

AED Final Project Report

Banking Management System

The project is a Banking Management System which is a simple and easy to use application offering features such as amount deposit, amount withdrawal, amount transfer, NGO funding, Insurance requests, credit card application, loan application, transaction details and also provides graphical insights via pie charts for the loans and credit cards approval.

Enterprises: Banking, NGO, Insurance, Customer

Organisations: Card, Loan, Card Verification, Loan Verification, NGO, Insurance, Bank, Customer

Roles: System Admin, Banking Admin, Banking Officer, Customer, NGO Admin, NGO Officer, Insurance Admin, Insurance Officer, Card Admin, Card Officer, Card Verification Admin, Card Verification Officer, Loan Admin, Loan Officer, Loan Verification Admin, Loan Verification Officer, Customer.

Features:

- System admin creates the network and credentials for the Banking Admin, NGO Admin, Insurance Admin, Card Admin, Card Verification Admin, Loan Admin and Loan Verification Admin.
- Banking Admin creates the banking organization and credentials for the banking officer.
- Card Admin creates the card organization and credentials for the card officer.
- Card Verification Admin creates the card verification organization and credentials for the card verification officer.
- Loan Admin creates the loan organization and credentials for the loan officer.

- Loan Verification Admin creates the loan verification organization and credentials for the loan verification officer.
- NGO Admin creates the NGO organisation and credentials for NGO officer.
- Insurance Admin created the Insurance organisation and credentials for insurance officer.
- Banking Officer creates the bank accounts and credentials for the customers.
- Banking Officer processes the NGO funding requests.
- Banking Officer processes the Insurance requests.
- Customers can deposit the amount, withdraw the amount, check the transaction details, apply for credit cards and apply for loans.
- Card Officer either approves the customer's credit card request and sends for verification or rejects the credit card request.
- Card Verification Officer either approves or rejects the credit card request upon verification.
- Loan Officer either approves the customer's loan request and sends for verification or rejects the loan request.
- Loan Verification Officer either approves or rejects the loan request upon verification.
- Pie charts for the loans and credit cards approval insights.

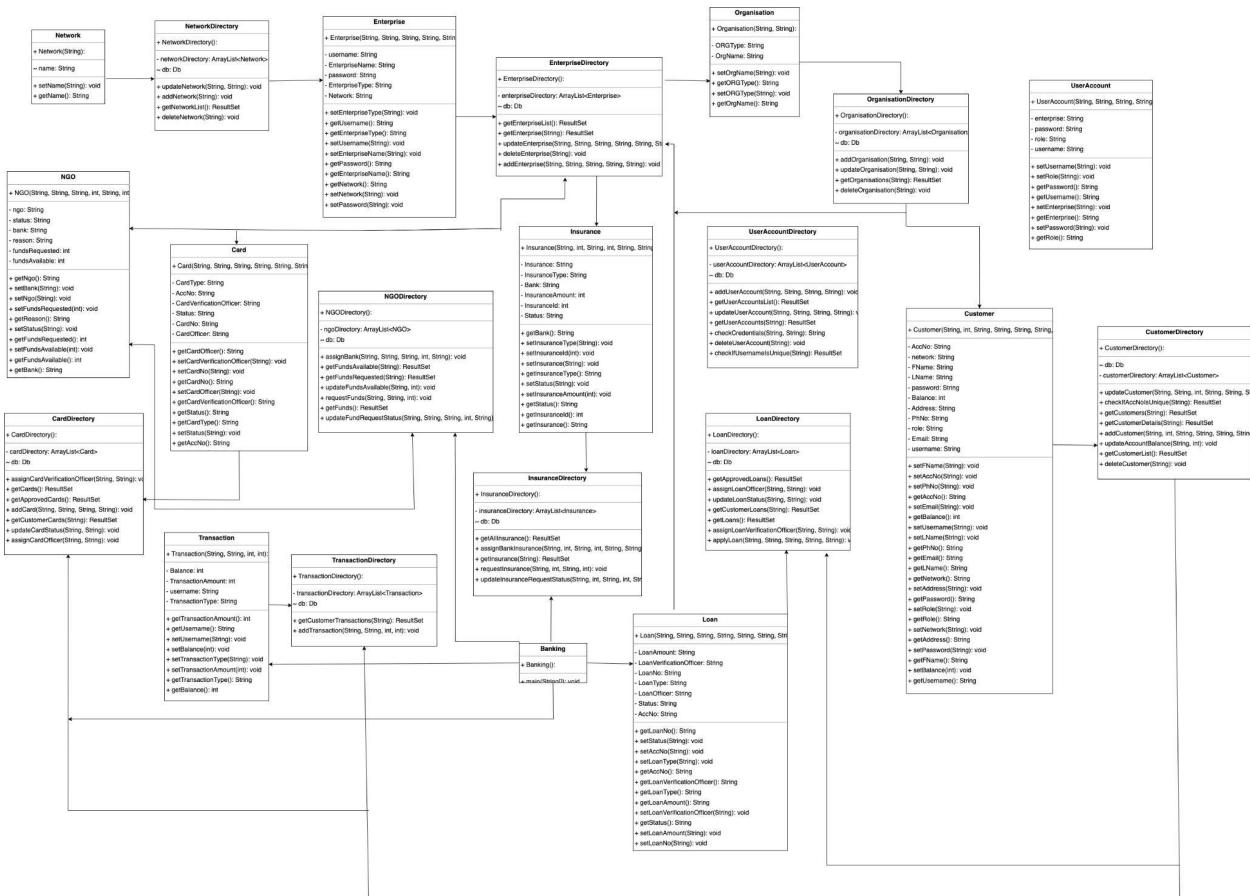
Tech Stack: Java, Java Swing (UI), MySQL (Database)

