

DATABASE MANAGEMENT SYSTEMS

ONLINE NET BANKING REVIEW-3

FINAL REPORT

TEAM MEMBERS:

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ABSTRACT:

Requirements definition and management is recognized as a necessary step in the delivery of successful systems and software projects, discipline is also required by standards, regulations, and quality improvement initiatives. The ONLINE BANKING SYSTEM undertaken as a project is based on relevant technologies. The main aim of this project is to develop software for bank management system. This project is to develop software for bank management system. This project has been developed to carry out the processes easily and quickly, which is not possible with the manual systems, which are overcome by this software. Hence it will provide the complete solution for the current management system

PROBLEM DESCRIPTION:

1. Data redundancy and inconsistency.
2. Difference in accessing data.
3. Data isolation.
4. Security problem
5. Communication gap
6. Updating problem

FUNCTIONALITIES TO BE PROVIDED:

1. Maintenance

banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. Online banking is also referred of Account Holder's records those are available in the Books.

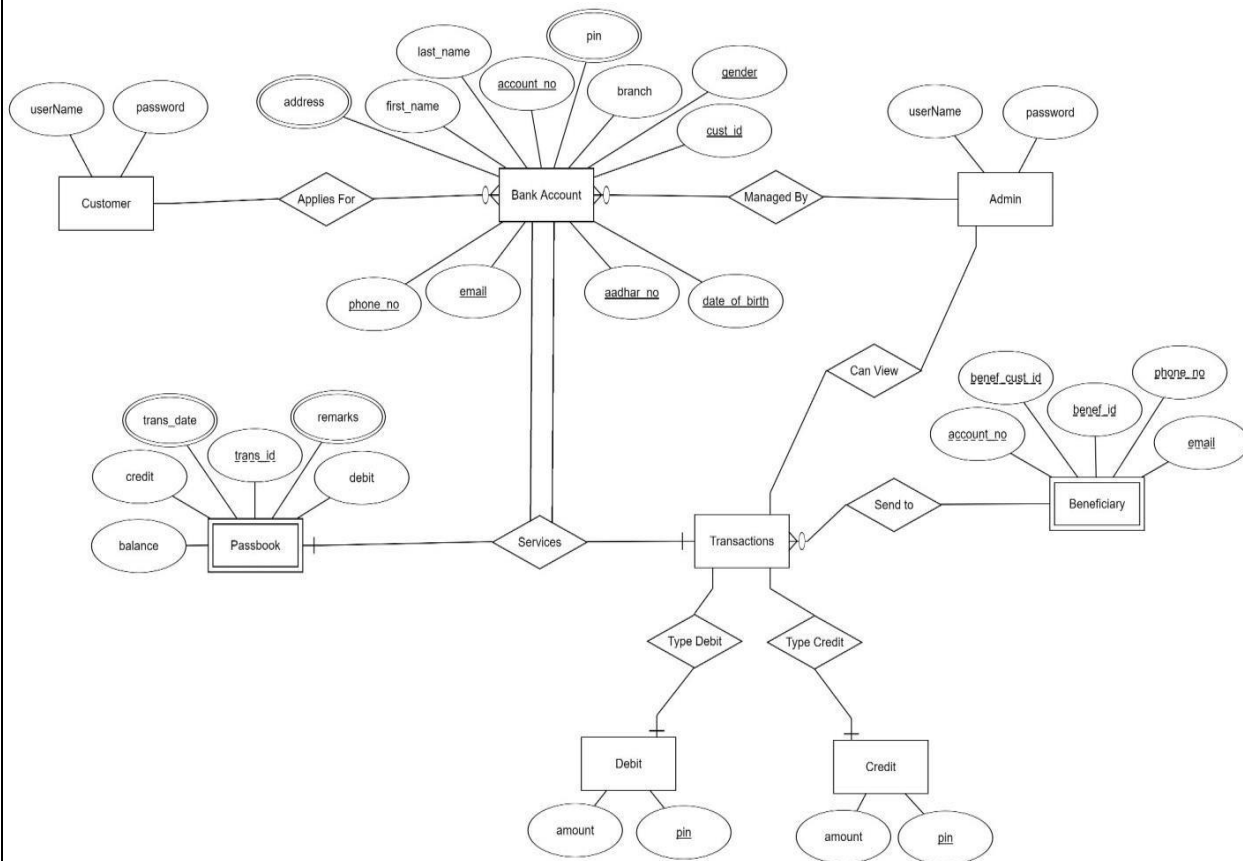
2.Maintenance of Daily Transactions that are ongoing in the Bank.

3.Maintenance of Different Accounts for the annual closing of Accounting Books,Searching Criterion.

INTRODUCTION:

Online as internet banking, e-banking, virtual banking and by other terms. Online banking or E-banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution. Online banking is the practice of making bank transactions or paying bills via the Internet. Thanks to technology, and the Internet in particular, people no longer have to leave the house to shop, communicate, or even do their banking.

ER DIAGRAMS:



TABLES:

"ACCOUNT INFO" Table: -

Field Name	Type	Constraints
Account_No	Int	Primary Key
Branch_No	Varchar(7)	References Branch_Info(Branch_No)
Branch_Name	VARCHAR(50)	Not Null
Account_H_Type	Varchar(15)	Not Null
No_Account_H	Varchar(5)	Not Null
Saluation_F	Varchar(5)	Not Null
Name_P_O_F	Varchar(50)	Not Null

Fa_Name_F	Varchar(50)	Not Null
Gender_F	Varchar(6)	Not Null
DOB_F	DateTime	Not Null
Age_F	Varchar(3)	Check(Age_F>=0 and Age_F<100)
Occupation_F	Varchar(15)	Not Null
Photo_F	Image	Not Null
Sign_F	Image	Not Null
Address_F	Varchar(100)	Not Null
Ph_No_F	Varchar(11)	Not Null
Mob_No_F	Varchar(14)	Not Null
Saluation_S	Varchar(5)	
Name_P_O_S	Varchar(50)	
Fa_Name_S	Varchar(50)	
Gender_S	Varchar(6)	
DOB_S	DateTime	
Age_S	Varchar(3)	Check(Age_S>=0 and Age_S<100)
Occupation_S	Varchar(15)	
Photo_S	Image	
Sign_S	Image	
Address_S	Varchar(100)	
Ph_No_S	Varchar(11)	
Mob_No_S	Varchar(14)	

