ASSIGNMENT 4

Java Program: (Array) Input customer data (account number, name, type of account and account balance) from the User.

Create a menu-driven program to display all details, specific details, withdraw or deposit money.

Algorithm:

1. Declare a class Bank_Acc and create a parameterized methods input, display, specific and deposit.
2. Then create two subclasses of class Bank_Acc named Savings_Acc and Current_Acc to withdraw money from the respective types.
3. In Savings_Acc, there is a limit of 3000 in order to withdraw.
4. In Current_Acc, there is no limit, however, overdraft is mentioned.
5. Four arrays are declared in the public class to store account number, name, balance and account type.
6. Now in the main method, objects are created of the three classes.
7. Using do while loop, menu is printed and the options in it are executed using switch case.

Code:

```
package assignment4;

 class Savings_Acc extends Bank_Acc {

       float withdraw(int i, int acc_num[], float balance, float amt) {
             System.out.print("\nEnter account number : ");
             int acc = sc.nextInt();
             int j;

             for (j=0; j < acc_num.length; j++ ){
                   if (acc_num[j] == acc)
                         {
                    i = j;
                    break;
                         }
                  }
             if (i != j) {
                System.out.println("Account not found.");
                }
             else {
                   if((balance - amt)>=3000) {
                         amt -= balance;
                         System.out.println("The amount withdrawn : " +
amt);
                         System.out.println("Existing balance in the
account : " + balance);
                         }
                   else {
                         System.out.println("Insufficient balance.");
                   }
              }
             return balance;
       }
}
```

```
package assignment4;

import java.util.Scanner;

public class Current_Acc {
    Scanner sc = new Scanner(System.in);

    public float withdraw(int i, int[] acc_num, float balance, float amt,
float overdraft) {
        System.out.print("\nEnter account number : ");
        int acc = sc.nextInt();
        int j;

        for (j = 0; j < acc_num.length; j++) {
            if (acc_num[j] == acc) {
                i = j;
                break;
            }
        }
```

```
        if (i != j) {
            System.out.println("Account not found.");
        } else {
            if (balance >= amt) {
                balance -= amt;
                System.out.println("The amount withdrawn : " + amt);
                System.out.println("Existing balance in the account : " +
balance);
            } else {
                overdraft += (balance - amt);
                System.out.println("Due to insufficient balance, there is
an overdraft of : " + overdraft);
            }
            return overdraft;
        }
        return 0;
    }
}
```

```
package assignment4;
import java.util.Scanner;

public class Bank_Acc {

      Scanner sc = new Scanner(System.in);

      static String name[]= new String[20];
      static int acc_num[] = new int[20];
      static String acc_type[] = new String[20];
      static float balance[] = new float[20];

      void input(int i){

            System.out.print("\t Enter the account number : ");
            acc_num[i] = sc.nextInt();
            System.out.print("\t Enter name of account holder : ");
            sc.nextLine();
            name[i] = sc.nextLine();
        System.out.print("\t Enter 's' for Savings or 'c' for Current
account : ");
            acc_type[i] = sc.nextLine();
            System.out.print("\t Enter existing balance in the account :");
            balance[i] = sc.nextFloat();
      }

      public void display(int i){

            System.out.print("\nEnter account number : ");
            int acc = sc.nextInt();
            int j;

            for (j=0; j < acc_num.length; j++ ){

                  if (acc_num[j] == acc)
                  {
                i = j;
                break;
                  }
```

```
            }

            if (i != j) {
            System.out.println("Account not found.");
        }

            else {
                  System.out.print("\nFor account number : " + acc_num[i]);
                  System.out.print("\nName of the account holder : " +
name[i]);
                  System.out.print("\nType of account : " + acc_type[i]);
                  System.out.print("\nCurrent balance in account : " +
balance[i]);
           }
      }

    public void specific(int i){

            System.out.print("\nEnter account number : ");
            int acc = sc.nextInt();
            int j;

            for (j=0; j < acc_num.length; j++ ){
                  if (acc_num[j] == acc)
                  {
              i = j;
              break;
                  }
            }
              if (i != j) {
           System.out.println("Account not found.");
      }
            else {
                  int n;
                  do {
                        System.out.println("\n\nChoose the operation you
want to perform");
                        System.out.println("5. Choose another option");
                        System.out.println("6. Display name of account
holder");
                        System.out.println("7. Display type of account");
                        System.out.println("8. Display balance amount");

                        n = sc.nextInt();
                        switch (n){
                        case 5:
                              break;

                        case 6:
                              System.out.println("Name of the account
holder is " + name[i]);
                              break;

                        case 7:
                              if (acc_type[i] == "s")
                              {
                                    System.out.println("Type of account :
Savings Account");
                              }
                              else
                              {
```

```
                                        System.out.println("Type of account :
Current Account");
                                }
                                break;

                        case 8:
                                System.out.println("The balance amount in
this account is " + balance[i]);
                                break;

                        default:
                                System.out.println("Enter a valid option");
                        }
                    }
                    while (n != 5);
                }
            }

    public void deposit(int i) {
        System.out.print("\nEnter account number : ");
        int acc = sc.nextInt();
        int j;
        for (j=0; j < acc_num.length; j++) {
            if (acc_num[j] == acc) {
                i = j;
                break;
            }
        }
        if (i != j) {
            System.out.println("Account not found.");
        } else {
            System.out.print("Enter the amount to be deposited : ");
            float amt = sc.nextFloat();
            balance[i] += amt;
            System.out.println("Deposit successful.");
            System.out.println("New balance : " + balance[i]);
        }
    }


      public static void main(String[] args) {

            Bank_Acc obj = new Bank_Acc();
            Savings_Acc sa = new Savings_Acc();
            Current_Acc ca = new Current_Acc();

            System.out.print("Enter number of accounts : ");

            int n = obj.sc.nextInt();

            for(int i=0; i<n; i++){
                  System.out.println("\nEnter the details of account holder
" + (i+1));
                  obj.input(i);
            }

            Scanner sc = new Scanner(System.in);
            int choice;

            do {
```

```
                    System.out.println("\n\nChoose the operation you want to
perform");
                    System.out.println("0. Exit");
                    System.out.println("1. Display all details of the
customer");
                    System.out.println("2. Display specific details of the
customer");
                    System.out.println("3. Deposit money in the account");
                    System.out.println("4. Withdraw money from the account");

                    choice = sc.nextInt();
                    int i = 0;
                    switch (choice)
                    {
                    case 0:
                          System.out.println("Goodbye and Have a great
day!");
                          break;

                    case 1:
                   obj.display(i);
                          break;

                    case 2:
                          obj.specific(i);
                          break;

                    case 3:
                          obj.deposit(i);
                          break;

                    case 4:
                          float withdraw;
                          float overdraft = 0;
                          System.out.println("Enter the amount to withdraw :
");
                          withdraw = sc.nextFloat();
                        if (acc_type[i].equals("s")) {
                            sa.withdraw(i, acc_num, balance[i], withdraw);
                        }
                        else if (acc_type[i].equals("c")) {
                            ca.withdraw(i, acc_num, balance[i], withdraw,
overdraft);
                        }
                        else {
                            System.out.println("Invalid account type.");
                        }
                        break;

                    default:
                          System.out.println("Enter a valid option");
                    }
              }
              while (choice != 0);


      }

}
```

