SOFTWARE REQUIREMENT SPECIFICATION

FOR

ONLINE BANKING

PREPARED BY:

Mahesh M

Nalini Pogula

Deepak Vaswani

Nyayapati Manasi

Thota Lakshmi Pavani

Mallela Manjunatha Reddy

Kishan Kumar MN

Sireesha Nemalidinne

Suragowni Suresh Gowd

Satyajit Chandra

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1. INTRODUCTION:

1.1 Purpose:

The purpose of this document is to present a detailed description of the

Online Banking System. It will explain the purpose and features of system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be liable for the approval or disapproval of the project by the community of the Bank.

1.2 Scope:

An online banking system will be applicable everywhere where banking exists. It will be a more efficient and easier way to have a record on systems through which everyone can easily access it according to his rights as compared to the traditional banking system. Every bank will prefer the online banking system instead of the traditional banking system as it contains many useful features and is the fastest method for the transactions.

1.3 Definitions and Abbreviations:

Following are the definitions of the jargon words:

TERMS	DEFINITIONS
MS SQL Server	SQL Server is a relational database management system, or RDBMS, developed and marketed by Microsoft.
User	A lay person who needs the system to do his task efficiently and effectively. An account holder or a bank's website visitor.
Database	Collection of all the information monitored by this system.
ASP.NET	ASP.NET is an open source web framework, created by Microsoft, for building modern web apps and services with .NET. ASP.NET is cross platform and runs on Linux, Windows, macOS, and Docker.
Credit Card	Credit holding cards, Buy everything and pay from the credit cards. These cards are of each bank and ensure that the person has an account and balance in the specific bank of which he holds the card.
Account Teller	Bank staff that provides information about an account to the user who visits the bank branch physically.
Computer System	Computers, which will be used as clients to access the server database according to its right.
Visitors	Anyone visiting the site.
Bank Features	All the benefits and characteristics that bank provide. These features will be explained to the new comer visiting the website without an account.
Administrator	A person that will be responsible for the addition and deletion of the staff members from the general database of the system.
SRS	A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document.
Stake Holder	Any person with an interest in the project who is not a developer.

1.4. References :

This web application has been prepared on the basis of discussion with Team members, and our project guide and also taken information from following websites.

