**MANAV RACHNA UNIVERSITY**

**B.TECH CSE 6B**

**PROJECT NAME – “ATM MACHINE PROGRAM”**

**PROJECT SUBMITED BY -**

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**PROJECT CODE –**

#include <stdio.h>

// Define the states of the ATM machine

typedef enum {

IDLE,

PIN\_ENTERED,

TRANSACTION\_SELECTION,

BALANCE\_ENQUIRY,

WITHDRAWAL\_AMOUNT\_ENTERED,

WITHDRAWAL\_TRANSACTION,

DEPOSIT\_AMOUNT\_ENTERED,

DEPOSIT\_TRANSACTION,

FINISHED

} State;

// Define the initial balance in the account

#define INITIAL\_BALANCE 1000

// Define a global variable to store the current balance

int currentBalance = INITIAL\_BALANCE;

// Function to process user input and transition to the next state

State processInput(State currentState, int input) {

switch (currentState) {

case IDLE:

if (input == 1) {

printf("Enter your ATM PIN: 🔢");

return PIN\_ENTERED;

}

break;

case PIN\_ENTERED:

if (input == 1234) {

return TRANSACTION\_SELECTION;

} else {

printf("Oops You Have Entered Invalid PIN, Please Try Again 😊\n");

return IDLE;

}

case TRANSACTION\_SELECTION:

if (input == 1) {

printf("Your current balance is ₹%d\n", currentBalance);

return BALANCE\_ENQUIRY;

} else if (input == 2) {

printf("Enter the amount to withdraw: ");

return WITHDRAWAL\_AMOUNT\_ENTERED;

} else if (input == 3) {

printf("Enter the amount to deposit: ");

return DEPOSIT\_AMOUNT\_ENTERED;

} else if (input == 4) {

printf("Thank you for using the ATM machine!\n");

printf("Collect Your Card 💳 \n");

printf("Have A Nice Day!\n");

return FINISHED;

}

break;

case BALANCE\_ENQUIRY:

if (input == 5) {

printf("Give me a moment...\n");

return TRANSACTION\_SELECTION;

}

break;

case WITHDRAWAL\_AMOUNT\_ENTERED:

if (input <= currentBalance) {

printf("Cash will Be In Your Hand Shortly.. ₹%d...\n", input);

currentBalance -= input;

return WITHDRAWAL\_TRANSACTION;

} else {

printf("Oops Insufficient balance. Please enter a valid amount within: ₹" ,currentBalance);

return WITHDRAWAL\_AMOUNT\_ENTERED;

}

break;

case WITHDRAWAL\_TRANSACTION:

if (input == 5) {

printf("Transaction completed successfully.\n");

return TRANSACTION\_SELECTION;

}

break;

case DEPOSIT\_AMOUNT\_ENTERED:

printf("We Are Updating Your Current Balance.. ₹%d...\n", input);

currentBalance += input;

return DEPOSIT\_TRANSACTION;

case DEPOSIT\_TRANSACTION:

if (input == 5) {

printf("Transaction completed successfully.\n");

return TRANSACTION\_SELECTION;

}

break;

case FINISHED:

// No valid transitions from FINISHED state

break;

}

// Default case: Invalid input or no state transition

printf("Invalid input or no state transition.\n");

return currentState;

}

int main() {

State currentState = IDLE;

int input;

printf("Rishabh\_1085 Mini Project for TOC\n");

printf("Welcome to the ATM machine!\n");

while (currentState != FINISHED) {

printf("\n");

switch (currentState) {

case IDLE:

printf("1. Insert Your Card 😊\n");

printf("Select an option: ");

break;

case PIN\_ENTERED:

break;

case TRANSACTION\_SELECTION:

printf("1. Balance Enquiry\n");

printf("2. Withdrawal Cash\n");

printf("3. Deposit Cash\n");

printf("4. Exit from ATM\n");

printf("What Do You Want to Do - ");

break;

case BALANCE\_ENQUIRY:

printf("5. Return to Main Menu\n");

printf("Select an option: ");

break;

case WITHDRAWAL\_AMOUNT\_ENTERED:

break;

case WITHDRAWAL\_TRANSACTION:

printf("5. Return to Main Menu\n");

printf("Select an option: ");

break;

case DEPOSIT\_AMOUNT\_ENTERED:

break;

case DEPOSIT\_TRANSACTION:

printf("5. Return to Main Menu\n");

printf("Select an option: ");

break;

}

scanf("%d", &input);

currentState = processInput(currentState, input);

}

return 0;

}

**OUTPUT -**

Rishabh\_1085 Mini Project for TOC

Welcome to the ATM machine!

1. Insert Your Card 😊

Select an option: 1

Enter your ATM PIN: 🔢

12345

Oops You Have Entered Invalid PIN, Please Try Again 😊

1. Insert Your Card 😊

Select an option: 1

Enter your ATM PIN: 🔢

1234

1. Balance Enquiry

2. Withdrawal Cash

3. Deposit Cash

4. Exit from ATM

What Do You Want to Do - 1

Your current balance is ₹1000

5. Return to Main Menu

Select an option: 5

Give me a moment...

1. Balance Enquiry

2. Withdrawal Cash

3. Deposit Cash

4. Exit from ATM

What Do You Want to Do - 2

Enter the amount to withdraw:

900

Cash will Be In Your Hand Shortly.. ₹900...

5. Return to Main Menu

Select an option: 5

Transaction completed successfully.

1. Balance Enquiry

2. Withdrawal Cash

3. Deposit Cash

4. Exit from ATM

What Do You Want to Do - 1

Your current balance is ₹100

5. Return to Main Menu

Select an option: 5

Give me a moment...

1. Balance Enquiry

2. Withdrawal Cash

3. Deposit Cash

4. Exit from ATM

What Do You Want to Do - 3

Enter the amount to deposit:

104500

We Are Updating Your Current Balance.. ₹104500...

5. Return to Main Menu

Select an option: 5

Transaction completed successfully.

1. Balance Enquiry

2. Withdrawal Cash

3. Deposit Cash

4. Exit from ATM

What Do You Want to Do - 1

Your current balance is ₹104600

5. Return to Main Menu

Select an option: 5

Give me a moment...

1. Balance Enquiry

2. Withdrawal Cash

3. Deposit Cash

4. Exit from ATM

What Do You Want to Do - 4

Thank you for using the ATM machine!

Collect Your Card 💳

Have A Nice Day!