**DBT 1303 Software Development**

**PROJECT PRESENTATION**

**STUDENT NUMBER: DITNRB130422**

My project is on how an ATM MACHINE works.

I have done the following activities to confirm my project;

* Identified the customer's needs.
* Evaluated the system for feasibility..
* Establish schedule and constraints.
* Created system definitions.

The pseudo code for my project is as follows:

***MAIN***

PROCEDURE Main

BEGIN

LOOP

IF control system is disabled

THEN BEGIN

Display 'out of service' message

LOOP UNTIL control system is enabled

END

ELSE IF no card is inserted

THEN display 'insert card' message

ELSE CALL PROCEDURE Check PIN

ENDIF

ENDIF

ENDLOOP

END Main

***CHECK PIN***

PROCEDURE Check PIN

CONSTANTS

MAXPINS IS 3

VARIABLES

PIN Counter IS NUMBER

BEGIN

Read data from card

Set PIN Counter to zero

LOOP UNTIL PIN Counter is equal to MAXPINS

Input PIN from customer keypad

IF entered PIN matches card PIN

THEN EXITLOOP

ENDIF

Add 1 to PIN Counter

ENDLOOP

IF PIN Counter is equal to MAXPINS

THEN confiscate customer's card

ELSE CALL PROCEDURE Services

ENDIF

END Check PIN

***SERVICES***

PROCEDURE Services

VARIABLES

ExitServicesFlag IS BOOLEAN

BEGIN

RESET ExitServicesFlag

LOOP UNTIL ExitServicesFlag is SET

Display customer services

Input selection from keypad

CASE OF selection:

WHEN withdrawal with receipt

BEGIN

CALL PROCEDURE Withdrawal (with\_receipt)

SET ExitServicesFlag

END

WHEN withdrawal without receipt

BEGIN

CALL PROCEDURE Withdrawal (no\_receipt)

SET ExitServicesFlag

END

WHEN display balance

get and display balance

WHEN print balance

get and print balance

WHEN order statement

send statement order to control system

WHEN order chequebook

send chequebook order to control system

DEFAULT

return customer's card

SET ExitServicesFlag

ENDCASE

ENDLOOP

END Services

***WITHDRAWALS***

PROCEDURE Withdrawal (WithdrawalType)

VARIABLES

Amount IS NUMBER

BEGIN

input Amount from customer keypad

read customer's details from accounts database

IF customer has insufficient funds

THEN IF customer has zero funds

THEN BEGIN

display 'insufficient funds' message

set Amount to zero

END

ELSE BEGIN

display offer of available funds

input customer's response (Y/N)

IF response is 'Y'

THEN set reduced Amount

ELSE set Amount to zero

ENDIF

END

ENDIF

ENDIF

return customer's card

IF Amount is not zero

THEN BEGIN

dispense cash Amount

IF WithdrawalType is with\_receipt

THEN print receipt for Amount

ENDIF

update accounts database

END

ENDIF

END Withdrawal

***CARD AUTHORISATION***

OBJECTIVE: To test the PIN verification procedure

TEST 1: Enter the correct PIN

EXPECTED OUTCOME: Successful PIN validation

TEST 2: Enter 1 incorrect PIN and then the correct PIN

EXPECTED OUTCOME: Successful PIN validation

TEST 2: Enter 2 incorrect PINs and then the correct PIN

EXPECTED OUTCOME: Successful PIN validation

TEST 3: Enter 3 incorrect PINs

EXPECTED OUTCOME: Unsuccessful PIN validation - retain card, notify bank

***CASH WITHDRAWAL***

BJECTIVE: To test the cash withdrawal procedure

TEST 1: Request available funds without receipt

EXPECTED OUTCOME: Requested cash dispensed, accounts updated

TEST 2: Request available funds with receipt

EXPECTED OUTCOME: Requested cash & receipt dispensed, accounts updated

TEST 3: Request more than available funds, accept available

EXPECTED OUTCOME: Available cash dispensed, accounts updated

TEST 4: Request more than available funds, refuse available

EXPECTED OUTCOME: No cash dispensed

TEST 5: Request funds with none available

EXPECTED OUTCOME: No cash dispensed

***DISPLAY BALANCE***

OBJECTIVE: To test the balance checking procedure

TEST 1: Request balance on screen

EXPECTED OUTCOME: The balance is retrieved and displayed on the screen

TEST 2: Request printout of balance

EXPECTED OUTCOME: The balance is retrieved and a printout is dispensed

END