Software Requirements Specification

For

< Bank Management System (BMS) >

Version 1.0 approved

Prepared by <Zaman Bin Ishfaq>

Registration no< Fa17-bse-023 >

<5th Nov, 2019>

Table of Contents

Table of Contents ..... **ii**
Revision History ..... Error! Bookmark not defined.
1. Introduction **1**
1.1 Purpose 1
1.2 Document Conventions 1
1.3 Intended Audience and Reading Suggestions 1
1.4 Product Scope 2
1.5 References 2
2. Overall Description **2**
2.1 Product Perspective 2
2.2 Product Functions 2
2.3 User Classes and Characteristics 3
2.4 Operating Environment 3
2.5 Design and Implementation Constraints 3
2.6 User Documentation 3
2.7 Assumptions and Dependencies 3
3. External Interface Requirements **4**
3.1 User Interfaces 4
3.2 Hardware Interfaces 4
3.3 Software Interfaces 4
3.4 Communications Interfaces 5
4. System Features **5**
4.1 System Feature 1 ..... **Error! Bookmark not defined.**
4.2 System Feature 2 (and so on) ..... **Error! Bookmark not defined.**
5. Other Nonfunctional Requirements ..... Error! Bookmark not defined.
5.1 Performance Requirements 6
5.2 Safety Requirements 6
5.3 Security Requirements 7
5.4 Software Quality Attributes 7
5.5 Business Rules 7
6. Other Requirements ..... Error! Bookmark not defined.
Appendix A: Glossary ..... Error! Bookmark not defined.
Appendix B: Analysis Models ..... Error! Bookmark not defined.
Appendix C: To Be Determined List ..... Error! Bookmark not defined.

1. Introduction

1.1 Purpose

The **Bank Management System** is an application for maintaining a person's account in a bank. The system provides the access to the customer to create an account, deposit & withdraw the cash from his account ad can also view all the activities of own account.

In this project I tried to show the working of a banking account system and cover the basic functionality of a Bank Account Management System. This project has been developed to carry out the processes easily and quickly, which is not possible with the manuals systems, which are overcome by this software. Bank need to define and manage requirements to ensure they are meeting needs of the customer, while proving compliance and staying on the schedule and within budget.

1.2 Document Conventions

By using IEEE standards, I am trying to build the SRS for my project call Bank Management System. The font of every normal text is 12 and if there came any came any word with more significance than of others then it would be highlighted and main as well as other headings are also highlighted and their text sizes are 18 and 14 respectively.

There are also some basic Definitions, acronyms and abbreviations that will be used throughout the whole SRS

IT: Information Technology.
OS: Operating System.
EWS (Employee Work-Space)
Transaction is a part of EWS that allows performing banking functions for existing customers.
Transfer Money transfer function, for transferring money from one customer account in bank to other.

1.3 Intended Audience and Reading Suggestions

If the reader is **developer** then he/she might skip all these parts and must focus on the purpose of the **project, scopes, limitations, constraints and business and others rules**

If the reader is **non-technical** person then he/she might have to go through the main parts like **product functions, user documentation, Scope and purpose**

1.4 Product Scope

The **scope** of the Bank Management System extends to all the users who wish for easy banking facilities. This software product will be used for storing user's account information and the transactions made by them.

It is an application for maintaining **a person's account** in a bank. The main **aim** of this project is to develop software which provides an ease to every type of user. This project has been developed to carry out the processes easily and quickly, which is not possible with the manuals systems, which are overcome by this software. Bank need to define and manage requirements to ensure they are meeting needs of the customer, while proving compliance and staying on the schedule and within budget.

1.5 References

Following are the Links that helps me understand my domain more easily and in effective way.

https://www.slideshare.net/vinothrethnam/bank-management-system

http://services.lovelycoding.org/banking-management-system/

https://slideplayer.com/slide/10856371/

2. Overall Description

2.1 Product Perspective

A bank has several automated teller machines (ATMs), which are geographically distributed aid connected via a wide area network to a central server. Each ATM machine has a card reader, a cash dispenser, a keyboard/display, and a receipt printer. By using the ATM machine, a customer can withdraw cash from either checking or savings account, query the balance of an account, or transfer funds from one account to another.