1.4.1. Websites:

1.4.1.1. www.google.com

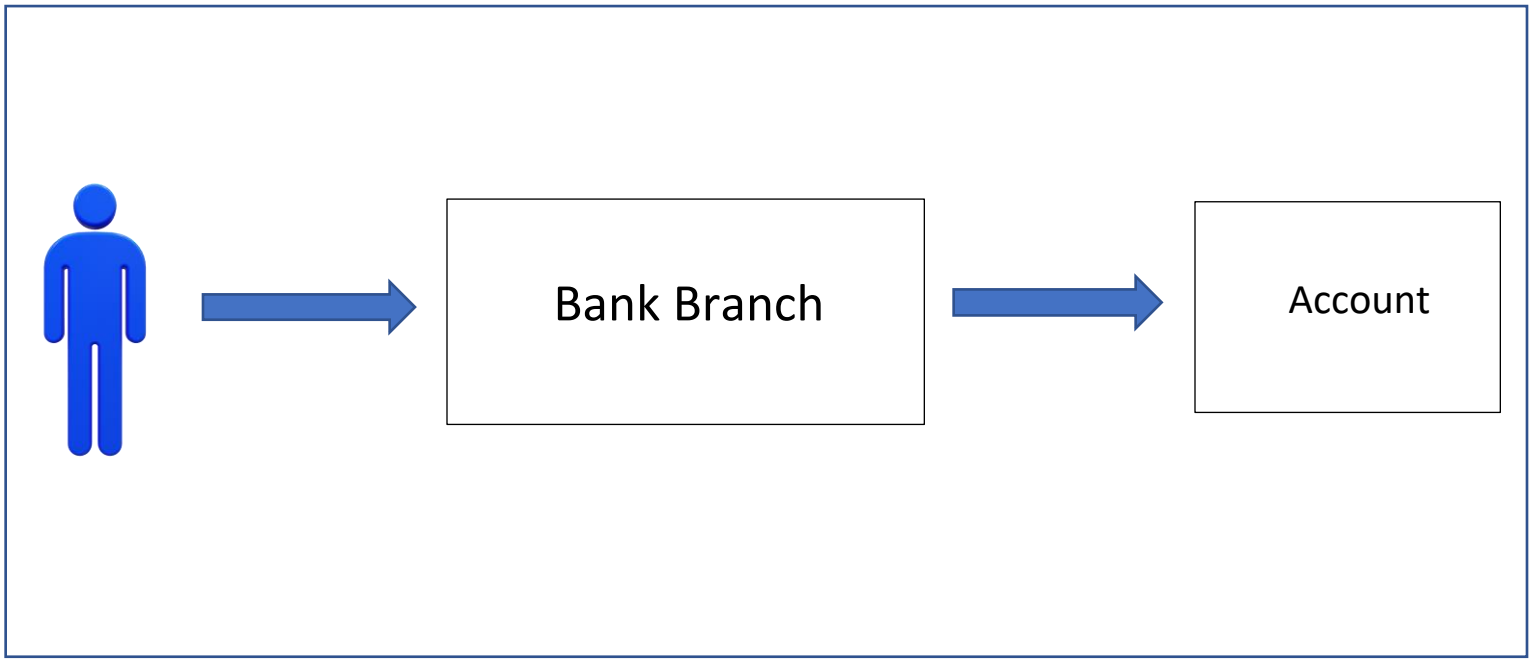
1.4.1.2. www.wikipedia.org

1.4.1.3 Banking Websites

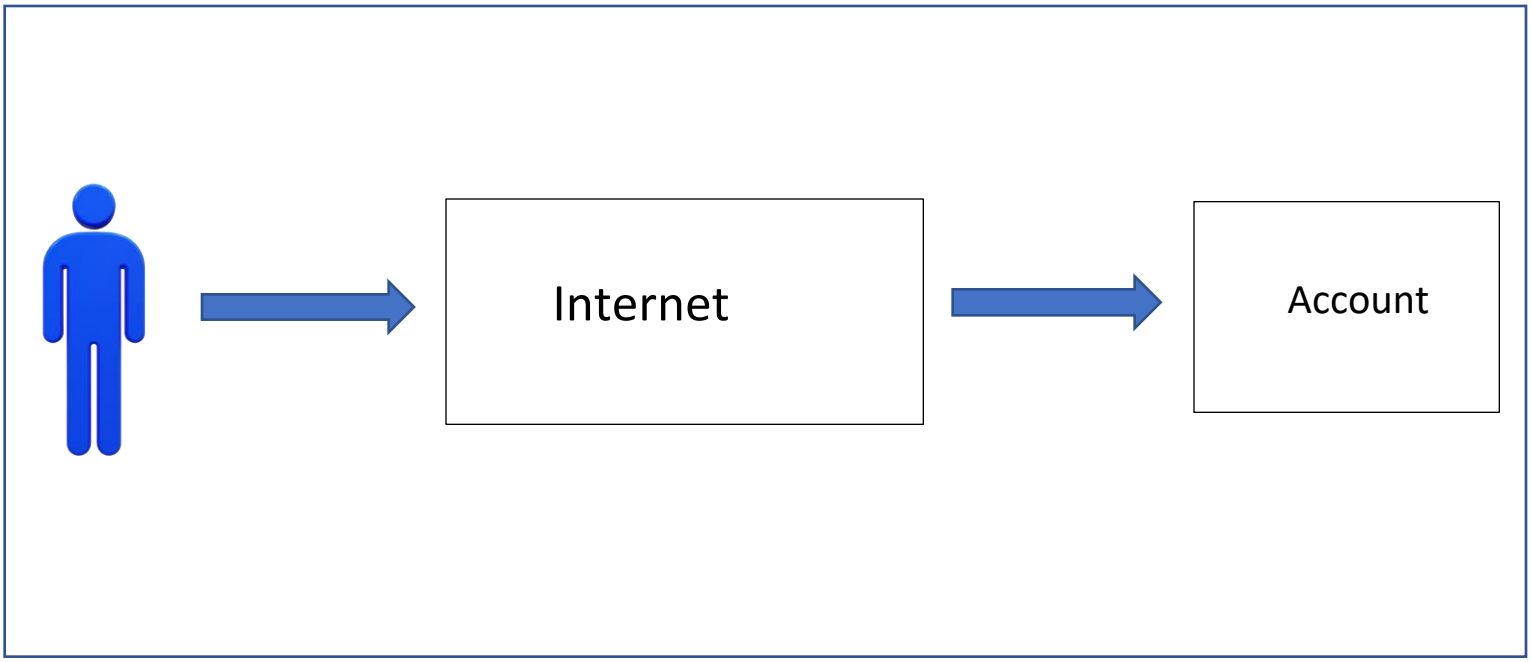
2. Overall Descriptions:

2.1 Product Perspective:

Following is the context or origin of online banking system. A comparison b/w the Tradition system and the new system can also be made through the System Models.



In the traditional system, customers should have to visit the Bank branch physically for the transactions or some other tasks. It wastes time.



After implementing the online banking system customer will be able to connect to his account through the internet connection. Time usage will be minimized, task will be done fast instead of waiting someone other to complete his task.

2.2 Product Features and Functionalities:

This software will have the following functionalities:

1. **Online balance check and transaction information:**
   A customer will be able to check his balance online while sitting at home by accessing the database of the bank using his/her password and account no. allotted him by the bank.
2. **Save or view up to 1 year past history of transaction:**

It will be easy for the customer to view or save his history transactions up to past 1year transactions. It will provide him with the opportunity to maintain his bank balance and needs.

3. **Balance transfer:**

This system will provide a path to the customer of the bank to transfer his balance to other account in easy steps. A small transfer fee will be applicable for this transaction.

4. **Online record Entry:**

Bank staff will input and maintain their record online. It will be easy and efficient for them to serve more and more people in less time.

5. **Online record search:**

Bank staff will easily search for a record and update it if needed. Transactions will be faster even physically from the branch because it will be very easy for the bank staff to check the balance of a specific person and update its record if necessary.

6. **Online Billing Option:**

Customers will be able to shop online and pay the bills from their account. A secure way will be provided for the billing. Online shopping will provide them with the easiest way to buy and sell their items.

7. **Check book Allotment:**

If the customer's checks have been completed, a new check book will be allotted to him.

2.3 User Characteristics:

There are various kinds of users for the product. Usually, web products are visited by various users for different reasons.
The users include:

- The Chancellor will be acting as the controller, and he will have all the privileges of administrator.

- All the people who need to perform banking.

2.4 Hardware Requirements:

Some general constraints should be defined which will have a great part in the overall succession of the online banking project.

- As this system is an online Web-based application so a client server will be the most suitable Organizational style for this system. Computer systems will be needed by each of the actor as well as that user must be connected to the internet.

  So, concisely following hardware will be needed.

  1) Computer systems
  2) Internet availability

2.5. Safety and Security:

This Project must be safe and secure because customers will directly contact their account through the internet. Software will have to identify the valid customer according to his/her bank details and password. So, it is a difficult task to prevent the system from major disasters by preventing unauthorized access to the system.

2.6. Assumptions and Dependencies:

Following are the assumptions dependencies which are related to this online banking project.

1) This project is a stand-alone project so it will not affect the system where it will be embedded.

2) This project is a web-based project while the staff was addict of using traditional methods of data storage and retrieval so they will be trained a bit to jump to it.

3) This system will not depend on any other module. It will be web-based so everyone will independently contact it.

4) It is will not affect the environment at all.

5) Banks will feel free to adopt it because it will not be so much expensive.

6) As this project contains valuable and new features it will probably remove the previous online banking systems embedded in some banks.