Saluation_T	Varchar(5)	
Name_P_O_T	Varchar(50)	
Fa_Name_T	Varchar(50)	
Gender_T	Varchar(6)	
DOB_T	DateTime	
Age_T	Varchar(3)	Check(Age_T>=0 and Age_T<100)
Occupation_T	Varchar(15)	
Photo_T	Image	
Sign_T	Image	
Address_T	Varchar(100)	
Ph_No_T	Varchar(11)	
Mob_No_T	Varchar(14)	
Account_Type	Varchar(25)	Not Null
Witness_Name	Varchar(50)	Not Null
Witness_Sign	Image	Not Null
Nominee_Rel	Varchar(10)	Not Null
Nominee_Name	Varchar(50)	Not Null
Nominee_Sign	Image	Not Null
Opening_Bal	Varchar(10)	
T_Date	DateTime	Not Null

“Branch Info” Table: -

Field Name	Type	Constraints
Branch_No	Varchar(7)	Primary Key
Branch_Name	Varchar(50)	

“Deposit Info” Table: -

Field Name	Type	Constraints
Account_No	Int	References Account_Info(Account_No)
Branch_No	Varchar(7)	
Depositor_Name	Varchar(150)	
Account_H_Type	Varchar(15)	
Deposit_Amt	Varchar(10)	
Deposit_Date	DateTime	

“Fixed Info” Table: -

Field Name	Data type	Constraints
Account_No	Int	References Account_Info(Account_No)
Branch_No	Varchar(7)	
Depositor_Name	Varchar(50)	
Account_H_Type	Varchar(15)	
Time_Span	Varchar(5)	References Rate_Of_Interest_Info(Time_Span)
ROI	Varchar(5)	
Start_Date	DateTime	
Mature_Date	Varchar(15)	
Deposit_Amt	Varchar(10)	
Mature_Amt	Varchar(10)	

“Login_Info” Table: -

Field Name	Data type	Description
UserName	Varchar(20)	Primary Key
UserPassWord	Varchar(15)	

"Login_Info" Table: -

Field Name	Data type	Description
Time_Span	Varchar(5)	Primary Key
ROI	Varchar(5)	

"Recurring_Info" Table: -

Field Name	Data type	Description
Account_No	Int	References Account_Info(Account_No)
Branch_No	Varchar(7)	
Depositor_Name	Varchar(50)	
Account_H_Type	Varchar(15)	
Time_Span	Varchar(5)	References Rate_Of_Interest_Info(Time_Span)
ROI	Varchar(5)	
Start_Date	DateTime	
Mature_Date	Varchar(15)	
Monthly_Deposit	Varchar(10)	
Principle_Amt	Varchar(10)	
Mature_Amt	Varchar(10)	

“Withdrawl Info” Table: -

Field Name	Type	Constraints
Account_No	Int	References Account_Info(Account_No)
Branch_No	Varchar(7)	
Withdrawee_Name	Varchar(150)	
Account_H_Type	Varchar(15)	
Withdrawl_Amt	Varchar(10)	
Withdrawl_Date	DateTime	

“Loan Info” Table: -

Field Name	Type	Constraints
Account_No	Int	References Account_Info(Account_No)
Branch_No	Varchar(7)	
Acc_Holder_Name	Varchar(50)	
Account_Type	Varchar(15)	
Account_Sub_Type	Varchar(15)	
Time_Span	Varchar(5)	References Rate_Of_Interest_Info(Time_Span)
ROI	Varchar(5)	
Issue_Date	DateTime	
Due_Date	Varchar(15)	
+Loan_Sanctioned	Varchar(10)	
No_Installments	Varchar(5)	
EMI	Varchar(10)	
Total_Loan_Ret	Varchar(10)	

TOOLS USED:

HTML5, CSS, JavaScript & jQuery used for front-end design.

PHP7 & MySQL used for back-end design. Oracle MySQL has been used to create and host the database for the internet banking website. Other than the

languages/tools mentioned above NO other/external libraries and/or web-page templates have been used, everything has been coded from ground-up straight from scratch.

BENEFITS:

