



# KALASALINGAM

## ACADEMY OF RESEARCH & EDUCATION

### (DEEMED TO BE UNIVERSITY)



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Title of the Project : MONEY DISPENSER(ATM)

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## **I. INTRODUCTION**

An automated teller machine (ATM) is a specialized computer that allows you to complete bank transactions without the need to see a bank representative. Many ATMs are conveniently accessible any time of day or night and can be used for everything from withdrawing or depositing money to checking your account balance to transferring money between accounts.

The ATM system is the project which is used to access their bank accounts in order to make cash withdrawals. Whenever the user need to make cash withdraws,they can enter their pin number(personal identification number)and it will display the amount to be withdrawn in the form of 50's,100's and 500's.Once their withdrawn was successful, the amount will be debited in their account.

The ATM will service one customer at a time. A customer will be required to enter ATM Card number, personal identification number (PIN)-both of which will be sent to the data base for validation as part of each transaction. The user will then be able to perform one or more transactions .Also customer must be able to make a balance inquiry of any account linked to the card.

The ATM will communicate each transaction to the database and obtain verification that it was allowed by the database. In the case of a cash withdrawal, a second message will be sent after the transaction has been physically completed (cash dispensed or envelope accepted). If the database determines that the customer's pin is invalid, the customer will be required to re-enter the Pin before the transaction can proceed.

If a transaction fails for any reason other than an invalid PIN the ATM will display explanation of the problem, and will then ask the customer whether he/she wants to do another transaction.

The ATM will provide the customer with a printed receipt for each successful transaction, showing the date, time, machine location, type of transaction, accounts, amount and ending and available balance of the affected account (to account for transfer).

### **What is an ATM?**

ATMs are machines that dispense cash and allow you to make other banking transactions. An ATM typically consists of a screen, a card reader, a keypad, a cash dispenser and a printer.

ATMs can be found in many locations throughout the U.S. and the world. On-premise ATMs are located at

financial institutions such as banks and credit unions, while off-premise ones are commonly offered at places like airports, grocery stores and gas stations.

Using an ATM simply involves inserting your bank-issued ATM card, entering your PIN and following the prompts on the screen to complete your desired transaction.

### **Examples of ATM transactions:**

Various common banking transactions that are often carried out at an ATM include:

#### **Withdrawing cash:**

The most common ATM transaction is the withdrawal of funds from one's account. Banks typically impose limits on the maximum amount that can be taken out each day. This amount can vary from bank to bank, as well as among different accounts offered by a single bank.

#### **Depositing money:**

Account holders can often use an ATM to deposit cash or checks. When making this type of transaction, you'll be asked to insert the funds into a slot in the machine. When money is deposited in the form of a check, the bank sometimes might not provide you with access to the funds until the check has cleared.

#### **Transferring funds:**

You may be able to use an ATM to transfer money between accounts you hold with your bank. For instance, if you wish to transfer \$200 from your savings account to your checking account, this can often be done by selecting the "transfer" option at the ATM. Like balance inquiries, transferring funds between accounts is also something you can accomplish using your bank's mobile app or website.

#### **Balance inquiries:**

You can also visit an ATM to view your current account balance. This feature may come in handy if you wish to know how much you're able to spend when using your debit card or writing a check. Alternatively, your account balance is something you can view by logging onto your bank's mobile app or website. Knowing your balance can help you keep from overspending or overdrawing your account.

## **I. OBJECTIVE OF THE PROJECT**

Our main objective is to speed up the transactions done by customers. No manual transactions needed generally. The second objective is to save the time which is very important now-a-days.

It will include other objectives such as:

- ✓ To render accurate services to customer.
- ✓ The reduction of fraudulent activities
- ✓ To achieve speedy processing of customer data
- ✓ To reduce error processing, the guarantee of increase security

The primal objectives in ATM security are:

- Confidentiality: Confidentiality of stored and transferred data
- Data Integrity: Protection of stored and transferred information.
- Accountability: Accountability for all ATM networks and transactions.

The standard approach to verify the appropriateness of a new ATM authentication system is to compare it to PIN entry in controlled laboratory experiments. However, such a laboratory experiment can never mirror completely the real situation when using an ATM.