The main aim of designing and developing this internet banking system primarily based engineering project is to provide secure and efficient net banking facilities to the banking customers over the internet where all banking customers can login through the secured web page by their account login id and password. Users will have all options and features in that application like get money from western union, money transfer to others, and send cash or money to inter banking as well as other banking customers by simply adding them as payees

2.2 Product Functions

- User registration for online banking if not register.
- Adding Beneficiary account by customer
- Transferring amount to the local customer account number.
- Admin must approve the user account activation before it can be used and transferring funds, view statement history.
- Customer gets to know his last login date and time each time he logs in.

• Customer can check all transactions made with their account.
•Customer can check their account statement within a date range.
• Customer can request for ATM and Cheque Book.
• Admin cans add/edit/delete customer accounts

2.3 User Classes and Characteristics

i. **Customer Class**: Manage all the operations of Customer Employees Class : Manage all the operations of Employees
ii. **Accounts Class**: Manage all the operations of Accounts
iii. **Fixed Deposit Class**: Manage all the operations of Fixed Deposit
iv. **Saving Account Class**: Manage all the operations of Saving Account
v. **Current Account Class**: Manage all the operations of Current Account

2.4 Operating Environment

Bank Management system is web base project. So you just only need a normal computer with a good internet connection. Following are the some of the requirements for the batter response of the system.

i. *Standard Pc.*
ii. *Internet: Internet Connection with Good Enough Speed.*
iii. *Processor: core 2 duo processor 3.0 GHz or better Processor.*
iv. *RAM: 4 GB (Latest).*
v. *Hard Disk: 500 GB.*

2.5 Design and Implementation Constraints

This system works only on a single server. This system is implemented by using

- *PHP*
- *HTML*
- *SCC*

Languages and the IDE used for it is **Visual Studio Code.**

2.6 User Documentation

A registered user can have following facilities:

- Accounts and accounts status.
- The balance enquiry.
- The fund transfer standards.
- Cheque Book Request.
- Password Changing.

2.7 Assumptions and Dependencies

- Assumptions

The details of customers such as username, password, account type and their corresponding authority details should be manually entered by the administrator before using this system.
Every user should be comfortable of working with computer and net browsing.
He should be aware of the banking system.
He must have basic knowledge of English too.

- Dependencies

One of the major dependencies is that we are totally dependent of internet and servers. If we or any one lost the connection from the internet then we might lost our information than we have to wait for the internet to start our routines

3. External Interface Requirements

3.1 User Interfaces

New User: Who all visited that Bank webpage or heard about the bank those persons getting ready to start account in bank. They register the bank application form, submit and start account in the nearest bank.

Existing User: The Existing user is the most typical user of the Online Banking system. Each Users have their own account and registered or authorized login access. The Existing user can login in online to their account perform the operation of deposit, withdrawn, transfer, balance queries and transactions. All the operation of the banking do in online it helpful for user because save time and efficient process.

Administrator: Admin is master user of the system because they are main role of the system. Admin grant and maintain the database of the existing user and grant the permissions to users. It over rules all other users

3.2 Hardware Interfaces

Client Side:

User on Internet	Web Browser, Operating System (any)
Application Server	WAS
Data Base Server	DB2
Network Internet Development Tools	PHP, CSS, HTML, OS(Windows),

Server Side:

Processor	Pentium IV or higher
RAM	4 GB or more
Disk Space	More than 160 GB

3.3 Software Interfaces

User on Internet	Web Browser, Operating System (any)

Application Server	WAS
Data Base Server	DB2
Network Internet Development Tools	PHP, CSS, HTML, OS(Windows),

3.4 Communications Interfaces

This Bank 'offers all banking facilities anywhere any time through internet facility. It also offers Mobile Banking facility which is a SMS based service.

- Client on Internet will be using HTTP/HTTPS protocol.
- Client on Intranet will be using TCP/IP protocol
- A Web Browser such as IE 6.0 or equivalent

4. System Features

4.1 Open an account

4.1.1 Description and Priority

A module new account is literally the form for the customer to open a new account. A new account is opened with the following details of the customer, with the default account number

- Name.
- Address.
- Initial deposit amount.

4.1.2 Stimulus/Response Sequences

First of all user have to click on the create account button. Then system will ask user to enter his/her basic information and after few steps new account will be created.

4.1.3 Function requirement

- Load website
- Open Gmail account.
- Create bank account on website
- Provide necessary information’s
- Link Gmail there

4.2 Deposit

4.2.1 Description and Priority

Deposition should be done each time the customer deposits a particular amount for an account. Deposition is done in the account after the following details.