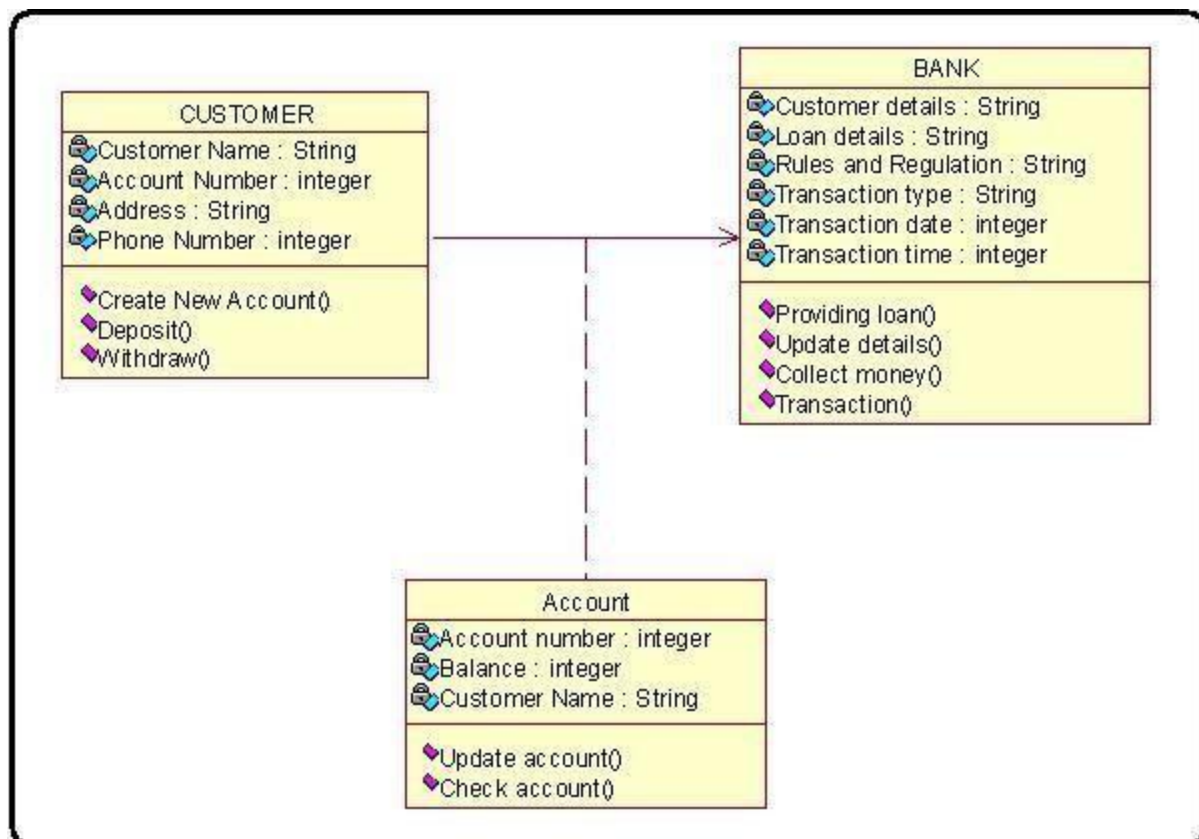
Access to privilege banking zone,Dedicated Relationship Manager, International Debit Card with insurance coverage Facility to link with current account , Anywhere Banking with higher limits,Daily account balance alerts ,Multi-city cheque book with 25 leaves

LIMITATIONS:

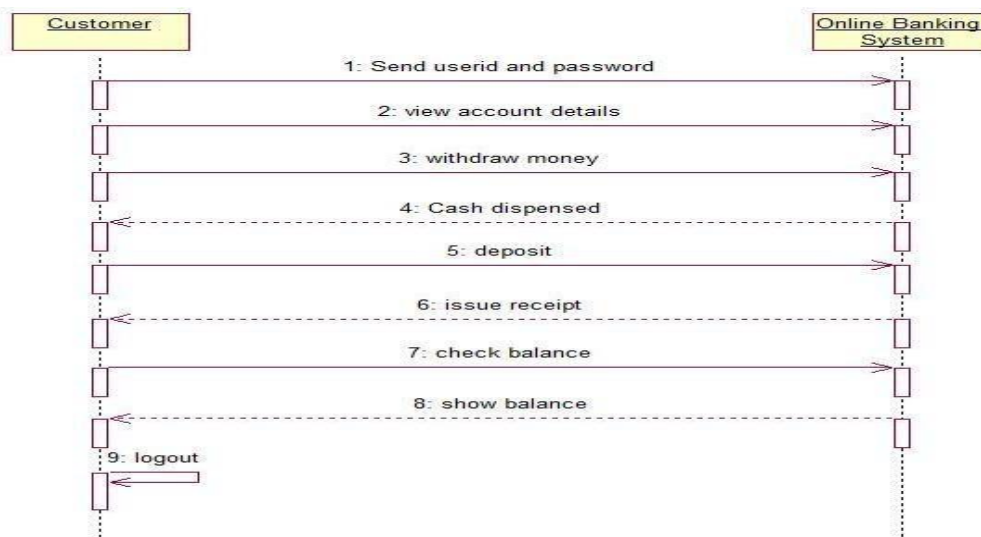
The failure of a larger institution could have serious ramifications for the entire system in that if one universal bank were to collapse, it could lead to a systemic financial crisis. Universal bankers may be tempted to take excessive risks. • Banks may deploy their own assets in securities with consequent risk to commercial and savings deposits.Vulnerable to high risks due to investment banking activities coupled with focus on commercial banking activities. Unsound loans may be made in order to shore up the price of securities or the financial position of companies in which a bank had invested its own assets.

UML DIAGRAMS:

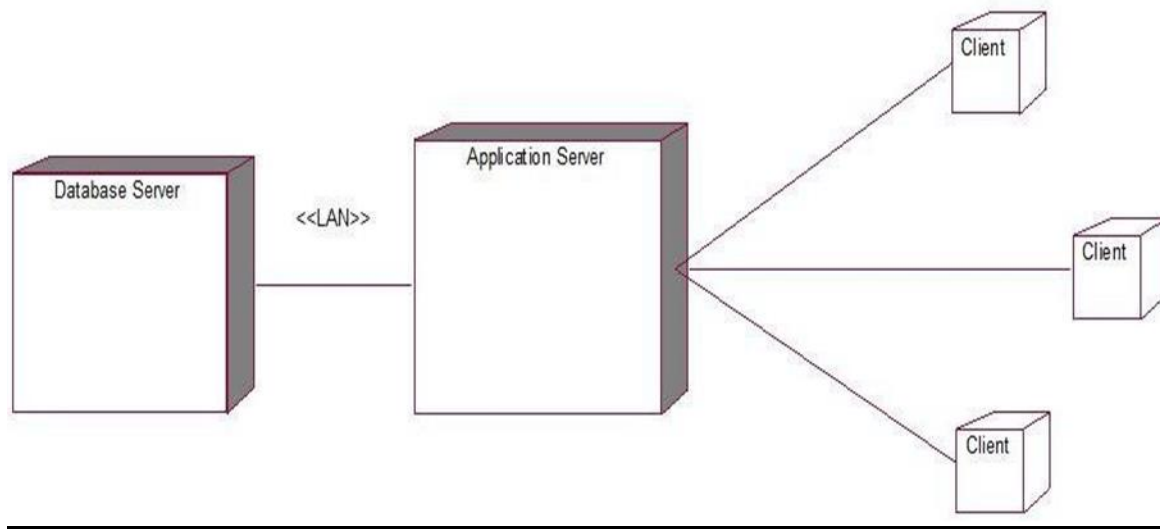
CLASS DIAGRAM:



SEQUENCEDIAGRAM:



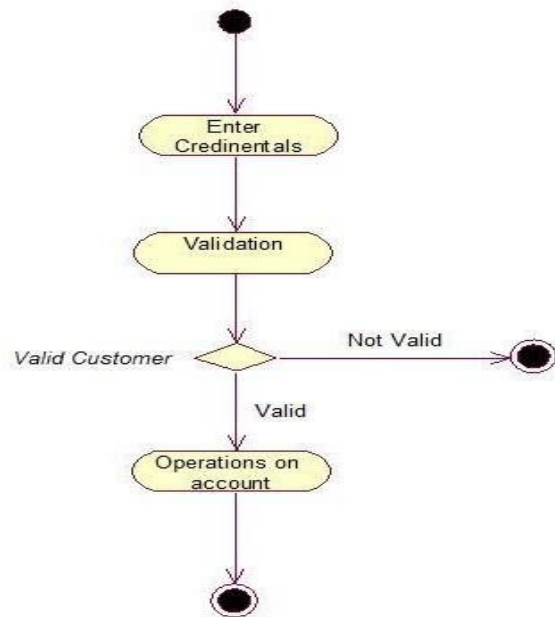
DEPLOYMENT DIAGRAM:



Activity Diagram:

CUSTOMER DETAILS - New Account Opening:

The first use case “Customer details” perform the following operation. The customer details contain the customer name, customer address, phone number and account number. It is used to help the bankers to know the details about the customer. The second use case “To create a new account” performs the following operation. To create a new account, first login the user and check the application form is submitted or not. If the application is fulfilled and submitted, the account will be created or, it just goes to the login phase. Finally the process of creating a new account can be stopped.



Hierarchy of the website:

The website has been divided into 3 main parts : A core home part where the customer can view login options, access contact information and/or read latest news/notices. A core customer part where the customer can interact with the various options available to him/her for internet banking. A core admin part where the admin can interact with the various options available to him/her for managing the customers and website

The core home part:

It consists of 4 parts accessible via a top navigation bar Home : The home page of the website, also the login page for the customer. News This page consists of news/notices posted by the admin on the website.

Contact : This page has contact information about the bank. About : About the bank and info regarding the developers of the website is present on this page.

Responsive Web Design:

Guidelines of RWD have been followed to ensure a seamless compatibility between different devices based on screen size. Elements which include the guidelines are :Navbar : On large screens the contents of the navbar are present in a tabbed layout, however on small screens only one tab is visible and the rest become visible after clicking a button on the navbar. The navbar is sticky in nature which means that on scrolling the page the navbar sticks to the top. Sidebar On large screens the sidebar is always visible, however on small screens the navbar becomes visible only when an associated button (hamburger icon) is clicked on the navbar. All the content of the web pages have been placed inside flex-boxes to ensure that they dynamically adjust with screen size. Certain texts are replaced by icons to save space on small screen. In certain places dynamic fonts have been coded, the size of which adjusts in accordance with the screen size.

Overview of the internet banking features:

Registration for online banking by Admin. Adding beneficiary account by customer. Transferring amount to the beneficiary added by customer. Customers can check the transactions related with their account. Customers can check their account statement within a date range. Customers can filter their transactions based on certain variables. Auto deletion of added beneficiaries on sensitive data

mismatch or/if data integrity of the beneficiary is compromised. Customer can debit/credit money from/into his/her account. Customer can change their password and non sensitive details. Admin can add/edit/delete customer. Admin login page is hidden from customer for security purpose. Admin can post news/notices on the main website.

Features of the database:

The database contains customer & admin tables. Each customer has its own virtual passbook linked with his/her account number. Each customer has its own beneficiary table linked with his/her account number. A separate table for news and news' body is maintained in the database.

The Customer Part: This part is only accessible after the customer logs into his/her account. It cannot be accessed in any other way. It consists of the following core internet banking features, most of them accessible via a side pane : A Customer Home page which displays information about the customer like total balance, account number, last transaction, etc. A My Profile page in which the customer can view/edit non sensitive details/change password and/or pin, etc page which displays all the transactions of the customer in a tabular form. It consists of the following features ,Ability to sort the transactions by the transaction id or date of the transaction in both ascending and descending order. Ability to filter the transactions based on a certain type of transaction/remark. Ability to filter/display transactions within/from/up to a certain date range. Ability to use one or more filter in conjugation with the other. Ability to use filter in conjugation with sort type. Filters being used are constantly displayed on the screen. Ability to remove

applied filters. The customer can transfer funds to another customer via a Transfer Funds page which has the following features Before the customer can send funds, the customer has to add beneficiaries to whom he/she can send the funds. Beneficiaries can be added via the transfer funds page. To add a beneficiary, the customer has to fill all the valid details as required in the add beneficiary form. Submitting invalid information will result in rejection of the form and the beneficiary can't be added. Beneficiaries can only be added if and only if ALL the information entered is valid. After a beneficiary has been successfully added it will be displayed in the transfer funds page.