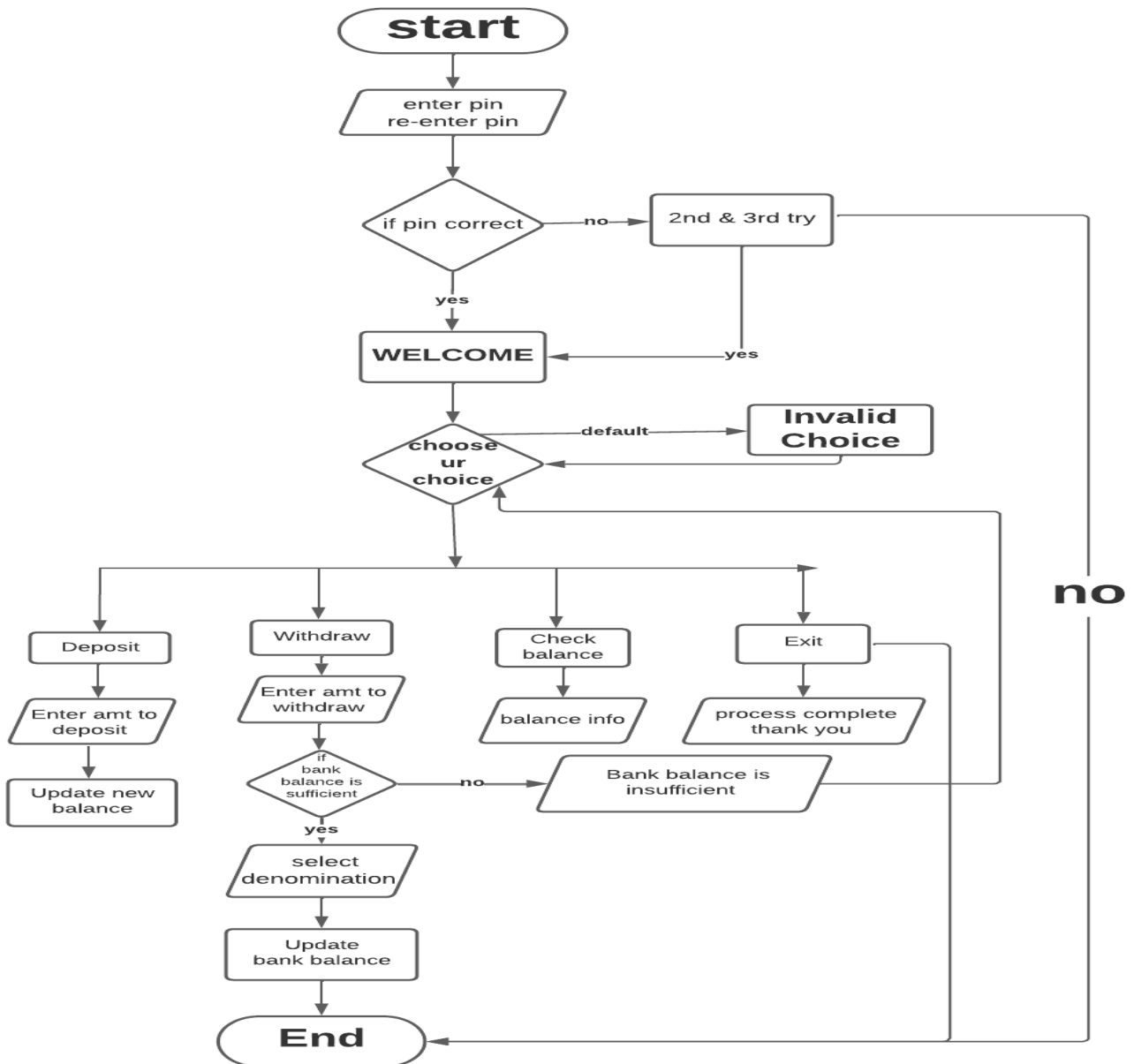
ATM card transactions are generally processed immediately in the electronic banking system, so your bank balance will reflect the debit as soon as the transaction is complete. The system can determine whether your account has a sufficient balance to pay for the transaction, thus guarding against an accidental overdraft.

