 Conventions/Standards:

Programming should follow IEEE standard for software.

5.13 Software Quality Attributes:

- Applications should have a throughput of 1000 transactions per second.

- 95% of all requests must be processed in less than 4 seconds, and no requests must take more than 15 seconds.
- The system should be scalable to accommodate a future increase in peak loads.
- Application should allow a minimum of 2000 concurrent users.
- Assumption and Constraints (Business and Technical):

6.1 Assumptions and Other Relevant Facts

ID	Assumption

6.2 Requirement Constraints & Dependencies

Design Constraints

ID	Constraint

7.0 APPENDIX A – GLOSSARY

Terminology	Description

Solution Architecture (design diagram):