Auto deletion of beneficiaries:

Every time the "transfer funds" page loads a check is made initially to ensure that the data integrity of the beneficiaries is intact. If not, those beneficiaries whose data integrity has been compromised will be automatically deleted from the list of beneficiaries and an appropriate message will be displayed to the customer. Data integrity of a beneficiary will be lost if and only if the following data of the beneficiary is changed : email id, phone number, account number, name, and/or if the beneficiary's account no longer exists

Security features of the website:

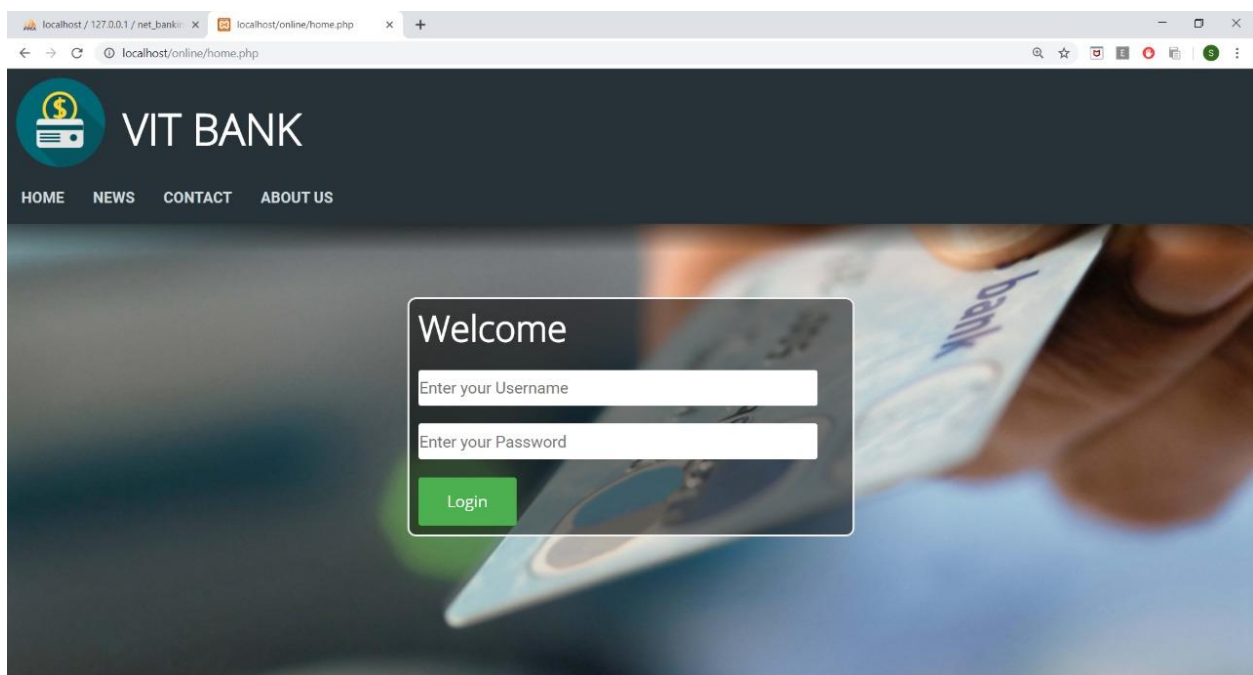
Each and every input is passed through `mysqli_real_escape_string()` to remove special characters from the string so that user can't submit arbitrary input. It protects from attacks like SQL Injection and Cross Site

Scripting(XSS). Sensitive details like password/username in a form are passed through method="POST" and NOT method="GET" to prevent leak of such data via the URL

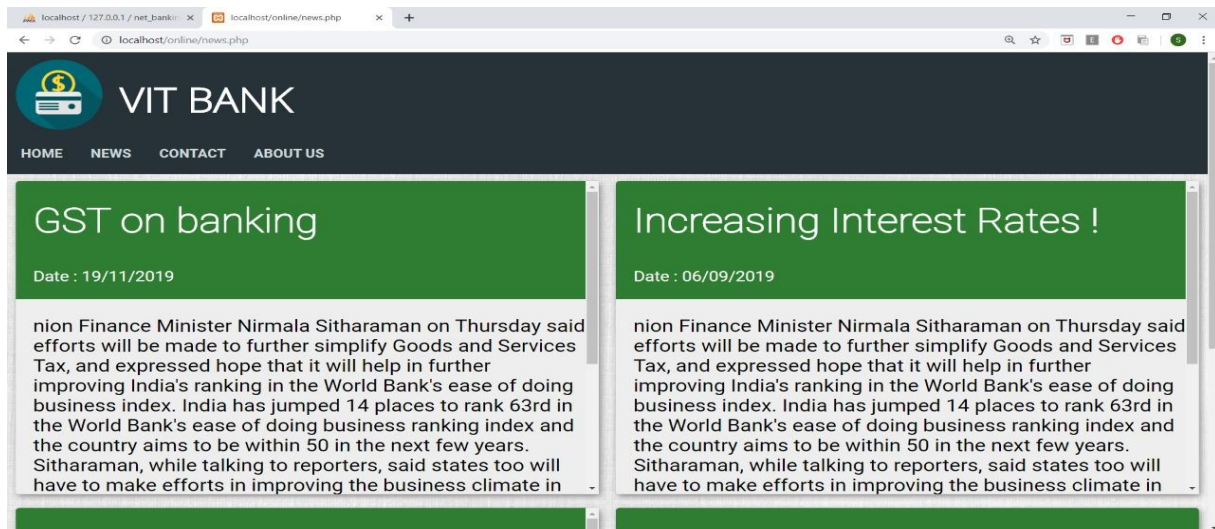
RESULT:

OUTCOME SCREENSHOTS:

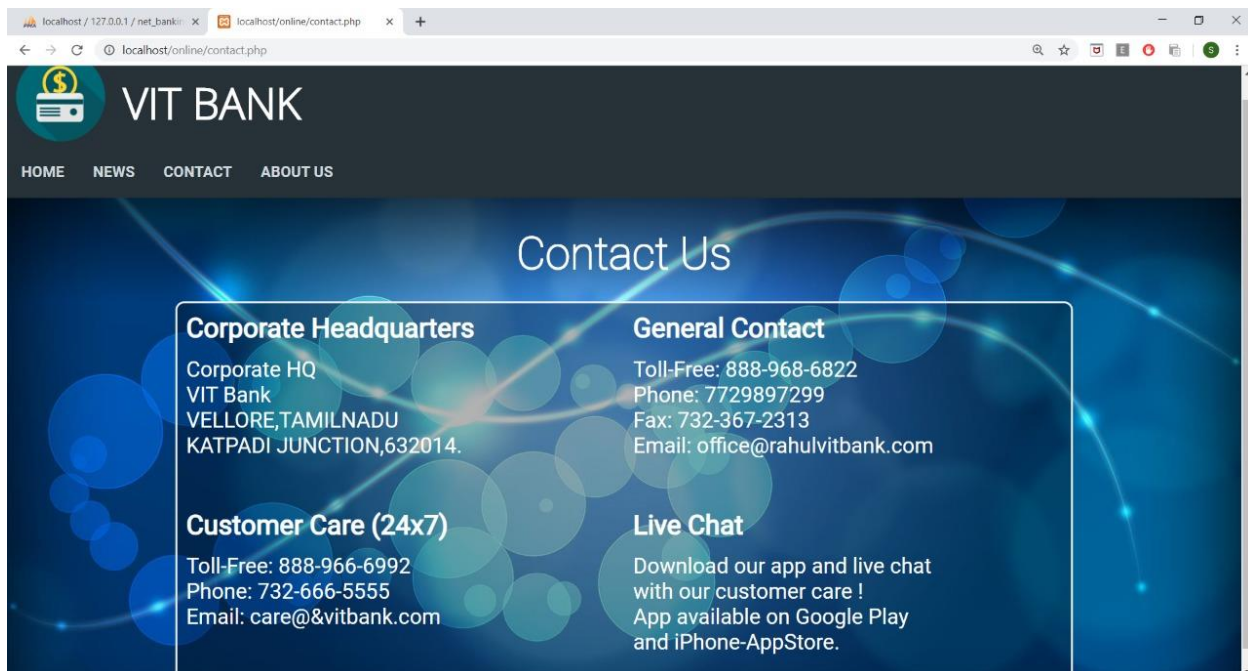
HOME PAGE:



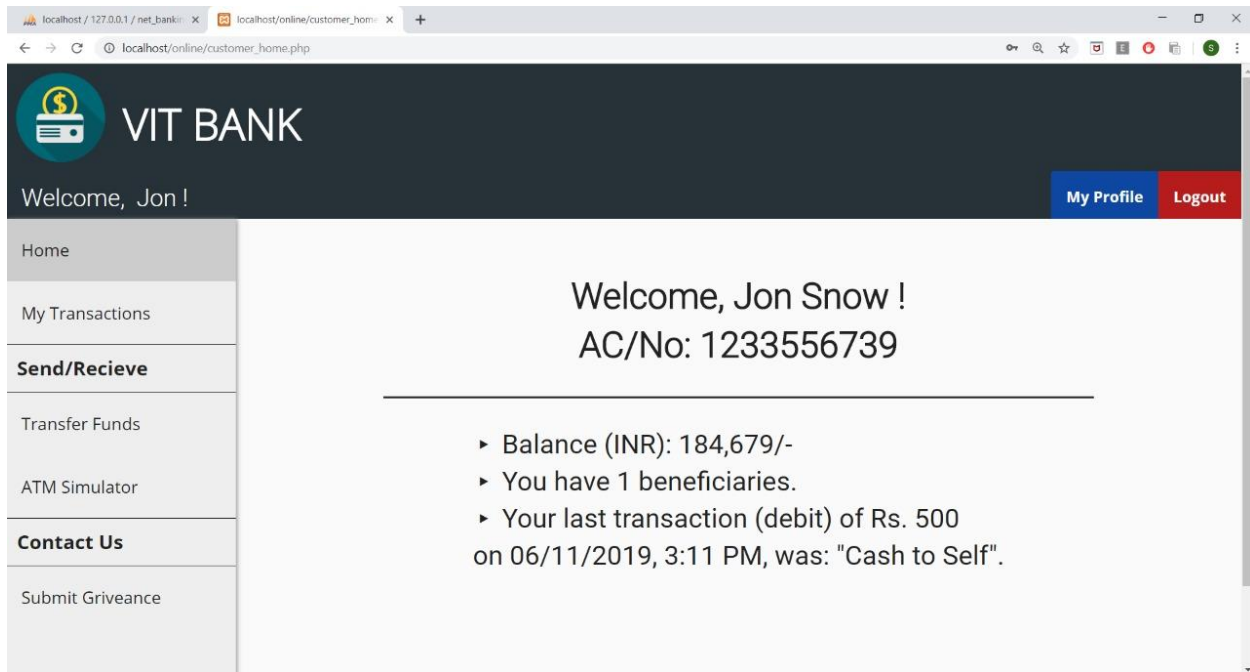
NEWS PAGE:



CONTACTPAGE:



Send and Receive:



The screenshot shows the VIT Bank online customer home page. The header includes the VIT Bank logo and a welcome message for 'Jon'. A sidebar on the left contains navigation links: Home, My Transactions, Send/Recieve, Transfer Funds, ATM Simulator, Contact Us, and Submit Griveance. The main content area displays the user's account details and a list of transactions.

VIT BANK

Welcome, Jon !

[My Profile](#) [Logout](#)