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Email Id: shekar.p@northeastern.edu

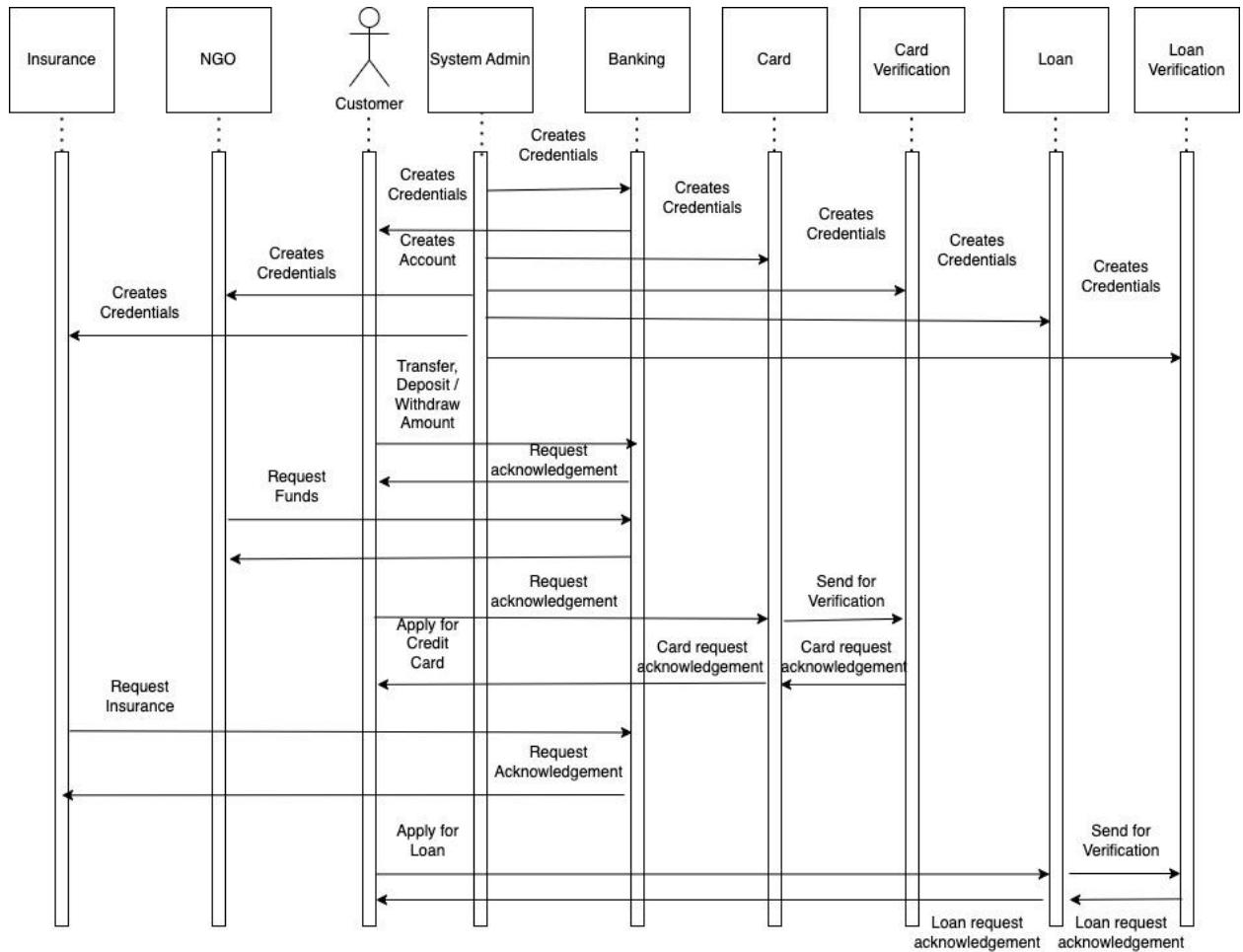
Class Diagram:



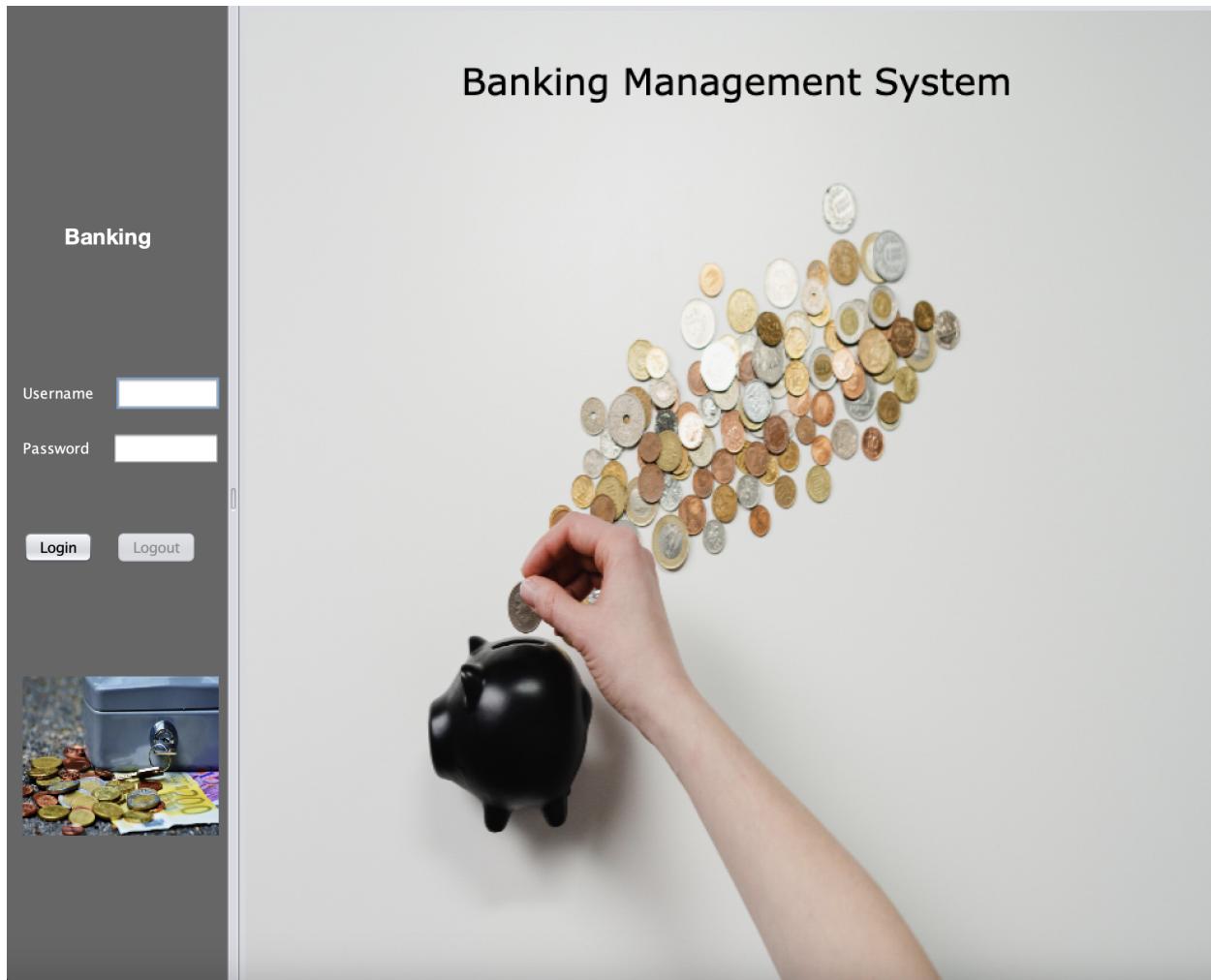
Object / Workflow Diagram:



Sequence Diagram:



Screenshots:



Banking

Username

Password

[Login](#) [Logout](#)



Admin

[Manage Network](#) [Manage Enterprise](#)



Banking

Username

Password



City

Boston
New York

Enter the city

Banking

Network	Enterprise	Username
Boston	Banking	BankingAdmin
Boston	CardAdmin	CardAdmin
Boston	CardVerificationAdmin	CardVerificationAdmin
Boston	LoanAdmin	LoanAdmin
Boston	LoanVerificationAdmin	LoanVerificationAdmin
New York	Swiss	SwissAdmin
New York	Visa	VisaAdmin
New York	Prodigy	ProdigyAdmin
New York	CardBGV	CardBGVAdmin
New York	LoanBCV	LoanBCVAdmin

Delete

Username

Network

Password

Enterprise

Login Logout

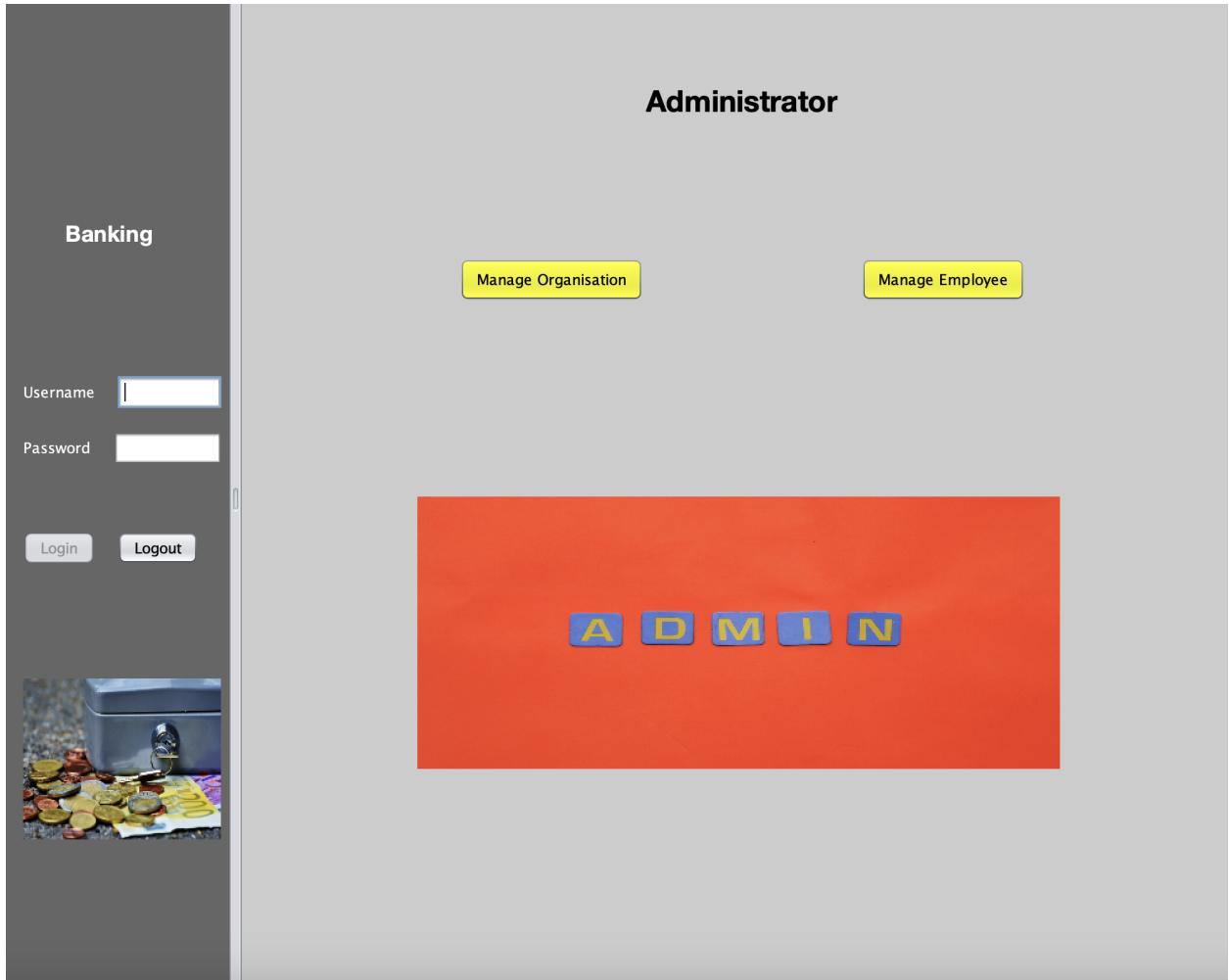
Username

Password

Role

Add **Update**





Manage Organisation

[Back](#)

Organisation
BankingOrganisation
SwissOrganisation

Username

Password

[Delete](#)

[Login](#) [Logout](#)



Enter the organisation

[Add](#) [Update](#)

Banking

Username

Password

[Login](#) [Logout](#)



Manage Employee

[Back](#)

Name	Username	Role
Banking	BankingOfficer	Banking
Swiss	SwissOfficer	Banking

[Delete](#)

Username

Password

[Add](#) [Update](#)

Banking

Username

Password Delete

Login Logout



Manage Organisation

Back

Organisation

NGOOrganisation

Enter the organisation

Add Update

Banking

Username

Password

[Login](#) [Logout](#)



Manage Employee

[Back](#)

Name	Username	Role
NGO	NGOOfficer	NGO

[Delete](#)

Username

Password

[Add](#) [Update](#)

Manage Organisation

[Back](#)

Organisation