- Account number.
- Amount to deposit.

4.2.2 Stimulus/Response Sequences

In case if user wants to deposit money, he/she must have to login first then they can perform their tasks. They can deposit their money in their accounts securely.

4.2.3 Functional requirements

- Login
- Select your amount
- Press deposit button
- Check for verification Email

5. Other Nonfunctional Requirements

5.1 Performance Requirements

System can withstand even though many no. of customers request the desired service. Access is given to only valid users of bank who requires the services such as balance enquiry, update profile, funds transfer, mini statements, and request for stop payments and for cheque book
It is available during whole week for all 24 hours.

5.2 Safety Requirements

By incorporating a secure database and proven DB2 UDB into the system, reliable performance and integrity of data is ensured. There must be a power backup for server system. Since the product is of 24by7 availability there should be power backup for server which provides the information. Every day the data should be backup even when the operation of a user is not successful i.e., while performing the operation power failure occurs then data should be backup.

5.3 Security Requirements

Sensitive data is protected from unwanted access by user's appropriate technology and implementing strict user-access criteria. Facility of unique user number and Password in such a way that unauthorized user cannot log in. Operational rights for each user/terminal can be defined. Thus, a user can have access to specific terminals and specific options only.

Authentication: ensures that you are communicating with the correct server. This prevents another computer from impersonating Bank.

Encryption: scrambles transferred data.

Data integrity: verifies that the information sent by customer to Bank wasn't altered during the transfer. The system detects if data was added or deleted after customer sent the message. If any tampering has occurred, the connection is dropped

5.4 Software Quality Attributes

- **Usability**. The users of the system are members and the administrators who maintain the system. The members are assumed to have basic knowledge of the computers and Internet browsing. The administrators of the system to have more knowledge of the internals of the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system.

- **Reliability**. The system is safety critical. If it moves out of normal operation mode, the requirement to drop to the next lower floor and open its doors is given priority. This emergency behavior shall not occur without reason. The system has to be very reliable due to the importance of data and the damages incorrect or incomplete data can do.

- **Availability**. When in normal operating conditions, request by a user for a servicer shall be handled within 1second. Immediate feedback of the systems activities shall be communicated to the user by link page clicked. At peek system load, individual users at either the server in the security office, at the links or inside the banking system shall not experience any delay in the service response to their commands longer than 1 second.

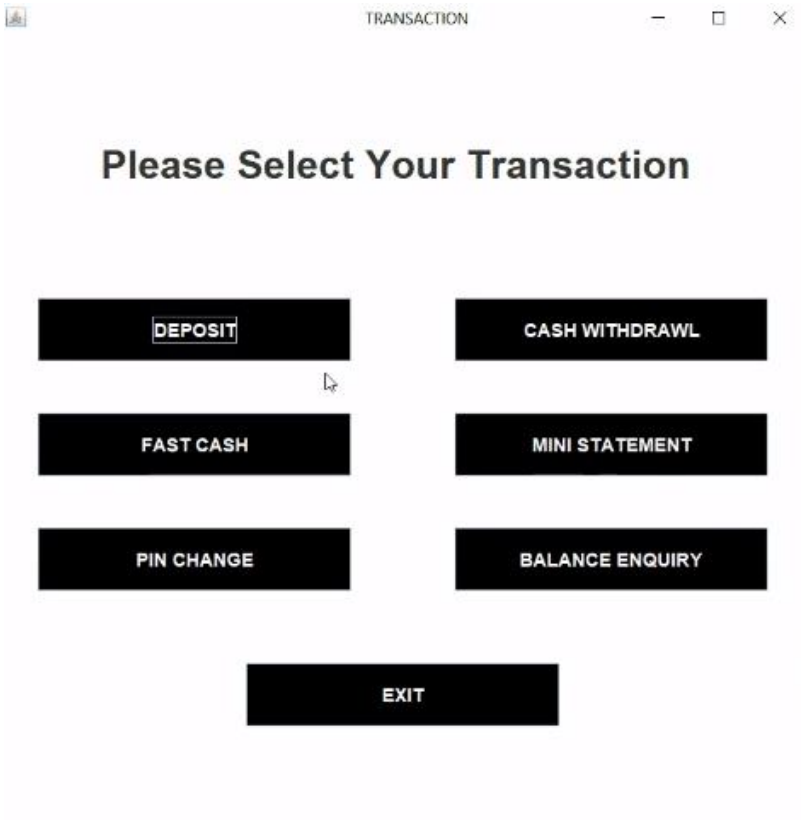
5.5 Business Rules

- There is fix amount that anyone can withdraw in one day.
- As all accounts were sync with the Gmail accounts so there must be one account that would be registered one Email account
- For the creation of Bank account, user must have CNIC card, then he/she can create the account