Home

My Transactions

Send/Recieve

Transfer Funds

ATM Simulator

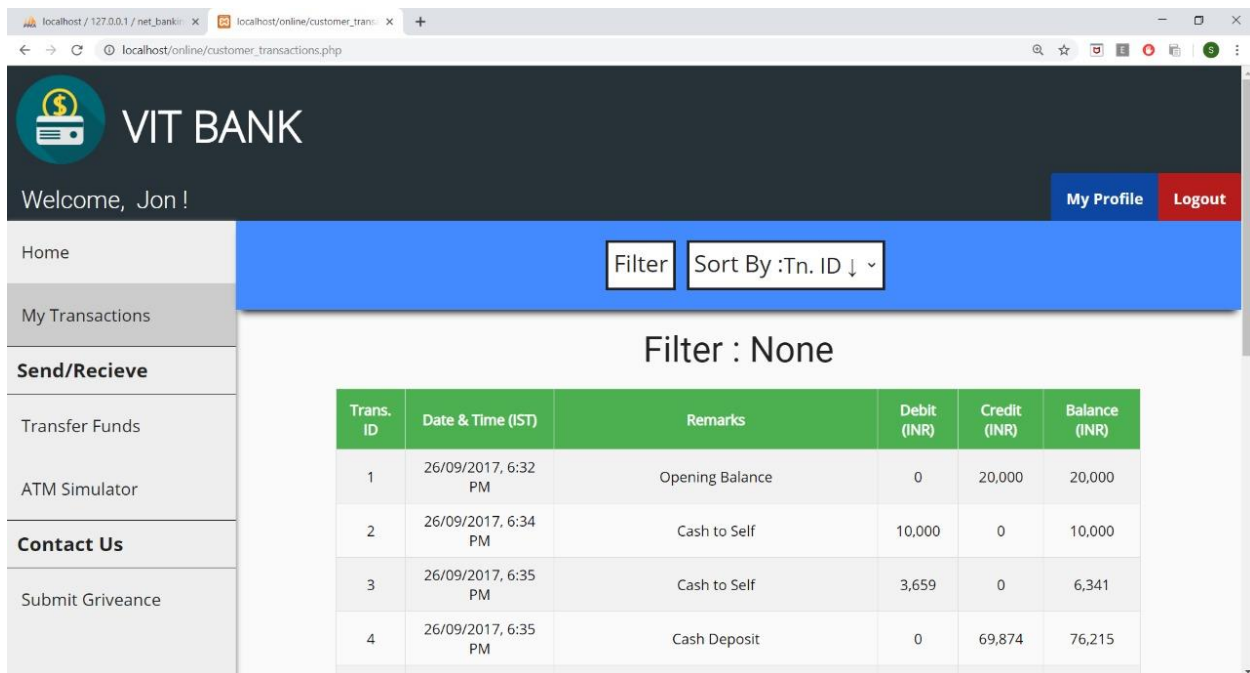
Contact Us

Submit Griveance

Welcome, Jon Snow !
AC/No: 1233556739

- ▶ Balance (INR): 184,679/-
- ▶ You have 1 beneficiaries.
- ▶ Your last transaction (debit) of Rs. 500 on 06/11/2019, 3:11 PM, was: "Cash to Self".

My transactions:



The screenshot shows the VIT Bank online customer transactions page. The header includes the VIT Bank logo and a welcome message for 'Jon'. A sidebar on the left contains navigation links: Home, My Transactions, Send/Recieve, Transfer Funds, ATM Simulator, Contact Us, and Submit Griveance. The main content area displays a table of transactions with columns for Trans. ID, Date & Time (IST), Remarks, Debit (INR), Credit (INR), and Balance (INR). The table shows four transactions: Opening Balance, Cash to Self, Cash to Self, and Cash Deposit.

VIT BANK

Welcome, Jon !

[My Profile](#) [Logout](#)

