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Online Banking System(OBS)

Software Requirement Specification

Document

by

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Abstract:-

"The Main aim of this project is making banking online."

This proposed project aims at creation of secure internet banking system .This will be accessible to all customers who have a valid user ID and password .In the present world , banking is a necessity. In the existing system the transactions are done only manually but in proposed system we have to computerize all the banking transaction using the software Online Banking .The security is also a problem with the existing system .Online banking reduces the above mentioned problems .Online banking is a powerful tool to attract the customers .

To use online banking services provided by this website, a customer must register with the bank for the service, and setup some password for customer verification. After verification bank will approve the registration form and send the account details to the provided mail and address by the customer .By using the account number and password the customer can go through his account .This online banking project also set up additional security All this online banking process will take place on a secure channel using SSL technology, by this customer can keep his/her account safely.

The system will provide all the banks facilities to its customers when their authentications[user id and password] match, including viewing account information, performing transfers, giving the customer an option of changing address, paying bills on-line,password retrieval, performing transactions, viewing transactions and the locations the bank and its branches .It should also generate credit card numbers automatically when customer insert credit card.

1)Introduction:-

The Project ONLINE BANKING SYSTEM provides comprehensive electronic fund transfer and payment solutions that enable thousands of Citizens, Financial Institutions and hundreds of businesses the convenience of receiving and transferring their funds online .We deal in the method transaction in the bank can be made faster and easier because our project is an internet based computerized approach towards banking .

1.1 Purpose:-

The traditional way to maintaining the user details in the bank was enter the details and record them in a book. If the user want to do some transactions he has to go to bank and do the transactions. Every time this is not feasible. This is hard task for both customers and bankers. Online Banking System help to overcome this type of issues. Here, we provide an automation for existing banking system through internet. Online banking system captures activities performed by different roles in real life banking which provides enhanced techniques for maintaining the required information up-to-date, which results in efficiency.

1.2 Scope:-

Online banking allows customers of a particular bank to conduct financial transactions on this secured website operated by the bank. It may include of any transactions related to online usage.

To use online banking services provided by this website, a customer must register with the bank for the service, and setup some password for customer verification. After verification bank will approve the registration form and send the account details to the provided mail by the customer.

To access online banking, the customer would go to the financial institution website and enter the online banking facility using the customer account number and password. Through this the customer controls his account, which may be savings, loans, credit card and money transactions.

This online banking project also set up additional security .All this online banking process will take place on a secure channel using SSL technology, by this customer can keep his/her account safely.

1.2.1 Functions:-

- customer must have a valid user ID and password to login to the system.
- If a wrong password is given thrice in successions that account will be locked and the customer will not be use it .when an invalid password is enter a warning is given ti the user that his account is going to get locked.
- After login he is taken to a page which shows the present balance in that particular account number.
- User can request for the details of the last 'n' number of transaction that he has performed.
- User can make a funds transfer to another account in the same bank .User is provided with a transaction password which is different from the login password.
- User can transfer funds from his account to any other account to any other account with this bank. if the transaction is successful a notification should appear to the customer ,in case it is unsuccessful ,a proper message should be given to the customer as to why it failed.
- User can view his monthly as well as annual statements .He can also take print out the same .

- Administration can take a back up of the database for every instance that is happening periodically.
- FAQ section is also included for end users benefit.

1.3 Intended Audience and Reading Suggestions:-

1.3.1 Intended Audience:

Administrator:-

He is the super user who can add new customers into banking system and assigns corresponding username, password, account type and other details. When any customer withdraw his account from the bank, he can delete their account and stop the transactions immediately. He also takes the system backup.

Customers:-

After logging into his account he can request for balance enquiry in his account, Funds transfer to another account in the same bank, online payments, mini statements.

1.3.2Reading suggestions:-

SRS includes two sections overall description and specific requirements

i) Overall description will describe major role of the system components and interconnections.

ii) Specific requirements will describe roles and functions of the actions.

1.4 References:-

- SRS (IEEE SRS Format and Format provided by TGMC)

1.5 Technologies used:-

1.5.1 Web Technologies:-

Java Script, HTML, PHP,CSS,Apache Tomcat server

1.5.2 Database Technologies:-

My SQL

1.6 Definitions :-

HTML:-

Hyper text Markup Language is markup language used to design static web pages.

PHP:-

Personal home page .PHP supports multiple databases .Many open source and commercial projects choose PHP as an implementation language for web based applications.

CSS:-

cascade style sheet .This is the web page designing application to add some extra features to the web page.

MYSQL:-

structured query language

HTTP:-

Hyper text transfer protocol

TCP/IP:-

Transmission Control Protocol/Internet Protocol, the suite of communication protocols used to connect hosts on the Internet. TCP/IP uses several protocols, the two main ones being TCP and IP.

HTTPS:-

Secure Hypertext Transfer Protocol is a HTTP over SSL (secure socket layer)

2) Overall Description:-

Customer must have a valid user id and password to login to the site. After logging in he has showed the details of the account. User can request to view the details of his last ‘n’ number of transactions which he performed. User can make the fund transfer to another account.