The aim of this project is to develop ATM based software that can perform the following objectives :-

- To make the bank transaction in the most efficient manner.
- To enable more people, have access to ATM banking facility. To encourage the transition to cashless society.
- Reduce the risk involved in carrying huge sum of money about by making deposit in ATM.
- People can save and withdraw the money at any time by themselves and reduce staff work through ATM banking.

## II. DESIGN OF THE SYSTEM

### FLOW CHART



#### IV. SYSTEM SPECIFICATION/ FUNCTION MODULES

##### MODULES

- 1) **User module:** The user module allows user to withdraw, deposit and checking balance.  
This module allows you to manage users, groups and roles defined in the default security realm.
- 2) **Security system module:** The security system module helps the users to secure their account from thefts in the form of special pin system.
- 3) **Cash module:** This module shows the denominations of the money.
- 4) **Information Module:** This module lets the user see the remainder amount in his account after a transaction.

##### OPERATIONS

1. **Withdraw:** The main purpose of withdraw operation is to take away the money from the atm machine.
2. **Deposit :** A deposit is a transaction involving a transfer of money to another party for safe keeping. However, a deposit can refer to a portion of money used as security or collateral for the delivery of a good.
3. **Show balance :** This operation helps the users to know about their remaining balance in their particular account.
4. **Choice :** This operation asks command from the user whether they need to continue with the another transaction or not.
5. **Quit :** This operation will directly exit from the user account.
6. **Denominations:** This operation leads to the denomination of the notes to be taken by the user.
7. **Pin setup:** This operation will lead to the pin being set up and re-entering it correctly leads to the whole program whereas the remaining possible chances lead to the exit after 3 times of incorrect turns,

## V. Implementation

```
#include<stdio.h>
#include<stdlib.h>
void deposit(int);
void withdraw(int);
void denomination(int);
int showbal();
int balance;
int main()
{
int choice,amt,i,j,n,count;
balance=10000;//INITIAL BALANCE IS TEN THOUSAND
do
{
printf("\nSet your pin\n");
//This is not a format of fixed pin but setting a random pin and re entering the same
pin gives you access to the account(main program)
scanf("%d",&i);
for(int n=1;n<=3;n++)
{

printf("Re-Enter the pin\n");
//If u don't get it correct after three times it will be over and you can access the
account again only after a short amount of is passed
scanf("%d",&j);
if(i==j)
{

printf("\n\n*****");
printf("\n\tWELCOME TO SBI ATM");
printf("\n*****");
n=3;
/*if it wasnt here then re-enter the pin would have printed again due to "FOR
LOOP" for 3 times;
so i made "FOR LOOP" to believe that n=3;thats why it stopped repeating again*/
}
else
{
for(count=0;count<=3;count++);
{
```

```

printf("Wrong pin\n");
}
}
}
if(count>3)
//this means after more than 3 tries the program should exit.
{
exit(0);
}
printf("\n\n \xB2\xB2\xB2 1. DEPOSIT \n\n \xB2\xB2\xB2 2. WITHDRAW
\n \xB2 \xB2 \xB2 3. SHOW BALANCE \n\n \xB2\xB2\xB2 4. EXIT");
printf("\n\n ENTER YOUR CHOICE:");
scanf("%d",&choice);
switch(choice)
{

case 1:
printf("\xB2\xB2 ENTER AMOUNT TO DEPOSIT \n");
scanf("%d",&amt);
deposit(amt);
break;

case 2:
printf("\xB2\xB2ENTER AMOUNT TO WITHDRAW\n");
scanf("%d",&amt);
if(amt>balance)
{
printf("\n\xB2\xB2 INSUFFICIENT BALANCE\n");
}
else
{
withdraw(amt);
denomination(amt);
}
break;

case 3:
amt=showbal();
printf("\xB2\xB2 THE BALANCE IS %d \n",amt);
break;

case 4:
exit(0);
default:
printf("INVALID CHOICE\n");

