**PROJECT REPORT**

*Computer Organization & Assembly Language (CEL-221)*



**BS(CS)-3(A/B)/MS(CS)-1**

**Project Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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**Note: Project Report carries *10 Marks*. Report should be written in your own words. *Plagiarism* is not allowed.**

*Module wise Work/Task Distribution*

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*Abstract*

This report attempts to understand the design of an Automated Teller Machine (ATM) system, a device used by bank customers to process account transactions. Typically, a user inserts into the ATM a special plastic card that is encoded with information on a magnetic strip. The strip contains an identification code that is transmitted to the bank's central computer by modem. To prevent unauthorized transactions, a personal identification number (PIN) must also be entered by the user using a keypad. The computer then permits the ATM to complete the transaction; most machines can dispense cash, accept deposits, transfer funds, and provide information on account balances. Banks have formed cooperative, nationwide networks so that a customer of one bank can use an ATM of another for cash access. Some ATMs will also accept credit cards for cash advances.

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**INTRODUCTION**

**Project Description**

An automated teller machine (ATM) or automatic banking machine (ABM) is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains a unique card number and some security information such as an expiration date or CVVC (CVV). Authentication is provided by the customer entering a personal identification number (PIN).

**Scope of the Project**

The main purpose of the ATM division and information service is to provide the customers financial flexibility, worldwide acceptance and round-the clock convenience. Bank issues only VISA Credit Cards, the renowned Credit Card brand. Cardholders can purchase goods/services up to the credit limit and can reuse the credit facility upon repayment. Credit Card is a safer substitute to cash and is the major mode of payment worldwide. Standard Chartered Bank is the first to introduce the TAKA CREDIT CARD. The card is issued basically to a person’s name and the specific person can use the card in anywhere in Bangladesh. The business activity of Premier Bank Credit Card section is to keep the records of all sales and customers’ requests, the information of cardholders and reports them to necessary documents

**Modules in Project(Individual working of each functionality)**

* Balance inquiry

To check how much balance do we have in our account

* Money withdraw

To withdraw money from our account.

* Transfer money

To transfer money to someone’s account via out account

**Project Features**

* Balance inquiry
* Money withdraw
* Transfer money

**ANALYSIS**

**Existing System**

The existing system is manual system. The manual system is prone to error. This system involves a lot of manual entries with the application to perform a desired task. Usage of papers and records in the process leads to less efficiently less productivity. Increase lots of mistakes while writing in paper. Time delay between the user and customer is reduced. For this reason the new system in invented.

**Proposed System**

The system customer transactions, satisfies the requirements of the existing system in full-fledged manner.  Through this system, customer can make fast transactions and view the last transactions easily.

**SYSTEM IMPLEMENTATION**

**Introduction**

Automated Teller Machine enables the clients of a bank to have access to their account without going to the bank.  This is achieved only by development the application using online concepts.

When the product is implemented, the user who uses this product will be able to see all the information and services provided by the ATM, when he enters the necessary option and arguments.  The product also provides services like request for cheques, deposit cash and other advanced requirement of the user.  The data is stored in the database and is retrieved whenever necessary.  The implementation needs ATM machine hardware to operate or similar simulated conditions can also be used to successfully use the developed product.

**Assembly Language Code**

; You may customize this and other start-up templates;

; The location of this template is c:\emu8086\inc\0\_com\_template.txt

org 100h

.model small

.stack 100h

.data

;Passswoed Property

a db 10,13,"Enter Your Password:$"

b db 10,13,"Invalid Password$"

pass db "towheed$"

pass1 dw 7

;Option Property

wel db 10,13," Welcome to Your Account $"

bal db 10,13,10,13,"1. Balance Inquiry $"

with db 10,13,"2. Money Withdraw $"

trans db 10,13,"3. Transfer Money $"

ex db 10,13,"4. Exit $"

bac db 10,13,"1. Back$"

ext db 10,13,"2. Exit$"

;Message Property

thank db 10,13,10,13," Thank You For Banking With Us. $"

inval db 10,13,"Invalid Input$"

new db 10,13,"$"

totalbal db 10,13,"Your Total Balance is: 25,000 USD $"

availablebal db 10,13,"Your Available Balance is: 24,900 USD $"

;Money Withdrow Option

fivehun db 10,13,"1. 500 USD$"

one db 10,13,"2. 1,000 USD$"

three db 10,13,"3. 3,000 USD$"

five db 10,13,"4. 5,000 USD$"

ten db 10,13,"5. 10,000 USD$"

fiften db 10,13,"6. 15,000 USD$"

tweenty db 10,13,"7. 20,000 USD$"

;Balance info

t1 db 10,13,"Your Total Balance is: 24,500 USD $"

av1 db 10,13,"Your Available Balance is: 24,400 USD $"

t2 db 10,13,"Your Total Balance is: 24,000 USD $"

av2 db 10,13,"Your Available Balance is: 23,900 USD $"

t3 db 10,13,"Your Total Balance is: 22,000 USD $"

av3 db 10,13,"Your Available Balance is: 21,900 USD $"

t4 db 10,13,"Your Total Balance is: 20,000 USD $"

av4 db 10,13,"Your Available Balance is: 19,900 USD $"

t5 db 10,13,"Your Total Balance is: 15,000 USD $"

av5 db 10,13,"Your Available Balance is: 14,900 USD $"

t6 db 10,13,"Your Total Balance is: 10,000 USD $"

av6 db 10,13,"Your Available Balance is: 9,900 USD $"

t7 db 10,13,"Your Total Balance is: 5,000 USD $"

av7 db 10,13,"Your Available Balance is: 4,900 USD $"