User can transfer funds from his account to any other account in the bank. If the transaction is successfully completed then a notification is appears to the customer if not it shows another message with proper reason as why the transaction is not completed. User can also do the online shopping.

User can see the monthly statements. Appropriate help is provided to the customer and when he request for help.

2.1 Product Perspective:-

The traditional way to maintaining the user details in the bank was enter the details and record them in a book. Here, we provide an automation for existing banking system through internet. Online banking system captures activities performed by different roles in real life banking which provides enhanced techniques for maintaining the required information up-to-date.

2.1.1.Existing System:-

But in the existing system the transactions are done only manually but in this system lot of problems are present like

- Lack of security of data.
- More man power.
- Time consuming.
- Consumes large volume of pare work.
- Needs manual calculations.
- No direct role for the higher officials.
- Damage of machines due to lack of attention.

To avoid all these limitations and make the working more accurately the system needs to be computerized. The aim of proposed system is to develop a system of improved facilities.

2.1.2.Proposed System:-

The proposed system can overcome all the limitations of the existing system.

The system is very simple in design and to implement. The system requires very low system resources and the system will work in almost all configurations. It has got following features

- Security of data.
- Ensure data accuracy's.
- Proper control of the higher officials.
- Reduce the damages of the machines.
- Minimize manual data entry.
- Minimum time needed for the various processing.
- Greater efficiency.

- Better service.
- User friendliness and interactive.
- Minimum time required.

Client Interface :-

In this client have an interface in which he can interact with the system. This interface is an webpage. Once he enter the bank url then he will showed a web page. Through this he can enter into his account by giving the proper Customer ID and Password. If he enters the valid password then he can see his account details. In this he has entire transactions list, which he may perform through this bank.

Administrative Interface :-

In this administrator have an interface so that he can see the entire system. He has also have an login page so that he can perform all his actions. This Interface is entirely different from client interface. By this interface administrator can maintain the database and take the backup for the information in the system.

2.2 Product Functions:-

The online Banking consists of following modules

1)Login Process :

This module provides the valid users to enter into the bank website and allow them to do the transactions.

2)Balance Enquiry :

This module allows users to check for their balance details.

3)Update profile :

This module allows users to update their profile that is address and gmail and recent photo etc.,

4)Funds Transfer :

This module allows users to transfer money from one account to other account.

5)Change of Password :

This module allows users to change their password frequently so that to maintain security.

6)Transaction details :

This module allows users to see their recent transactions.

2.3 User Classes and Characteristics:-

Users of System:-

Administrator:-

- Providing user name, password and other details to users to login
- Starting session
- Managing system backup
- Crash recovery
- Ending session

Customers:-

- Login
- Selecting the account
- Balance Enquiry
- Funds transfer
- Printing transaction details

User Characteristics:-

The normal users will have an fixed or savings account and the user should have a minimum balance of 500 Rs.He can transfer funds from one account to another account of the same bank and he may view his weekly or monthly transactions.

2.4 Operating Environment:-

The user should have internet connection to use this website and have a browser to open this site and http(hypertext transfer protocol) should be enabled to see that site.

Otherwise the user should have LAN connection to access site and to do transactions and it will work on any Operating system that is linux based or windows based.

2.5 Design and Implementation Constraints:-

when developers developing software they have to take care of a normal user interface and administrators interface because they have to give extra permissions and provide extra pages to them to query processing and permitting accounts and data back up.

2.6 User Documentation:-

Rather than giving documents to users we are giving online help and online instruction manual and our software provides query processing so that user may ask doubts about his account or any other issues or problems about anything and the user will be answered as early as possible by the administrator.

2.7 Assumptions and Dependencies:-

- 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 customer should be comfortable of working with computer and net browsing.
- Customer should be aware of the banking system.
- Customer must have basic knowledge of English too.

3) External Interface Requirements:-

3.1 User Interfaces:-

3.1.1 Administrator :-

He is the super user responsible for managing client of the system,taking system backup,generating reports , maintaining, organization details.

Manage Clients:

The administrator assigns new users when a new client joins the online bank .Also he can delete an account when any of the clients leave the bank organization.

Maintain Organization Details:

The Administrator maintains entire details of the organization that includes details of the clients, entrepreneur details etc.

Take System Back Up:

The Administrator Back Up the database in order to prevent loss of data on system crashes .He can backup entire database or a particular section.

Generate Reports:

Responsible for checking the logs of different system users for auditing and maintaining the integrity of the system.

3.1.2 Customer :-

Ordinary customers have a username and password with which they can login into their account .They can perform all the transactions such as funds transfer,balance enquiry etc by sitting at their home on internet.

Login:

User can login to the system by providing appropriate username ans password provided by the administrator.

Selecting the Account:

After logging in the user is provided with a screen showing the details of his account in order to perform the transaction.

Balance Enquiry:

He can view the balance left in his account ,if once he has entered into his account.

Funds Transfer:

Upon the request the user can transfer funds from his account to the other accounts of the same bank.

Messages:

He/She also check the messages send by the bank.