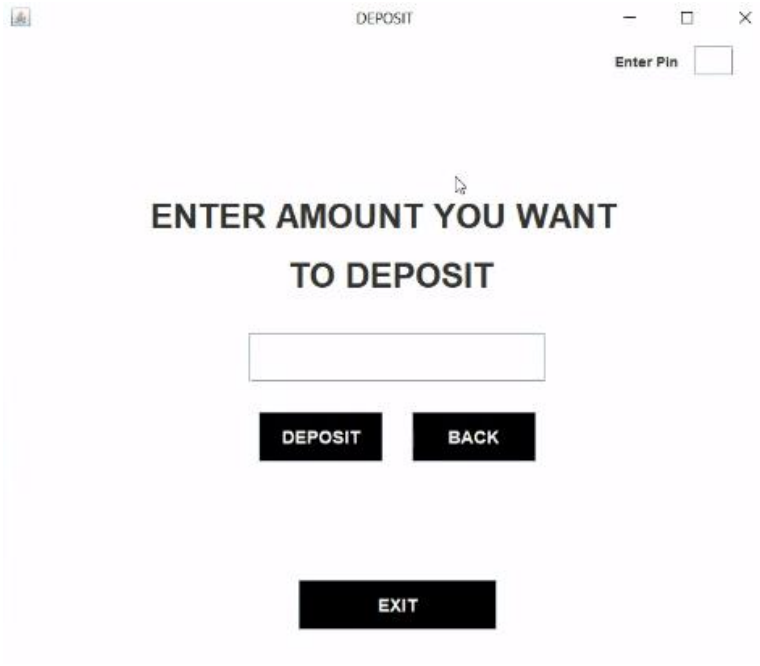
6. User Interface

- ***Startup page***

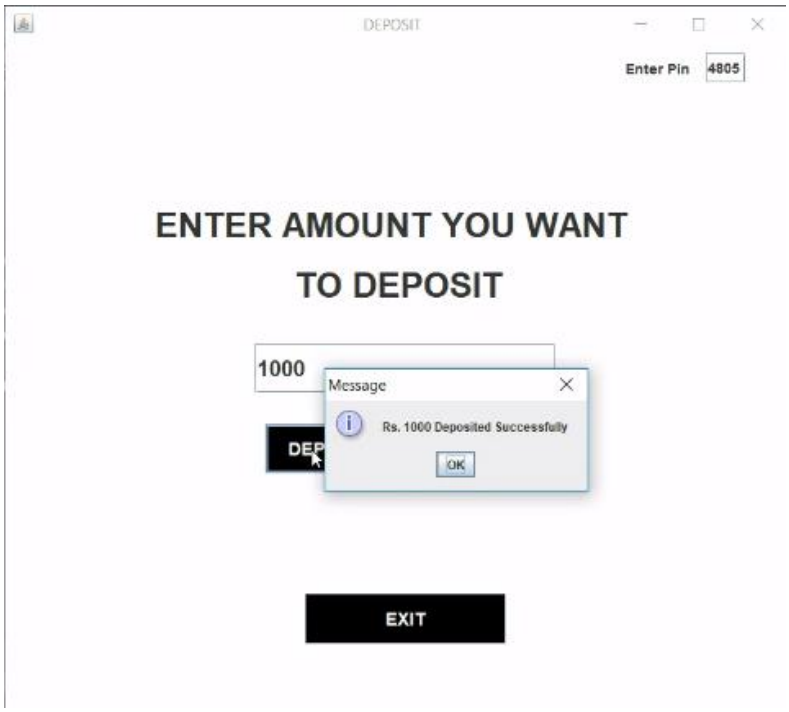
- ***Select your transaction***



- ***Deposit***



- ***Deposit successfully***



- ***Change Pin of an account***

- ***Add new account***

- ***Details of existing account***