

# **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, credit card application, loan application, transaction details and also provides graphical insights via pie charts for the loans and credit cards approval.

### **Enterprises:**

Banking, Card, Loan, Card Verification, Loan Verification, Customer

### **Organisations:**

Banking, Card, Loan, Card Verification, Loan Verification, Customer

### **Roles:**

System Admin, Banking Admin, Banking Officer, Customer, Card Admin, Card Officer, Card Verification Admin, Card Verification Officer, Loan Admin, Loan Officer, Loan Verification Admin, Loan Verification Officer, Customer.

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

**Name:** Pavan Soma Shekar

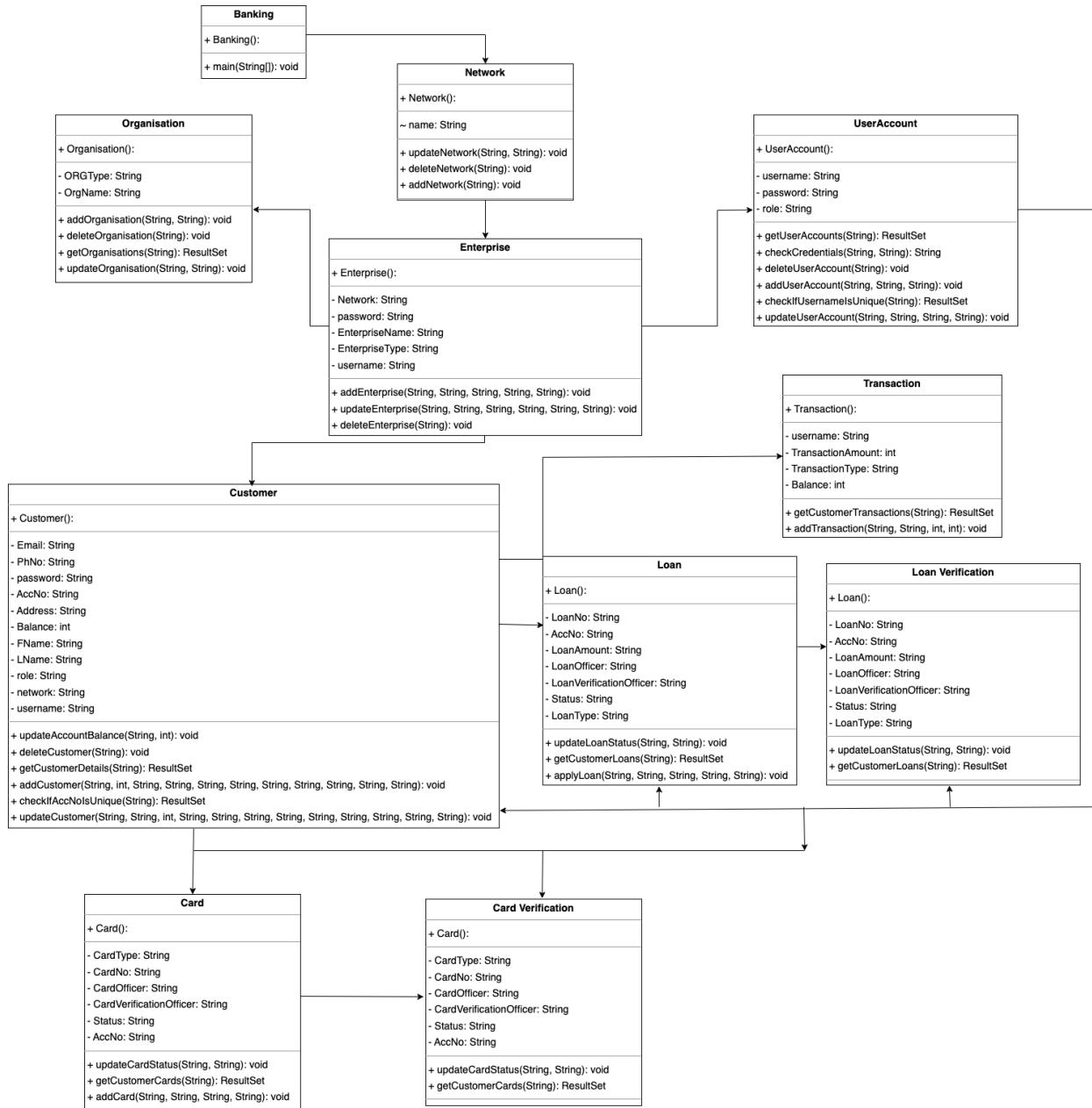
