**Task 3**

import java.util.Scanner;

class BankAccount {

private double bal;

public BankAccount(double initialBalance) {

this.bal = initialBalance;

}

public double getBalance() {

return bal;

}

public void dep(double amount) {

if (amount > 0) {

bal += amount;

System.out.println("Deposited: $" + amount);

} else {

System.out.println("Invalid deposit amount.");

}

}

public void withdraw(double amount) {

if (amount > 0 && amount <= bal) {

bal -= amount;

System.out.println("Withdrew: $" + amount);

} else {

System.out.println("Invalid withdrawal amount or insufficient funds.");

}

}

}

class ATM {

private BankAccount account;

public ATM(BankAccount account) {

this.account = account;

}

public void checkBalance() {

System.out.println("Current Balance: $" + account.getBalance());

}

public void dep(double amount) {

account.dep(amount);

}

public void withdraw(double amount) {

account.withdraw(amount);

}

public void displayMenu() {

System.out.println("\nATM Menu:");

System.out.println("1. Check Balance");

System.out.println("2. Deposit");

System.out.println("3. Withdraw");

System.out.println("4. Exit");

}

}

public class ATMSimulator {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

BankAccount account = new BankAccount(1000); // Initial balance of $1000

ATM atm = new ATM(account);

boolean exit = false;

System.out.println("Welcome to the ATM!");

while (!exit) {

atm.displayMenu();

System.out.print("Choose an option: ");

int choice = sc.nextInt();

switch (choice) {

case 1:

atm.checkBalance();

break;

case 2:

System.out.print("Enter deposit amount: $");

double depositAmount = sc.nextDouble();

atm.dep(depositAmount);

break;

case 3:

System.out.print("Enter withdrawal amount: $");

double withdrawalAmount = sc.nextDouble();

atm.withdraw(withdrawalAmount);

break;

case 4:

exit = true;

System.out.println("Thank you for using the ATM. Goodbye!");

break;

default:

System.out.println("Invalid option. Please choose again.");

}

}

sc.close();

}

}