3. Key Features:

- Make use of Automatic Teller Machine
- Deposit and Withdraw Amount
- Check the account statement online.
- Open a fixed deposit account.
- Make merchant payments.
- Make Regular Payments
- Transfer funds.

4. Non-Functional Requirements:

Non-Functional requirements can be defined as those set of requirements that provide the eco-system for the functionality to effectively work better. The plan is to implement the functional requirements as a part of system design. Plans to implement non-functional requirements are detailed in the system structure, as they are generally architecturally meaningful requirements.

Non-Functional Requirements of Online Banking are:

a. Performance Requirements

- Increase in Customer Satisfaction:

Online Banking System must allow customers to access banking services 24 hours a day, 365 days a year with minimum downtime period for backup and maintenance.

- Expand Product Offerings:

The new services allow bank to capture a larger percentage of their customers asset base. The online banking system will provide facilities for bank to offer new services and products onto its homepage.

b. Safety Requirements:

Backup, recovery and business continuity Banks should ensure adequate back-up of data as may be required by their operations. Banks should also have well-documented and tested business continuity plans that address all aspects of the bank's business.

c. Security Requirements:

- Account ID and Password (PIN) Protection
- Auto Timeout Screen Blanking

- Failed Log-on Attempts

d. Scalability:

Scalability is the efficiency of a system to handle even peak loads without any constraints or bottlenecks. In our scenario, an online banking system should consider the scalability when peak load of concurrent transactions happens online.

e. Maintainable:

Each of the modules should be designed in such a way that a new module can easily be integrated with it.

f. Adaptability:

Should have adaptability to allow usage of single module at a time.

5. External Interface Requirements:

These requirements are discussed under the following categorization.

5.1. User Interface :

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above.
No user would be able to access any part of the application without logging on to the system.

5.2 Standard Compliance:

5.2.1 Client Side:

- Microsoft Visual Studio 2012 and above
- Microsoft Edge
- Mozilla Firefox
- Chrome

5.2.2 Server Side:

- .NET Framework 3.5/4.0/4.5/4.5.1/4.6
- MVC Version: MVC3/MVC4/MVC5
- Microsoft SQL Server 2005 or above

5.3 Communication Interface:

The Customer must connect to the Internet to access the Website:

- Dialup Modem of 52 kbps.
- Broadband Internet.
- Dialup or Broadband Connection with a Internet Provider

06.Detailed Use case:

Use case Diagram :

A Use-Case is a description of systems behaviour from a understand point. For system developer this is a valuable tool : It's a tried-and-true technique for gathering system requirements from a user's point of view.

That is important if the goal is to build a system that real people can use. A little stick figure is used to identify an actor the ellipse represnts use-case.

Use cases -

A use case describes a sequence of actions that provide something of measurable value to an actor and is drawn as a horizontal ellipse.

Actor -

An actor is a person ,Organization or external system that plays a role in one or more interactions with your system. Actors are drawn as stick figures.

Associations -

Associations between actor and use case are indicated in use case diagrams by solid lines. An association exists whenever an actor is involved with an interaction described by a use case. Associations are modeled as lines connecting use cases and actors to one another, with an optional arrowhead on one end of the line. The arrowhead is often used to indicate the direction of the initial invocation of the relationship or to indicate the primary actor within the use case.

Use case Relationships :

Three relationships among use cases are used often in practice.

1.Include -

In one form of interaction , a given use case may include another. Include is a directed relationship between two use cases. Implying that the behavior of the included use case is inserted into the behavior of the including use case.

2.Extend -

In another form of interaction, a given use case may extend another. This relationship indicates that the behavior of extension use case may be inserted in the extended use case under some conditions. The notation is a dashed arrow from the extension to the extended use case with the label<<extend>>.

3.Generalization

In the third form of relationship among use cases, generalization/specialization relationship exists. A given use case may have common behaviors, constraints and assumptions to the general use case. The notation is a solid line ending in a hollow triangle drawn from the specialized to the more general use case.

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