InsuranceOrganisation

Username

Password

[Delete](#)

[Login](#) [Logout](#)

Enter the organisation

[Add](#) [Update](#)



Banking

Username

Password

[Login](#) [Logout](#)



Manage Employee

[Back](#)

Name	Username	Role
Insurance	InsuranceOfficer	Insurance

[Delete](#)

Username

Password

[Add](#) [Update](#)

Manage Organisation

[Back](#)

Organisation
CardOrganisation
VisaOrganisation

Username

Password [Delete](#)

[Login](#) [Logout](#)

Enter the organisation

[Add](#) [Update](#)



Banking

Username

Password

[Login](#) [Logout](#)



Manage Employee

[Back](#)

Name	Username	Role
Card	CardOfficer	Card
Visa	VisaOfficer	Card

[Delete](#)

Username

Password

[Add](#) [Update](#)

Manage Organisation

[Back](#)

Organisation

VisaBGVOrganisation
CardVerificationOrganisation

Username

Password

[Delete](#)

[Login](#) [Logout](#)

Enter the organisation

[Add](#) [Update](#)



Banking

Manage Employee

Back

Name	Username	Role
CardVerification	CardVerificationOfficer	CardVerification
VisaBGV	VisaBGVOfficer	CardVerification

Username

Password

Login Logout Delete



Username

Password

Add Update

Manage Organisation

[Back](#)

Organisation
LoanOrganisation
ProdigyOrganisation

Username

Password

[Delete](#)

[Login](#) [Logout](#)

Enter the organisation

[Add](#) [Update](#)



Banking

Username:

Password:

[Login](#) [Logout](#)



Manage Employee

[Back](#)

Name	Username	Role
Loan	LoanOfficer	Loan
Prodigy	ProdigyOfficer	Loan

[Delete](#)

