

IT314 - Software Engineering

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All Citizen Bank: Online Banking System

Project Detail Document

Group - 57

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2. Background: Online banking, refers to all transactions that take place among companies, and individuals. Some banks offered customers electronic banking in 1985. However, the lack of Internet users, and costs associated with using online banking, stunted growth.

Online banking allows customers to conduct financial transactions on a secure website operated by the institution, paying bills via the Internet etc. Thanks to technology, and the Internet in particular, people no longer have to go to banks physically to fulfill their financial needs. Online banking allows a customer to make deposits, withdrawals, and pay bills all with the click of a mouse.

3. Objectives:

- a. The main objective of the Online Banking system is to automate and digitize the working of a bank and provide all related activities and functionalities that a customer can perform while visiting a bank virtually. It would also help the bank employees to work fluently and execute all the functions provided to them.
- b. This software will enable the user to complete and solve its problems by the click of a single button which will attract more and more customers and make customers' experience more and more easy.
- c. This system provides the fast long term, consistent, accurate data storage & access of the data in comparison to the manual system.
- d. To analyze the trend of online banking with the help of primary data.
- e. To highlight the security problems and reduce the issues due to which the customers will automatically gain trust to use the software.

4. Functionalities:

- a. Sign up and login: A new user has to register in the bank by providing some basic information such as first name, last name, email-id, address, government issued identity card (such as aadhar card, voter id, pan card etc) and the type of account to be created (for eg. savings or current). For existing users they should log in with their registered email id and a valid password along with the otp which they would receive on their registered mobile number.
- b. Account verification: The website will provide a feature to verify the account holder's credibility via online-video KYC and other required document verification. This functionality extends the security of the website so that there are no fraudulent transactions.
- c. Account Info. Management: To manage all the necessary details of customers/account holders of the bank

- d. Transactions: To carry out transactions securely between different types of accounts and update all the relevant information.
- e. Notifications: Whenever any transaction happens or changes in the balance of the account, the user will be notified via a message to the contact details provided during registration.
- f. Profile and details: Provide a detailed statement, account details, balance check, and transaction details on request of any valid user.
- g. Maintain separate records for bank admins and managers and allow them to view details of customers.
- h. Update info.: Provide customers the feature to update their profile details (e.g. address, password, email-id etc.) to the account holders.
- Loan disbursement: The account holder applying for a loan will have to fill a form after security check (via OTP) and submit the employment details and required documents for successful disbursement.
- j. EMI calculator: The account holder would be able to calculate the emi's needed to pay if he/she wants a particular amount of personal/home loan.
- k. Investment: Users would be able to invest money through fixed deposits (i.e. invest the entire sum of money at the start) and recurring deposits (i.e. invest money at regular intervals).
- Recharge and Bill payments: Users can pay various bills such as electricity, water supply, gas pipeline along with recharges for mobile, telephone etc. Users need to fill in the details only for the first time and it would be saved for later usages.
- m. Security: The users will have to enter email and password while logging in and enter OTP sent to the contact details of the user during any transaction process to ensure security.
- n. Logout: The website will have a logout feature for the user to sign out of the application when all the required tasks are completed. Moreover, the website would automatically log out the user after 15 minutes of inactivity.
- Account deletion: The website provides an option to delete the user's account after password verification and confirmation so that it does not get deleted unnecessarily.

5. Users:

- I. Bank Account Holders
- II. Bank Employees
 - A. Manager
 - B. Loan Officer
 - C. Clerk
 - D. Cashier
- III. Developers

6. Project Deliverables:

- a. Milestones:
 - (i). User Interface
 - (ii). Banking operations
 - (iii). Security
 - (iv). Backend Development/Database management
 - (v). Testing

b. List of Final Deliverables:

SRS and documentation

Report/review after every milestone

Deployment - Project deployment within 6 weeks of projects

User guide – Released after testing

7. Estimated Total Time:

Approximated 200 hours

SRS preparation and verification: 10 hours

• Changes and modifications: 5 hours

Design: 50 hours

• Front-end: 50 hours

• Coding and implementation: 50 hours

• Testing: 20 hours

8. Hardware and Software Requirements:

Hardware Requirements:-

Computer/Smartphone with internet connectivity

Software Requirements :-

- Frontend :- HTML, CSS, Javascript, Django.
- Backend:- SQL, Node.js
- Operating System:- Windows/Linux.

9. Technology/Architecture:

The server side connection will be implemented using Django Python and Node.js. Database Connectivity could be implemented using PostgreSQL.

10. Standard to be followed during the project: Group to constantly review, audit and inspect the deliverables implemented while constructing the project application based on the core principles of agile methodology.