3.1.3 Accessing View:-

User after logging into his/her account a page is displayed with the basic requirements.

Balance Enquiry:-

when the customer needs to check the balance,he selects balance enquiry option from the home page .Client can view the balance left in his account ,if once he her entered into his account.

Funds Transfer(same bank):-

When the customer selects the funds transfer option in the home page. The client can transfer the amount from his account in the bank to the bank to the other account in the same bank.

3.2 Software Interface :-

User on Internet :- Web browser, Operating System

Application Server :- Xampp

Database Server :- Xampp

Network :- Internet

3.3 Communication Interface:-

- 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) Functional Requirements:-

A software requirements definition is an abstract description of the services which the system should provide and the constraints under which the system must operate.

4.1 Administrator:-

An administrator is that person who makes some editing for the internet banking system like add/cancel customer, check the transactions etc. but this administrator must be valid user. Therefore the administrator must have a username and password.

4.2 Customer:-

The valid customer on internet banking has a set of requirements he/she does on internet banking. These requirements are offered on next points..

Login :-

A customer to be able to use this system, he/she has to enter username and password which he/she has created before and been saved in the database in the Login page .This function might be a customer or an Admin also .The input in this function most be valid username and valid password and the

output if the user is valid user then he/she will get into a page which can makes has/her transaction, but if the user made wrong in username or password then he/she will be invalid user and will see a message “Alert Invalid Username and Password” and to login again.

View Account :-

View Account allows to a customer to view today’s up-to the minute balance information on deposit (saving/current), credit card, etc. The customer can also view transaction history with retention period up to a maximum of 90 days. But the customer most be logged in the internet banking.

Transfer Funds:-

The customer must be logged into Banking System to be able to make his/her transaction for transfer funds .Transfer Funds allows customer to transfer funds between authorized accounts – own personal accounts . The customer can enquire whether there is any funds transfer pending and when the customer selects the Transfer funds, the system will display Menu to select Transfer Funds function for transfer funds or Transfer History function for display the transaction he/she done.

Pay Bills :-

The customer most be logged into Banking System. The customers can use Online Pay Bill service to pay bills by debiting their account. The customer needs to key in his/her bill account number each time you make a payment. Also the customer makes payment (up to the outstanding balance) to his/her owns credit card and balance transfer account.

Utility:-

The customer most be logged into Banking System. Utility allows customer to change password and the secure delivery contact information. Within this feature, the customer can also change the online profile personal information that is retained by the internet banking system only. And the customer can cancel the ATM facilities.

Logout:-

The customer must be logged into Banking System. This function is used when a logged in user finishes his/her job and wants to be logged out so that no one can abuse his username. The system will state the user has been logged out successfully.

5) Other non-functional requirements:-

5.1 Performance requirements:

Increase Customer Satisfaction :-

Internet banking system must allows 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 allows bank to capture a larger percentage of their customers' asset base. The internet banking system will provide facilities for bank to offer new services and products onto its homepage.

Reduce Overall Costs :-

It will help to reduce a bank's costs in two fundamental ways: it minimize the cost of processing transactions and reduces the number of branches required to service an equivalent number of customer.

Portability:-

Portability is the degree to which software running on one platform can easily be converted to run on another. If we are designing a software in linux kernel based operating system if it works in the windows system also it is called portable that is our software is platform independent. So it will be usable to any type of user.

Reliability:-

Reliability of a software system is defined as the ability of the system to behave consistently in a user acceptable manner when operating within the environment for which it was intended.

Efficiency:-

Software efficiency refers to the level of use of scarce computational resources, such as CPU cycles, memory, disk space, buffers and communications channels.

We may see these things in efficiency

- Capacity
- Degradation of service

Response of system

5.2 safety requirement:-

Safety is a critical requirement for certain types of software systems, Analysis of safety requirements often entails hazard analysis and fault trees; these are techniques adopted from engineering disciplines.

Backup, recovery & business continuity :-

Banks should ensure adequate back up of data as may be required by their operations. Banks should also have, well

Sign-off Button :-

When an end-user is finished with Internet Banking, they should click the Sign-off button before going anywhere else on the Web. This ends the Internet Banking session.

Failed Log-on Attempts :-

As an added security feature, the Internet Banking System is denied access after a pre -determined number of failed log-on attempts. If users have been locked out due to exceeding the pre- determined number of log-on attempts, the users must contact the Bank in order to be re- initialized.

5.3 security requirement:-

Browser should be enable with SSL technology and https protocol to secure user's account by encryption and decryption processes.

- User Account ID and Password (PIN) protection occurs at the first level within the Internet Banking System. To access Internet Banking, users are required to enter an Account ID and password .
- Access to account transactions shall be restricted to holders of valid banking cards and personal identification numbers.
- Cash withdrawals shall not exceed fixed amount . Cash deposits shall not exceed the fixed amount fixed by the bank.
- System shall shutdown upon detection of device error, fatal software error, or upon loss of the link to DB.
- System shall record all transactions in its daily log.
- Developer will be responsible for ensuring the security of the physical cabinet and hardware devices.
- People's Bank is responsible for all account information contained on the Computer System.