**NUID:** 002737038

**Email Id:** shekar.p@northeastern.edu

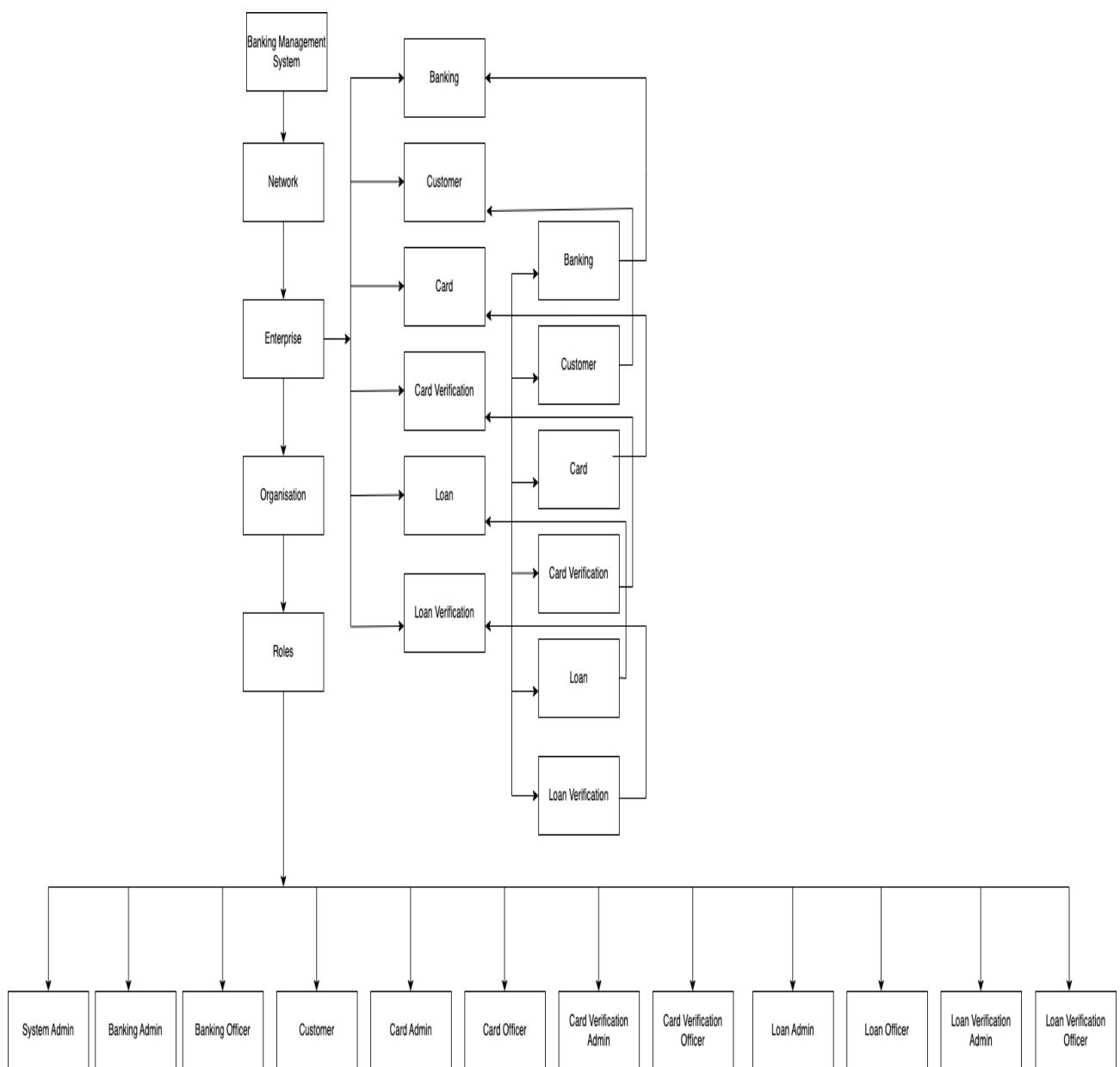
## **Features:**

- System admin creates the network and credentials for the Banking 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.
- Banking Officer creates the bank accounts and credentials for the customers.
- 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.

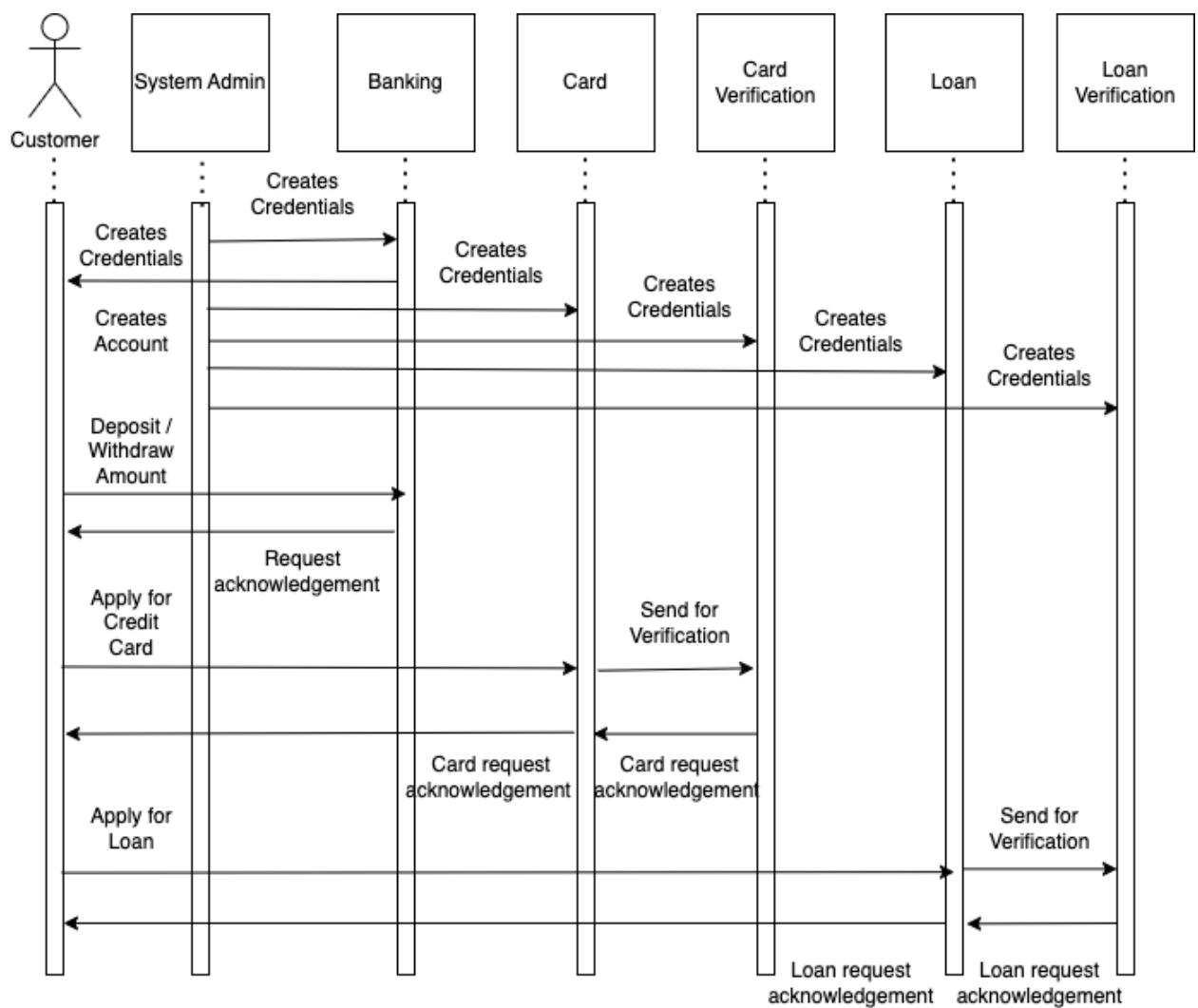
# Class Diagram:



