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LAB program 5 :

Develop a java program to create a Bank class that maintains two kinds of account for its customers, one called savings account and the other current account. The savings account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. create a class Account that stores customer name, account number and type of account. From this derive the classes cur-acct and sav-acct to make them more specific to their requirement. Include the necessary methods in order to achieve the following tasks.

a) Accept deposit from customers and update the balance

b) Display the balance

c) Compute and deposit interest

d) Permit withdraws and update the balance

e) check for the minimum balance, impose penalty if necessary and update the balance.

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```
import java.util.scanner;

class Account{
    private String customer_name;
    private int acc_no;
    protected double balance;
    public Account(String customer_name,
    int acc_no, double balance){
        this.customer_name = customer_name;
        this.accno_no = acc_no;
        this.balance = balance;
    }

    public double getBalance(){
        reten balance;
    }

    public void deposit(double amount){
        if(amount>0){
            balance += amount;
            System.out.println("Deposited:"
            + amount);
        }
        else{
            System.out.println("Deposit amount
            must be positive.");
        }
    }
```

```
public void withdraw (double amount)
  {
    if (amount <= getBalance()) {
        balance -= amount;
        System.out.println("withdrew:" +
        amount + "balance is:" + balance);
        }
    else
      System.out.println("Insufficient funds
  }.
  public void displayBalance(){
      System.out.println("Current Balance:"
      balance);
  }
}

class SavingsAccount extends Account{
    private double interestRate;

    public SavingsAccount (String customerName, int
    accountNumber, double initialbalance, double
    interestRate){
      Super (CustomerName, accountNumber,
        initialBalance);
      this.interestRate = interestRate;
    }

  public void computeAndDepositInterest(){
    double interest = getBalance() * interestRate / 100;
    deposit(interest);
  }
}
```

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```
class CurrentAccount extends Account{
    private double minimumBalance;
    private double servicecharge;

    public currentAccount (String customerName,
     int accountNumber, double initialBalance,
     double minimumBalance, double servicecharge){
        super(customerName, accountName, initialBa);
        this.minimumBalance = minimumBalance;
        this.service charge = serviceCharge;
    }
}

public class Bank {
    public static void main(String[] args){
    Scanner sc = new Scanner (System.in);
     SOP ("Customer name :");
     String name = sc.nextline();
     SOP("enter initial balance:");
     double balance = sc.nextDouble.
     SOP("enter interest rate :");
     double interest_rate = sc.nextDouble());
     SOP ("Enter choice : \n 1.current acc\n
          2. Savings acc");
      int ch = sc.nextInt();
      SOP ("Cust name : " + name + "\nAccno-
          number:" + accno + "\n");
```

```
switch(ch){

    case(1):
        SOP("account is current type");
        CurrentAccount ca = new
        CurrentAccount (name, accno, balan
        minimum_balance, service charge);
        do { SOP(" ");
        int c = sc.nextInt();
        ca.checkMinimumBalance();
        if (c==1) {
            SOP("enter: ");
            double amt = sc.nextDouble();
            ca.deposit(amt); }
        else if(c==2){
            SOP("enter amount:");
            double amt = sc.nextDouble();

        else if (c==3) {
            ca.displayBalance(); }
        else
            System.exit(0);
        } while (true);

    case(2):
        System.out.println("Savings type");
        SavingsAccount sa = new Savings
        Account(name, accno, balance, interest
        do{ System.out.println("enter
        choice: \n 1. deposit \n 2. withdraw
```

```
3.display balance");
int c1 = sc.nextInt();
if (c1 == 1){
    System.out.println("enter amount to
    be deposited:");
    double amt = sc.nextDouble();
        sa.deposit(amt); }
else if (c1 == 2 ){
    System.out.println("enter amount to
    withdraw:");
    double amt = sc.nextDouble();
    sa.withdraw(amt); }
else if (c1 == 3){
    sa.computeAndDeposit Interest();
        sa.displayBalance(); }
else {
    System.exit(0);
    }
} while(true);
}
}
```

Output:

```
enter customer name : Sujan
enter accno : 12344667
enter initial balance : 34567
enter minimum balance : 1000
enter interest rate : 2
enter service charge : 1

Enter choice :
 1. Current acc
 2. Savings acc.
 1.
Customer name : Sujan
Account no : 12344667
account is current type.
enter choice :
 1. deposit
 2. withdraw
 3. display balance
 2
enter amount to withdraw : 4567
withdrew : 4567.0  balance : 30000

enter choice : 1
enter amount : 1
Deposited : 1.0
enter choice : 3
Current balance : 30001.0
```