Username:

Password:

[Add](#) [Update](#)

Manage Organisation

[Back](#)

Organisation

ProdigyBGVOrganisation
LoanVerificationOrganisation

Username

Password [Delete](#)

[Login](#) [Logout](#)

Enter the organisation

[Add](#) [Update](#)



Manage Employee

Back

Name	Username	Role
ProdigyBGV	ProdigyBGVOfficer	LoanVerification
LoanVerification	LoanVerificationOfficer	LoanVerification

Username

Password

Login Logout Delete



Username

Password

Add Update

NGO

[Refresh](#)

Bank	Reason	Funds Requested	Status
Banking	Education of underprivileged ...	100000	Approved

Username

Password

[Login](#) [Logout](#)



Funds Available 100000

[Request Funds](#)

Banking

Request Funds

Username

Password

Enter the reason

Enter the amount

Request Funds

Login **Logout**



The interface is a mobile banking application. On the left, a dark sidebar labeled "Banking" contains "Login" and "Logout" buttons. The main screen has a light gray background with a title "Request Funds". It includes fields for "Username" and "Password". Below these are two input fields: "Enter the reason" and "Enter the amount", both with placeholder text. A large green button at the bottom right is labeled "Request Funds". At the very bottom of the sidebar is a small image of a blue metal tin with various coins scattered around it.

Banking

Username

Password

[Login](#) [Logout](#)



Insurance

[Refresh](#)

Insurance Id	Insurance Type	Insurance Amount	Bank	Status
19735	Life Insurance	500000	Banking	Approved

[Insure](#)