Output:

```
Enter number of accounts : 4

Enter the details of account holder 1
       Enter the account number : 101
       Enter name of account holder : Chinu
       Enter 's' for Savings or 'c' for Current account : c
       Enter existing balance in the account :49453450.99

Enter the details of account holder 2
       Enter the account number : 202
       Enter name of account holder : Chiku
       Enter 's' for Savings or 'c' for Current account : s
       Enter existing balance in the account :34593593.67

Enter the details of account holder 3
       Enter the account number : 303
       Enter name of account holder : Yogi
       Enter 's' for Savings or 'c' for Current account : s
       Enter existing balance in the account :6856498.34

Enter the details of account holder 4
       Enter the account number : 404
       Enter name of account holder : Santy
       Enter 's' for Savings or 'c' for Current account : s
       Enter existing balance in the account :93423452.01


Choose the operation you want to perform
0. Exit
1. Display all details of the customer
2. Display specific details of the customer
3. Deposit money in the account
4. Withdraw money from the account
1

Enter account number : 404

For account number : 404
Name of the account holder : Santy
Type of account : s
Current balance in account : 9.342346E7

Choose the operation you want to perform
0. Exit
1. Display all details of the customer
2. Display specific details of the customer
3. Deposit money in the account
4. Withdraw money from the account
2

Enter account number : 202


Choose the operation you want to perform
5. Choose another option
6. Display name of account holder
7. Display type of account
```

```
8. Display balance amount
6
Name of the account holder is Chiku


Choose the operation you want to perform
5. Choose another option
6. Display name of account holder
7. Display type of account
8. Display balance amount
7
Type of account : Current Account


Choose the operation you want to perform
5. Choose another option
6. Display name of account holder
7. Display type of account
8. Display balance amount
8
The balance amount in this account is 3.459359E7


Choose the operation you want to perform
5. Choose another option
6. Display name of account holder
7. Display type of account
8. Display balance amount
5


Choose the operation you want to perform
0. Exit
1. Display all details of the customer
2. Display specific details of the customer
3. Deposit money in the account
4. Withdraw money from the account
3

Enter account number : 303
Enter the amount to be deposited : 490
Deposit successful.
New balance : 6856988.5


Choose the operation you want to perform
0. Exit
1. Display all details of the customer
2. Display specific details of the customer
3. Deposit money in the account
4. Withdraw money from the account
4
Enter the amount to withdraw :
404

Enter account number : 404
The amount withdrawn : 404.0
Existing balance in the account : 4.945305E7


Choose the operation you want to perform
```

```
0. Exit
1. Display all details of the customer
2. Display specific details of the customer
3. Deposit money in the account
4. Withdraw money from the account
4
Enter the amount to withdraw :
101

Enter account number : 101
The amount withdrawn : 101.0
Existing balance in the account : 4.945335E7


Choose the operation you want to perform
0. Exit
1. Display all details of the customer
2. Display specific details of the customer
3. Deposit money in the account
4. Withdraw money from the account
0
Goodbye and Have a great day!
```