## Object / Workflow Diagram:



## Sequence Diagram:



## Screenshots:



**Banking**

Username

Password



**Admin**



**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	LoanRCV	LoanRCVAdmin

**Delete**

Username

Network

Password

Enterprise

Login  Logout

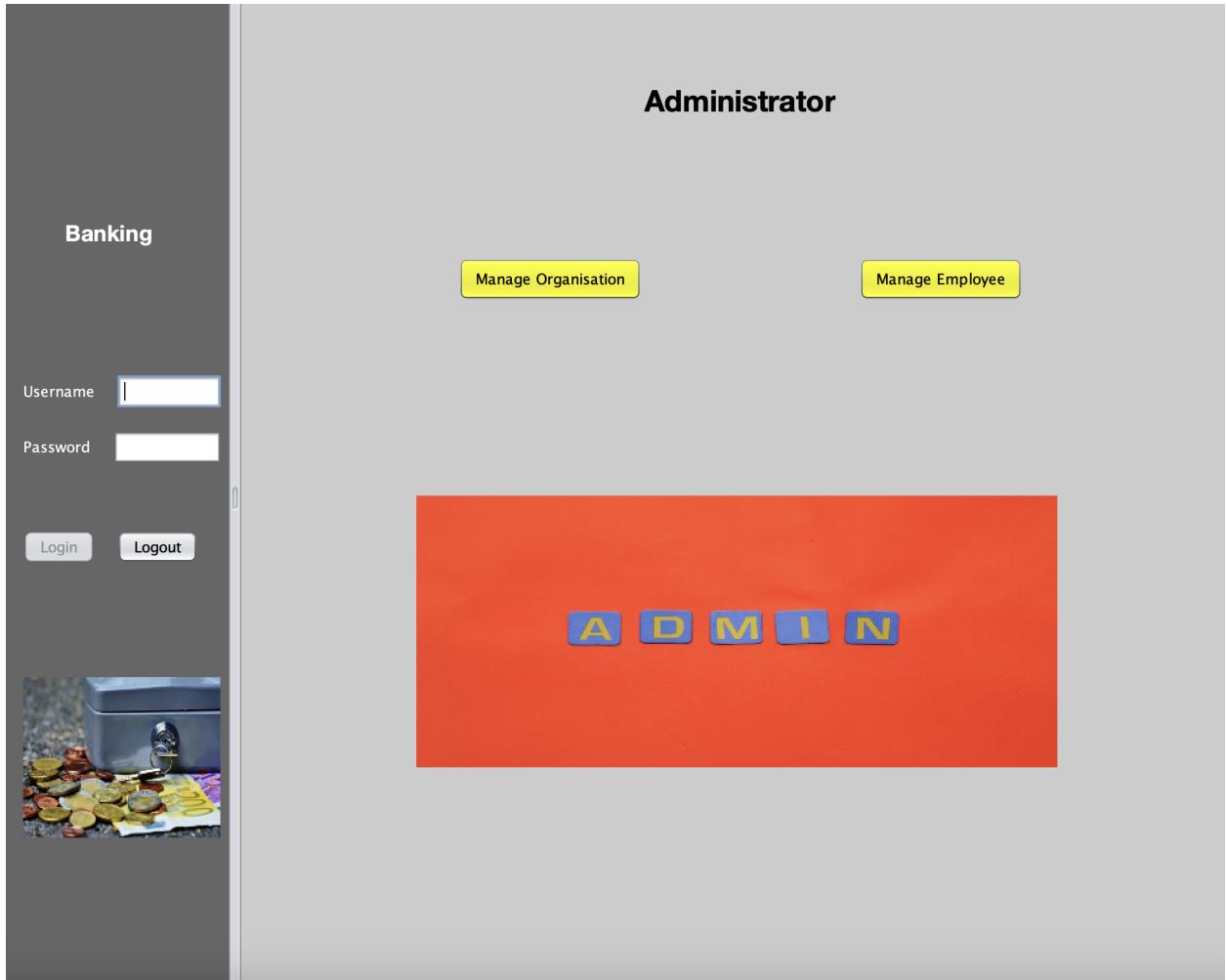
Username

Password

Role

**Add** **Update**





## Manage Organisation

[Back](#)

Organisation
BankingOrganisation
SwissOrganisation

Username

Password

[Delete](#)

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



Enter the organisation

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

## Banking

Manage Employee

Back

Username	Role
BankingOfficer	Banking
SwissOfficer	Banking

Username

Password

Login Logout 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](#)

Username	Role
CardOfficer	Card
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

Username	Role
CardVerificationOfficer	CardVerification
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

Manage Employee

Back

Username	Role
LoanOfficer	Loan
ProdigyOfficer	Loan

Username

Password

Login Logout Delete



Username

Password

Add Update

## Manage Organisation

[Back](#)