Banking

Insure

Back

Username

Insurance Type Life Insurance ▾

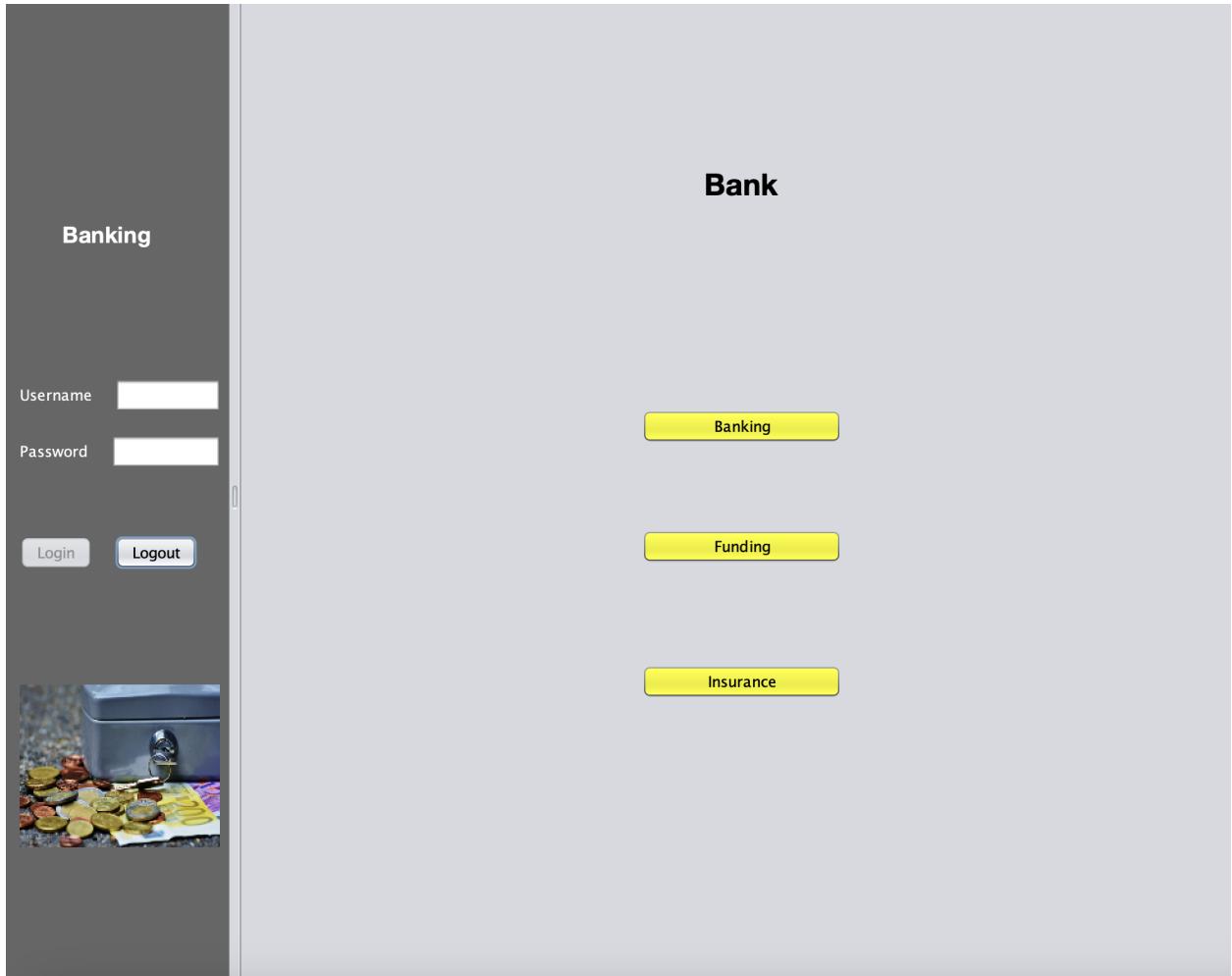
Password

Insurance Amount

Login Logout

Insure





Banking

Banking Officer

AccNo	FName	LName	Email	PhNo	Address	username	Network	Balance
AA001	Pavan	Shekar	pavan@gm...	85786919...	235 Park Dr	pavan	Boston	1200
AA002	John	Jacobs	john@gmail...	71825364...	26 Carson St	john	New York	6000

Username

Password

[Delete](#)

[Login](#) [Logout](#)



Acc No

FName

Email

Address

Username

Balance

LName

Ph No

Network

Password

Funding

[Back](#)

Banking

Username

Password

[Login](#) [Logout](#)



[Assign](#)

NGO	Bank	Reason	Funds Requested	Status
NGO	Banking	Education of underprivile...	100000	Approved

Process Fund Request Approve Reject

[Process](#)

Banking

Username

Password



Insurance

Insurance	Insurance Id	Insurance Type	Insurance Amount	Bank	Status
Insurance	19735	Life Insurance	500000	Banking	Approved

Process Insurance Request Approve Reject

Customer

Banking

Username

Password



Banking

Username:

Password:

[Login](#) [Logout](#)



Account Information

Acc No: AA001 Username: pavan

FName: Pavan LName: Shekar

Email: pavan@gmail.com Ph No: 8578691951

Address: 235 Park Dr Network: Boston

Balance: 1200

Transaction Type	Transaction Amount	Account Balance
Credit	500	1500
Debit	300	1200

Banking

Deposit

[Back](#)

Username

Account Balance: 1200

Password

[Login](#) [Logout](#)

Enter the amount to be deposited:

Deposit



Withdraw

[Back](#)

Banking

Username

Account Balance: 1200

Password

Enter the amount to be withdrawn:

[Login](#) [Logout](#)

Withdraw



Transfer

[Back](#)

Banking

Username

Enter the amount

Username john

Password

[Login](#) [Logout](#)

[Transfer](#)



Banking

Username

Password

[Login](#) [Logout](#)



Cards

[Back](#)

Acc No	Card No	Card Type
AA001	372724943573427	Platinum
AA001	372724943576810	Gold

Apply for Credit/Debit Cards

Card Type

Banking

Username

Password

[Login](#) [Logout](#)



Loan

[Back](#)

Acc No	Loan No	Loan Type	Loan Amount
AA001	L18722	Student Loan	50000
AA001	L10875	Personal Loan	10000

Apply for Loan

Loan Type

Loan Amount

Banking

Username

Password

[Login](#) [Logout](#)



Card Officer

Acc No	Card No	Card Type	Card Officer	Status
AA001	372724943573427	Platinum	CardOfficer	Approved
AA002	372724943578764	Gold	VisaOfficer	Rejected
AA002	372724943571527	Silver	VisaOfficer	Approved
AA001	372724943576810	Gold	CardOfficer	Approved
AA002	372724943572243	Black	VisaOfficer	Approved

