MINI PROJECT

#include <iostream>

#include <string>

using namespace std;

class Account {

private:

int accountNumber;

string name;

double balance;

int pin;

public:

Account(int acc, string n, double bal, int p) {

accountNumber = acc;

name = n;

balance = bal;

pin = p;

}

bool checkPin(int p) {

return (p == pin);

}

void deposit(double amount) {

if (amount > 0) {

balance += amount;

cout << "Deposited: ₹" << amount << " successfully.\n";

} else {

cout << "Invalid deposit amount.\n";

}

}

void withdraw(double amount) {

if (amount <= 0) {

cout << "Invalid withdrawal amount.\n";

} else if (amount > balance) {

cout << "Insufficient balance.\n";

} else {

balance -= amount;

cout << "Withdrawn: ₹" << amount << " successfully.\n";

}

}

double getBalance() {

return balance;

}

int getAccountNumber() {

return accountNumber;

}

string getName() {

return name;

}

};

class ATM {

private:

Account\* account;

public:

ATM(Account\* acc = nullptr) {

account = acc;

}

void authenticate(int accNum, int pin) {

if (account && account->getAccountNumber() == accNum && account->checkPin(pin)) {

cout << "\nWelcome, " << account->getName() << "!\n";

showMenu();

} else {

cout << "\nAuthentication failed. Invalid account number or PIN.\n";

}

}

void showMenu() {

int choice;

double amount;

do {

cout << "\n--- ATM MENU ---\n";

cout << "1. Check Balance\n";

cout << "2. Deposit Money\n";

cout << "3. Withdraw Money\n";

cout << "4. Exit\n";

cout << "Enter your choice: ";

cin >> choice;

switch (choice) {

case 1:

cout << "Current Balance: ₹" << account->getBalance() << endl;

break;

case 2:

cout << "Enter deposit amount: ₹";

cin >> amount;

account->deposit(amount);

break;

case 3:

cout << "Enter withdrawal amount: ₹";

cin >> amount;

account->withdraw(amount);

break;

case 4:

cout << "Thank you for using our ATM.\n";

break;

default:

cout << "Invalid choice. Try again.\n";

}

} while (choice != 4);

}

};

int main() {

Account acc1(12345, "Ishant", 5000.0, 1234);

ATM atm(&acc1);

int accNum, pin;

cout << "Enter Account Number: ";

cin >> accNum;

cout << "Enter PIN: ";

cin >> pin;

atm.authenticate(accNum, pin);

return 0;

}