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CSI2008 - Programming in Java

L53+L54

Challenging Task 2 - Classes and Objects

Banking

Write a menu-driven java program to reflect the functioning of a bank using basic classes and objects. The bank has many customers and each customer. There are three types of accounts available in the bank - Savings account, Current account and a loan account

The following facilities are offered by the bank:

1) Creating a new account – Get the customer name, Aadhaar card number, account type (savings, current or loan), opening balance – min Rs.500 for savings and Rs.5000 for current account and the loan amount for the loan account. The loan account should have the loan amount as a negative amount and as amount is credited to it, the remaining loan amount is adjusted and when it becomes zero, the loan status is set to closed and no further credit should be allowed in the account.

Once all the details are received from then generate the account number (random number) and display it. The account number should have six digits followed the characters 'S','C' or 'C' to indicate the type of the account. Ex: 192384C

- 2) Debit from Savings or Current Account Allow transfer of money from one account to another account either between the same person's accounts or to a different customer. Check the account balance before transfer and display appropriate messages
- Credit to the accounts No limit for savings and current account. If crediting to loan account check the left over loan amount and display appropriate messages
- 4) Deposit Interest When this functionality is triggered, calculate interest at the rate of 4% for savings account and 7.5% for current account and the corresponding amount should be credited to all the corresponding accounts.
- Display all the account details

```
CODE:
import java.util.Scanner;
public class BankingApplication {
       public static void main(String[] args) {
               BankAccount obj = new BankAccount("SL DevCode", "SL00001");
               obj.showMenu();
       }
}
class BankAccount{
       int balance;
       int previousTransaction;
       String customerName;
       String customerId;
       BankAccount(String cname , String cid) {
               customerName = cname;
               customerId = cid;
       }
       void deposit(int amount) {
```

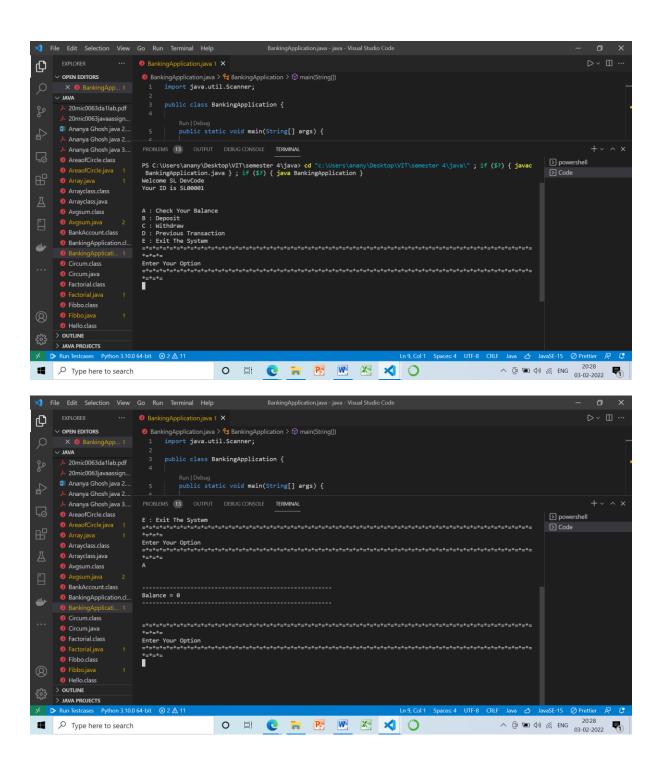
```
if(amount != 0) {
               balance = balance + amount;
               previousTransaction = amount;
       }
}
void withdraw(int amount) {
       if(amount != 0) {
               balance = balance - amount;
               previousTransaction = -amount;
       }
}
void getPreviousTransaction() {
       if(previousTransaction > 0) {
               System.out.println("Deposited: " + previousTransaction);
       }
       else if(previousTransaction < 0) {</pre>
               System.out.println("Withdraw: "+Math.abs(previousTransaction));
       }
       else {
               System.out.println("No Transaction Occured");
       }
}
void showMenu() {
```

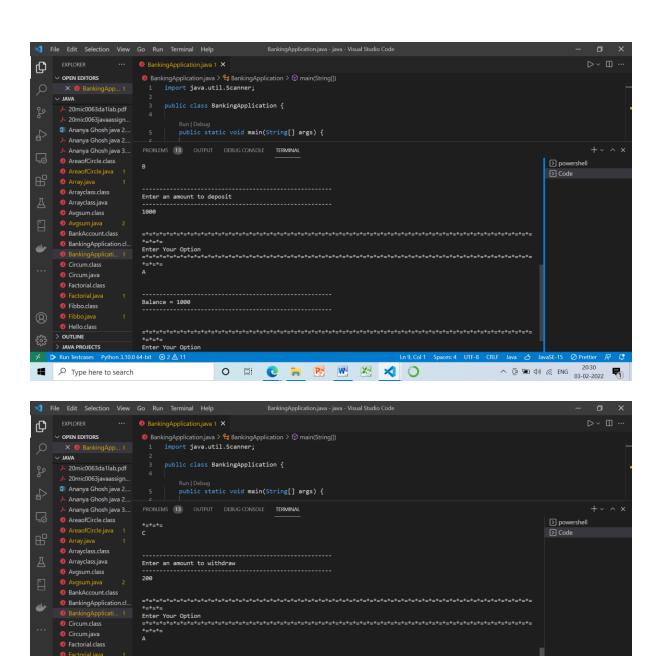
```
Scanner scanner = new Scanner(System.in);
         System.out.println("Welcome " +customerName);
         System.out.println("Your ID is " +customerId);
         System.out.println("\n");
         System.out.println("A : Check Your Balance");
         System.out.println("B : Deposit");
         System.out.println("C : Withdraw");
         System.out.println("D : Previous Transaction");
         System.out.println("E : Exit The System");
         do {
    System.out.println("Enter Your Option");
    option = scanner.next().charAt(0);
             System.out.println("\n");
             switch (option) {
             case 'A':
                  System.out.println("-----");
```

char option = $'\0'$;

```
System.out.println("Balance = "+balance);
     System.out.println("-----");
     System.out.println("\n");
     break;
case 'B':
     System.out.println("-----");
     System.out.println("Enter an amount to deposit ");
     System.out.println("-----");
     int amount = scanner.nextInt();
     deposit(amount);
     System.out.println("\n");
     break;
case 'C':
     System.out.println("-----");
     System.out.println("Enter an amount to withdraw ");
     System.out.println("-----");
     int amount2 = scanner.nextInt();
     withdraw(amount2);
     System.out.println("\n");
     break;
case 'D':
     System.out.println("-----");
```

```
getPreviousTransaction();
                   System.out.println("-----");
                   System.out.println("\n");
                   break;
              case 'E':
    break;
              default:
                   System.out.println("Invalid Option!! Please Enter Correct
Opton...");
                   break;
              }
         }
         while(option != 'E');
              System.out.println("Thank You for Using our Services....!!");
    }
}
OUTPUT
```





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Hello.class

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