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**Lab Assignment**

**Q1)** 1. create a Simple banking system with account creation, deposit, withdrawal, and balance

**Code:**

**import java.util.HashMap;**

**import java.util.Map;**

**import java.util.Scanner;**

**class Account {**

**private String accountNumber;**

**private double balance;**

**public Account(String accountNumber) {**

**this.accountNumber = accountNumber;**

**this.balance = 0.0;**

**}**

**public String getAccountNumber() {**

**return accountNumber;**

**}**

**public double getBalance() {**

**return balance;**

**}**

**public void deposit(double amount) {**

**balance += amount;**

**System.out.println("Deposited " + amount + " successfully.");**

**}**

**public void withdraw(double amount) {**

**if (balance >= amount) {**

**balance -= amount;**

**System.out.println("Withdrawn " + amount + " successfully.");**

**} else {**

**System.out.println("Insufficient balance.");**

**}**

**}**

**}**

**public class FinancialApplication {**

**private static Map<String, Account> accounts = new HashMap<>();**

**private static Scanner scanner = new Scanner(System.in);**

**public static void main(String[] args) {**

**boolean exit = false;**

**while (!exit) {**

**System.out.println("\n1. Create Account");**

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

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

**System.out.println("4. Check Balance");**

**System.out.println("5. Exit");**

**System.out.print("Enter your choice: ");**

**int choice = scanner.nextInt();**

**scanner.nextLine(); // Consume newline**

**switch (choice) {**

**case 1:**

**createAccount();**

**break;**

**case 2:**

**deposit();**

**break;**

**case 3:**

**withdraw();**

**break;**

**case 4:**

**checkBalance();**

**break;**

**case 5:**

**exit = true;**

**System.out.println("Exiting...");**

**break;**

**default:**

**System.out.println("Invalid choice.");**

**}**

**}**

**scanner.close();**

**}**

**private static void createAccount() {**

**System.out.print("Enter account number: ");**

**String accountNumber = scanner.nextLine();**

**if (accounts.containsKey(accountNumber)) {**

**System.out.println("Account already exists.");**

**} else {**

**Account account = new Account(accountNumber);**

**accounts.put(accountNumber, account);**

**System.out.println("Account created successfully.");**

**}**

**}**

**private static void deposit() {**

**System.out.print("Enter account number: ");**

**String accountNumber = scanner.nextLine();**

**if (!accounts.containsKey(accountNumber)) {**

**System.out.println("Account does not exist.");**

**return;**

**}**

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

**double amount = scanner.nextDouble();**

**scanner.nextLine(); // Consume newline**

**Account account = accounts.get(accountNumber);**

**account.deposit(amount);**

**}**

**private static void withdraw() {**

**System.out.print("Enter account number: ");**

**String accountNumber = scanner.nextLine();**

**if (!accounts.containsKey(accountNumber)) {**

**System.out.println("Account does not exist.");**

**return;**

**}**

**System.out.print("Enter amount to withdraw: ");**

**double amount = scanner.nextDouble();**

**scanner.nextLine(); // Consume newline**

**Account account = accounts.get(accountNumber);**

**account.withdraw(amount);**

**}**

**private static void checkBalance() {**

**System.out.print("Enter account number: ");**

**String accountNumber = scanner.nextLine();**

**if (!accounts.containsKey(accountNumber)) {**

**System.out.println("Account does not exist.");**

**return;**

**}**

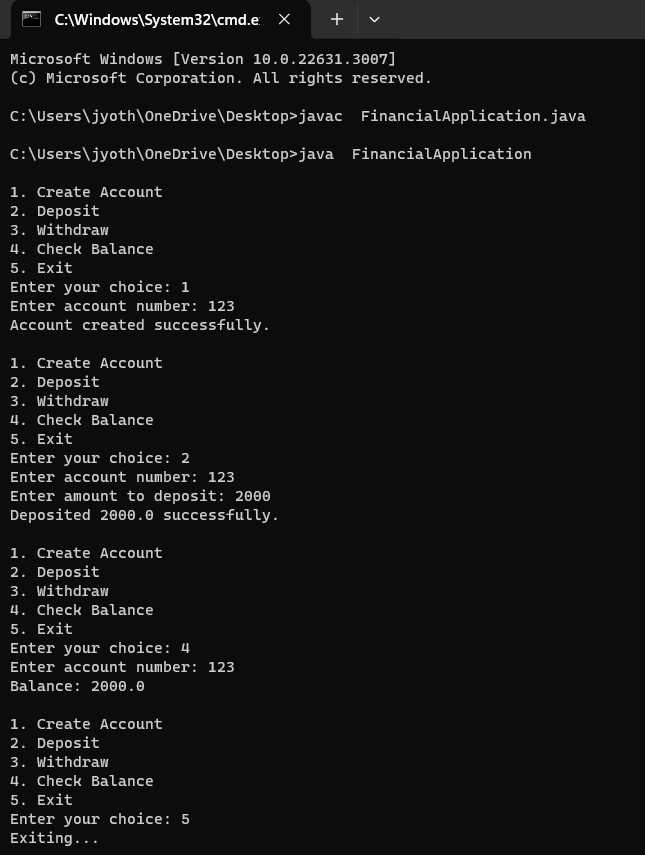
**Account account = accounts.get(accountNumber);**

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

**}**

**}**

**Output:**

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