

K.R. Mangalam University School of Engineering & Technology

Fundamentals Of Java Programming

Assignment 1

Banking Application for Accounts Management

Submitted by: SOPHIA SONI

Roll No: 2401201042

Course: BCA (AI & DS)

CODE-

```
1  import java.util.Scanner;
2
3  // Account Class Definition
4  class Account {
5      // fields
6      private final int accountNumber;
7      private String name, email, phone;
8      private double balance;
9
10     // constructor
11     Account(int accNo, String name, double balance, String email, String phone) {
12         this.accountNumber = accNo;
13         this.name = name;
14         this.balance = balance;
15         this.email = email;
16         this.phone = phone;
17     }
18
19     // method to get account number
20     public int getAccountNumber() {
21         return accountNumber;
22     }
23
24     // method to deposit money
25     void deposit(double amt) {
26         if (amt > 0) {
27             balance += amt;
28             System.out.println("Deposit Successful. Balance: " + balance);
29         } else {
30             System.out.println(x: "Invalid deposit amount.");
31         }
32     }
```

```

33
34 // method to withdraw money
35 void withdraw(double amt) {
36     if (amt > 0 && amt <= balance) {
37         balance -= amt;
38         System.out.println("Withdrawal Successful. Balance: " + balance);
39     } else {
40         System.out.println(x: "Invalid or insufficient balance.");
41     }
42 }
43
44 // method to display account details
45 void show() {
46     System.out.println("Account Number: " + accountNumber + " | Name: " + name +
47         " | Balance: " + balance + " | Email: " + email +
48         " | Phone: " + phone);
49 }
50
51 // method to update contact details
52 void update(String email, String phone) {
53     this.email = email;
54     this.phone = phone;
55     System.out.println(x: "Contact updated!");
56 }
57 }
58
59 // Main Banking Application Class
60 public class BankingApp {
61

```

```

62 // Static members for the application state
63 static Scanner sc = new Scanner(System.in);
64 static Account[] accounts = new Account[100]; // Array to store up to 100 accs
65 static int count = 0; // Counter for the number of accounts created
66
67 // Method to find an account by account number
68 static Account find(int accNo) {
69     for (int i = 0; i < count; i++) {
70         if (accounts[i].getAccountNumber() == accNo) {
71             return accounts[i];
72         }
73     }
74     return null; // Return null if not found
75 }
76
77 Run | Debug
78 public static void main(String[] args) {
79     while (true) {
80         // Display Menu (Customized for Sophia)
81         System.out.println(x: "\n*** WELCOME TO SOPHIA'S BANKING APP ***");
82         System.out.println(x: "1. Create Account");
83         System.out.println(x: "2. Deposit");
84         System.out.println(x: "3. Withdraw");
85         System.out.println(x: "4. Show Account Details");
86         System.out.println(x: "5. Update Contact Info");
87         System.out.println(x: "6. Exit");
88         System.out.print(s: "Enter your choice: ");
89
90         int choice = sc.nextInt();
91         sc.nextLine(); // consume newline

```

```

92
93         switch (choice) {
94             case 1 -> {
95                 System.out.print(s: "Enter Name: ");
96                 String name = sc.nextLine();
97                 System.out.print(s: "Enter Initial Deposit: ");
98                 double bal = sc.nextDouble();
99                 sc.nextLine();
100                 System.out.print(s: "Enter Email: ");
101                 String email = sc.nextLine();
102                 System.out.print(s: "Enter Phone: ");
103                 String phone = sc.nextLine();
104
105                 accounts[count] = new Account(1000 + count + 1, name, bal, email, phone);
106                 System.out.println("Account Created: " + accounts[count].getAccountNumber());
107                 count++;
108             }
109
110             case 2 -> {
111                 System.out.print(s: "Acc No: ");
112                 int accNo = sc.nextInt();
113                 System.out.print(s: "Amount to deposit: ");
114                 double amt = sc.nextDouble();
115
116                 Account a = find(accNo);
117                 if (a != null) {
118                     a.deposit(amt);
119                 } else {
120                     System.out.println(x: "Not found.");

```

```

121     }
122 }
123
124 case 3 -> {
125     System.out.print(s: "Acc No: ");
126     int accNo = sc.nextInt();
127     System.out.print(s: "Amount to withdraw: ");
128     double amt = sc.nextDouble();
129
130     Account a = find(accNo);
131     if (a != null) {
132         a.withdraw(amt);
133     } else {
134         System.out.println(x: "Not found.");
135     }
136 }
137
138 case 4 -> {
139     System.out.print(s: "Acc No: ");
140     int accNo = sc.nextInt();
141     Account a = find(accNo);
142     if (a != null) {
143         a.show();
144     } else {
145         System.out.println(x: "Not found.");
146     }
147 }
148
149 case 5 -> {
150     Svstem.out.print(s: "Acc No: ");

```

```

151     int accNo = sc.nextInt();
152     sc.nextLine();
153     System.out.print(s: "New Email: ");
154     String email = sc.nextLine();
155     System.out.print(s: "New Phone: ");
156     String phone = sc.nextLine();
157
158     Account a = find(accNo);
159     if (a != null) {
160         a.update(email, phone);
161     } else {
162         System.out.println(x: "Not found.");
163     }
164 }
165
166 case 6 -> {
167     System.out.println(x: "Exiting. Thank you!");
168     return;
169 }
170
171 default -> System.out.println(x: "Invalid choice!");
172 }

```

OUTPUT:

```
*** WELCOME TO SOPHIA'S BANKING APP ***
1. Create Account
2. Deposit
3. Withdraw
4. Show Account Details
5. Update Contact Info
6. Exit
Enter your choice: 1
Enter Name: SOPHIA
Enter Initial Deposit: 5000
Enter Email: Sophia@gmail.com
Enter Phone: 8630897370
Account Created: 1001
```

```
*** WELCOME TO Sophia's BANKING APP ***
1. Create Account
2. Deposit
3. Withdraw
4. Show Account Details
5. Update Contact Info
6. Exit
Enter your choice: 2
Acc No: 1001
Amount to deposit: 2000
Deposit Successful. Balance: 7000.0
```