;Amount Property

wdamount db 10,13,"Enter Your Withdrow Amount$"

tranamount db 10,13,"Enter Your Transaction Amount$"

success db 10,13,"Your Transaction is Successfull...$"

accountnum db 10,13,"Enter Account Number: $"

.code

main proc

mov ax,@data

mov ds,ax

;Password Cheek Level

mov cx,pass1

mov bx,offset pass

mov ah,9

lea dx,a

int 21h

cheekpass:

mov ah,8

int 21h

cmp al,[bx]

jne worng

mov ah,2

mov dl,42

int 21h

inc bx

loop cheekpass

mov ah,0x00

mov al,0x03

int 0x10

jmp mainpross

;Worng Password Level

worng:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,b

int 21h

mov ah,4ch

int 21h

;Account Option

mainpross:

mov ah,9

lea dx,wel

int 21h

mov ah,9

lea dx,bal

int 21h

mov ah,9

lea dx,with

int 21h

mov ah,9

lea dx,trans

int 21h

mov ah,9

lea dx,ex

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,1

int 21h

mov bl,al

;Input Cheek

cheek:

cmp bl,49

je blance

cmp bl,50

je withdraw

cmp bl,51

je Transfer

cmp bl,52

je exit

jmp err

;Account Balance Cheek Level

blance:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,totalbal

int 21h

mov ah,9

lea dx,availablebal

int 21h

jmp option

;Money Withdrow Level

withdraw:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,wdamount

int 21h

;Money Withdrow Option Display

mov ah,9

lea dx,fivehun

int 21h

mov ah,9

lea dx,one

int 21h

mov ah,9

lea dx,three

int 21h

mov ah,9

lea dx,five

int 21h

mov ah,9

lea dx,ten

int 21h

mov ah,9

lea dx,fiften

int 21h

mov ah,9

lea dx,tweenty

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,1

int 21h

mov bl,al

;Input Condition Cheek

cmp bl,49

je pross1

cmp bl,50

je pross2

cmp bl,51

je pross3

cmp bl,52

je pross4

cmp bl,53

je pross5

cmp bl,54

je pross6

cmp bl,55

je pross7

jmp err

;Option 1

pross1:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t1

int 21h

mov ah,9

lea dx,av1

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Option 2

pross2:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t2

int 21h

mov ah,9

lea dx,av2

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Option 3

pross3:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t3

int 21h

mov ah,9

lea dx,av3

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Option 4

pross4:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t4

int 21h

mov ah,9

lea dx,av4

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Option 5

pross5:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t5

int 21h

mov ah,9

lea dx,av5

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Option 6

pross6:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t6

int 21h

mov ah,9

lea dx,av6

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Option 7

pross7:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,success

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,t7

int 21h

mov ah,9

lea dx,av7

int 21h

mov ah,9

lea dx,new

int 21h

jmp option

;Balance Transfer Level

Transfer:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,accountnum

int 21h

mov ah,1

acco:

int 21h

cmp al,13

jne acco

mov ah,9

lea dx,new

int 21h

;Again Password Cheek

mov ah,9

lea dx,a

int 21h

mov cx,pass1

mov bx,offset pass

again:

mov ah,8

int 21h

cmp al,[bx]

jne worng

mov ah,2

mov dl,42

int 21h

inc bx

loop again

mov ah,0x00

mov al,0x03

int 0x10

jmp transferpross

;Money Transfer Proccess

transferpross:

mov ah,9

lea dx,tranamount

int 21h

;Transfer Amount Display

mov ah,9

lea dx,fivehun

int 21h

mov ah,9

lea dx,one

int 21h

mov ah,9

lea dx,three

int 21h

mov ah,9

lea dx,five

int 21h

mov ah,9

lea dx,ten

int 21h

mov ah,9

lea dx,fiften

int 21h

mov ah,9

lea dx,tweenty

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,1

int 21h

mov bl,al

;Input Condition Cheek

cmp bl,49

je pross1

cmp bl,50

je pross2

cmp bl,51

je pross3

cmp bl,52

je pross4

cmp bl,53

je pross5

cmp bl,54

je pross6

cmp bl,55

je pross7

jmp err

;Back And Exit Option Level

option:

mov ah,9

lea dx,new

int 21h

mov ah,9

lea dx,bac

int 21h

mov ah,9

lea dx,ext

int 21h

mov ah,9

lea dx,new

int 21h

mov ah,1

int 21h

cmp al,49

je back

cmp al,50

je exit

jmp err

;back Option Level

back:

mov ah,0x00

mov al,0x03

int 0x10

call mainpross

;Input Error Level

err:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,inval

int 21h

mov ah,9

lea dx,new

int 21h

call mainpross

;DOS Exit Level

exit:

mov ah,0x00

mov al,0x03

int 0x10

mov ah,9

lea dx,thank

int 21h

mov ah,4ch

int 21h

main endp

end main

ret

***SAMPLE SCREEN SHOTS OF OUTPUT***