**Organisation**

ProdigyBGVOrganisation  
LoanVerificationOrganisation

Username

Password  [Delete](#)

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



Enter the organisation

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

## Banking

Username

Password

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



**Manage Employee**

[Back](#)

Username	Role
ProdigyBGVOOfficer	LoanVerification
LoanVerificationOfficer	LoanVerification

[Delete](#)

Username

Password

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

## 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

**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**



**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

[Apply](#)

**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

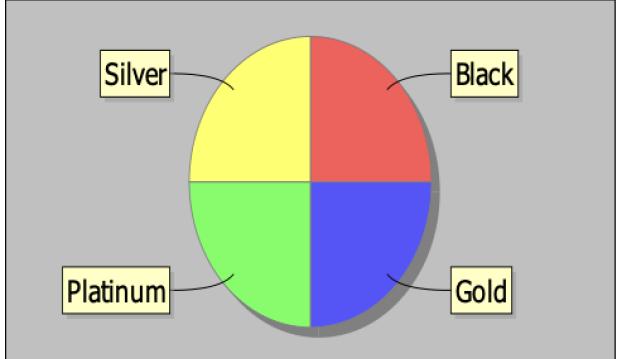
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[Back](#)

## Credit Card Approval Insights

### Credit Cards Approved



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

● Black ● Gold ● Platinum ● Silver

**Banking**

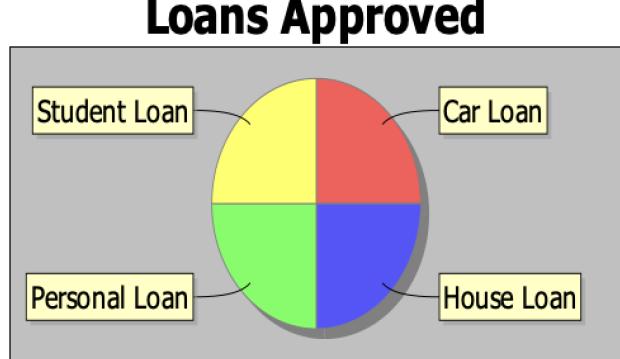
Username

Password



**Loan Approval Insights**

## Loans Approved



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