Assign

Process Card Request Approve Reject

[Process](#) [Send for Verification](#)

Check Insights

Banking

Username

Password

[Login](#) [Logout](#)



Card Verification Officer

Acc No	Card No	Card Type	Card Officer	Card Verification ...	Status
AA001	372724943573427	Platinum	CardOfficer	CardVerificationOffi...	Approved
AA002	372724943578764	Gold	VisaOfficer	VisaVerificationOffi...	Rejected
AA002	372724943571527	Silver	VisaOfficer	VisaVerificationOffi...	Approved
AA001	372724943576810	Gold	CardOfficer	CardVerificationOffi...	Approved
AA002	372724943572243	Black	VisaOfficer	VisaVerificationOffi...	Approved

[Assign](#)

Process Card Request Approve Reject

[Process](#)

Banking

Username

Password

[Login](#) [Logout](#)



Loan Officer

Acc No	Loan No	Loan Type	Loan Amount	LoanOfficer	Status
AA001	L18722	Student Loan	50000	LoanOfficer	Approved
AA002	L10720	House Loan	100000	ProdigyOfficer	Rejected
AA001	L10875	Personal Loan	10000	LoanOfficer	Approved
AA002	L18390	House Loan	80000	ProdigyOfficer	Approved
AA002	L11505	Car Loan	25000	ProdigyOfficer	Approved

[Assign](#)

Process Loan Request Approve Reject

[Process](#)
[Send for Verification](#)

Check Insights

Banking

Username

Password

[Login](#) [Logout](#)



Loan Verification Officer

Acc No	Loan No	Loan Type	Loan Amount	Loan Officer	Loan Verificati...	Status
AA001	L18722	Student Loan	50000	LoanOfficer	LoanVerificatio...	Approved
AA002	L10720	House Loan	100000	ProdigyOfficer	ProdigyVerificat...	Rejected
AA001	L10875	Personal Loan	10000	LoanOfficer	LoanVerificatio...	Approved
AA002	L18390	House Loan	80000	ProdigyOfficer	ProdigyVerificat...	Approved
AA002	L11505	Car Loan	25000	ProdigyOfficer	ProdigyVerificat...	Approved

[Assign](#)

Process Loan Request Approve Reject

[Process](#)

Banking

Username

Password

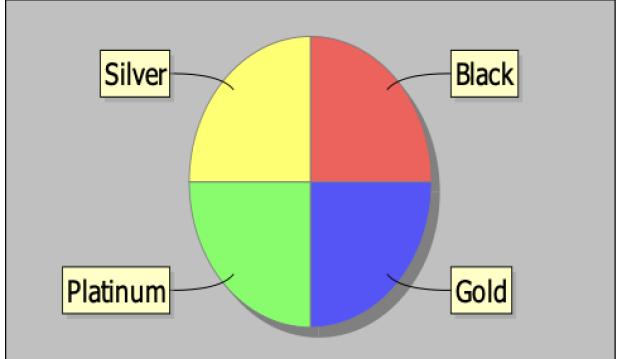
[Login](#) [Logout](#)



[Back](#)

Credit Card Approval Insights

Credit Cards Approved



Category	Percentage
Black	25%
Gold	25%
Platinum	25%
Silver	25%

● Black ● Gold ● Platinum ● Silver

Banking

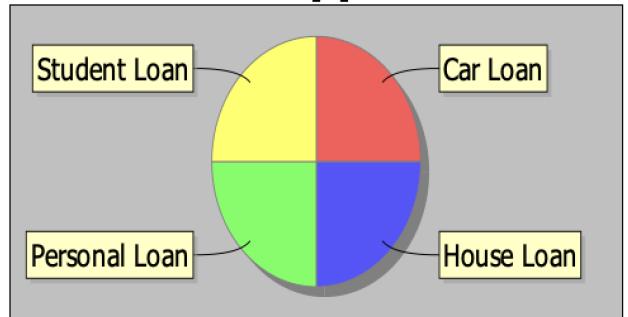
Username

Password



Loan Approval Insights

Loans Approved



● Car Loan	● House Loan	● Personal Loan
● Student Loan		