```



```

}
}while(choice!=0);
}
void deposit(int amt)
{
balance=balance+amt;
printf("\xB2\xB2 Amount added successfully\n");
printf("\t\tTHANK YOU");
}
void withdraw(int amt)
{
balance=balance-amt;
printf("\xB2\xB2 Balance is %d",balance);
printf("\t\tTHANK YOU");
}
void denomination(int amt){
int amt1,amt2, a, b, c, d;
printf ("The amount for the denomination is %d\n ",amt);
amt1=amt;
printf ("Enter no of 100 notes");
scanf ("%d", &a);
if(amt>=100*a){
amt = amt - (100 * a);}
printf ("Enter no of 200 notes");
scanf ("%d", &b);
if (amt>=200*b){
amt = amt - (200 * b);}
printf ("Enter no of 500 notes");
scanf ("%d", &c);
if (amt>=500*c){
amt = amt - (500 * c);}
printf ("Enter no of 2000 notes");
scanf ("%d", &d);
if (amt>=2000*d){
amt = amt - (2000 * d);}
else
{
printf("Invalid input due to insufficient balance");
}
amt2 = amt;
if(amt2!=amt1)
{
printf("\nRemaining amount denomination is being randomised.\n ");
}
printf("\t\tTHANK YOU");
}

```

```
int showbal()
{
return balance;
printf("\t\tTHANK YOU");
}
```

## VI. Implementation Screenshots

### A. CORRECT PIN

```
Set your pin
1234
Re-Enter the pin
1234

*****
      WELCOME TO SBI
*****

█ 1. DEPOSIT
█ 2. WITHDRAW
█ 3. SHOW BALANCE
█ 4. EXIT

ENTER YOUR CHOICE:
```

### B. WRONG PIN AND EXIT

```
Set your pin
1234
Re-Enter the pin
5555
Wrong pin
Re-Enter the pin
6666
Wrong pin
Re-Enter the pin
3333
Wrong pin

-----
Process exited after 12.13 seconds with return value 0
Press any key to continue . . . █
```

## C. DEPOSIT

```
Set your pin
1234
Re-Enter the pin
1234

*****
      WELCOME TO SBI
*****

█ 1. DEPOSIT
█ 2. WITHDRAW
█ 3. SHOW BALANCE
█ 4. EXIT

ENTER YOUR CHOICE:1
█ ENTER AMOUNT TO DEPOSIT
5000
█ Amount added successfully
      THANK YOU
Set your pin
```

## D. WITHDRAW

```
Set your pin
1234
Re-Enter the pin
1234

*****
      WELCOME TO SBI
*****

█ 1. DEPOSIT
█ 2. WITHDRAW
█ 3. SHOW BALANCE
█ 4. EXIT

ENTER YOUR CHOICE:2
█ ENTER AMOUNT TO WITHDRAW
5000
█ Balance is 5000          THANK YOUThe amount for the denomination is 5000
Enter no of 100 notes_
```

## **E. SHOW BALANCE**

```
Set your pin
1234
Re-Enter the pin
1234

*****
      WELCOME TO SBI
*****

█ 1. DEPOSIT
█ 2. WITHDRAW
█ 3. SHOW BALANCE
█ 4. EXIT

ENTER YOUR CHOICE:3
█ THE BALANCE IS 10000

Set your pin
```

## **F. EXIT**

```
Set your pin
1234
Re-Enter the pin
1234

*****
      WELCOME TO SBI
*****

█ 1. DEPOSIT
█ 2. WITHDRAW
█ 3. SHOW BALANCE
█ 4. EXIT

ENTER YOUR CHOICE:4

-----
Process exited after 6.43 seconds with return value 0
Press any key to continue . . . █
```

## **G. DENOMINATIONS**

```
ENTER YOUR CHOICE:2
██ ENTER AMOUNT TO WITHDRAW
10000
██ Balance is 0                                THANK YOUThe amount for the denomination is 10000
Enter no of 100 notes5
Enter no of 200 notes0
Enter no of 500 notes3
Enter no of 2000 notes4

10000

0

Remaining amount denomination is being randomised.
                THANK YOU
Set your pin
```

## **CONCLUSION**

This is a program that simulates a simple banking system in C. It includes functions for depositing, withdrawing, and displaying the balance, as well as generating an OTP (one-time password) for additional security. The program prompts the user to set and confirm a PIN, which is required to access the account. The program also includes error handling for incorrect PIN input and insufficient funds when attempting to withdraw money. Thus it is very efficient .

**THANK YOU**