Home

My Transactions

Send/Recieve

Transfer Funds

ATM Simulator

Contact Us

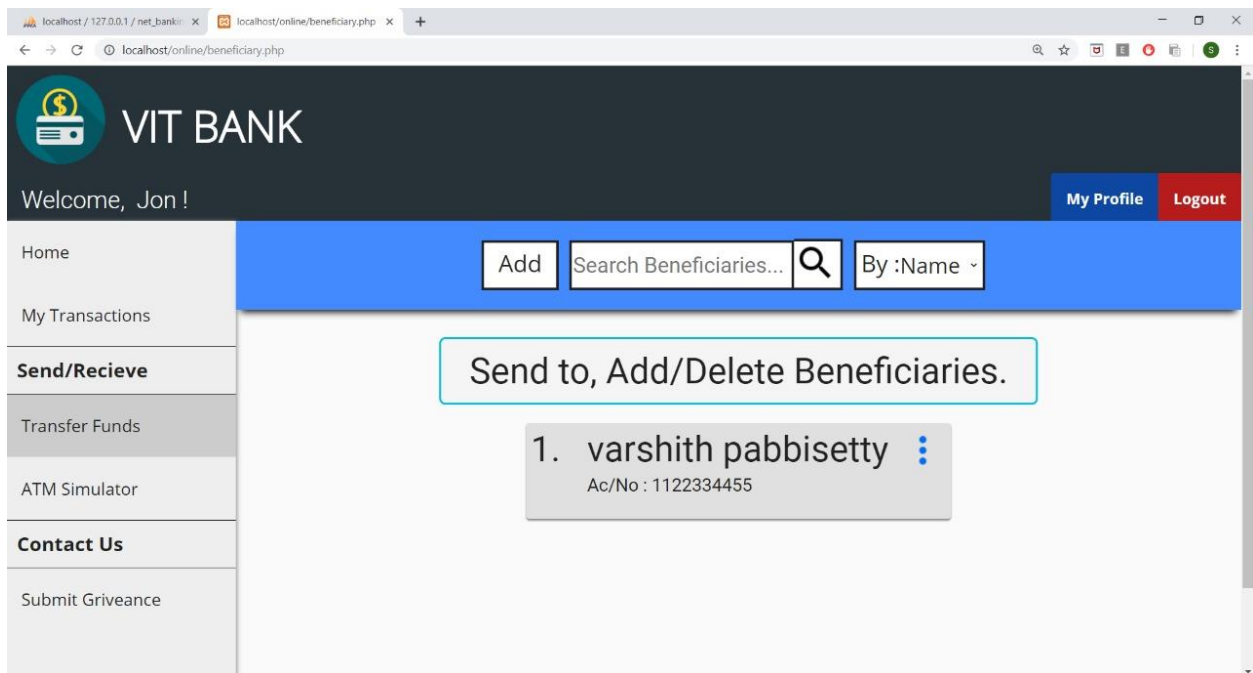
Submit Griveance

Filter Sort By :Tn. ID ↓

Filter : None

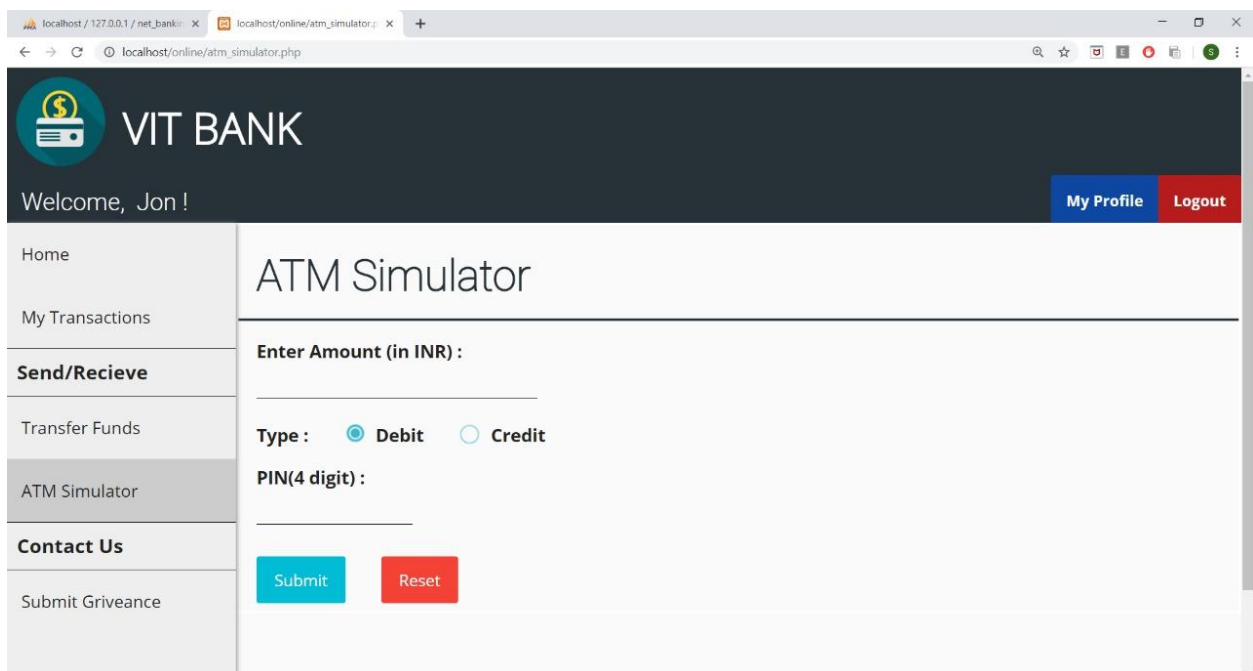
Trans. ID	Date & Time (IST)	Remarks	Debit (INR)	Credit (INR)	Balance (INR)
1	26/09/2017, 6:32 PM	Opening Balance	0	20,000	20,000
2	26/09/2017, 6:34 PM	Cash to Self	10,000	0	10,000
3	26/09/2017, 6:35 PM	Cash to Self	3,659	0	6,341
4	26/09/2017, 6:35 PM	Cash Deposit	0	69,874	76,215

Transferfunds:



The screenshot shows the VIT BANK online/beneficiary.php page. The header includes the VIT BANK logo, a welcome message "Welcome, Jon!", and links for "My Profile" and "Logout". The left sidebar contains navigation links: Home, My Transactions, Send/Recieve, Transfer Funds, ATM Simulator, Contact Us, and Submit Griveance. The main content area features a search bar with "Add", "Search Beneficiaries...", and "By :Name" dropdown. Below the search bar, a message "Send to, Add/Delete Beneficiaries." is displayed. A list of beneficiaries is shown, with the first entry being "1. varshith pabbisetty" with account number "Ac/No : 1122334455".

ATMSTIMULATOR:



The screenshot shows the VIT BANK online/atm_simulator.php page. The header includes the VIT BANK logo, a welcome message "Welcome, Jon!", and links for "My Profile" and "Logout". The left sidebar contains navigation links: Home, My Transactions, Send/Recieve, Transfer Funds, ATM Simulator, Contact Us, and Submit Griveance. The main content area features the "ATM Simulator" title. Below the title, there is a form with the following fields: "Enter Amount (in INR) :", "Type : Debit (selected) Credit", and "PIN(4 digit) :". At the bottom of the form are "Submit" and "Reset" buttons.

Account details:

localhost / 127.0.0.1 / net_bankin X localhost/online/customer_profil X +

localhost/online/customer_profile.php

Welcome, Jon ! [My Profile](#) [Logout](#)

Home

My Transactions

Send/Recieve

Transfer Funds

ATM Simulator

Contact Us

Submit Grivance

Your account details . . .

First Name : Jon **Last Name :** Snow

Account No : 1233556739

Balance (INR) : 184,679

Gender : Male

Date of Birth : 1985-02-03

Aadhar No : 129156787

Email-ID : jon.snow@gmail.com **Username :** jon

Phone No. : +1 8918332797

Address :

The Night Watch,
King in the North,

localhost / 127.0.0.1 / net_bankin X localhost/online/customer_profil X +

localhost/online/customer_profile.php

Welcome, Jon ! [My Profile](#) [Logout](#)

Home

My Transactions

Send/Recieve

Transfer Funds

ATM Simulator

Contact Us

Submit Grivance

Balance (INR) : 184,679

Gender : Male

Date of Birth : 1985-02-03

Aadhar No : 129156787

Email-ID : jon.snow@gmail.com **Username :** jon

Phone No. : +1 8918332797

Address :

The Night Watch,
King in the North,
The North Remembers,
Winter is here

Bank Branch : New York

[Home](#) [Update](#) [Change Password/PIN](#)

CONCLUSION:

We can go further for Online Banking. Can establish and start various Branches and available help centers for Account Holder's Queries. We can also deal through internet by creating web pages and a banking website for internet dealing. To attract Account Holder's we can offer various offers during festivals month. We can also deal in various types of Banking Transactions. To have more and more customer satisfaction we will emphasize more and more on our dealings. Banking activities are considered to be the life blood of the national Economy. Without banking services, trading and business activities cannot be carried on smoothly. Banks are the distributors and protectors of liquid capital which is of vital significance to a developing country. Efficient administration of the banking system helps in the economic Growth of the nation. Banking is useful to trade and commerce