Lab - 5

Bank Inheritance.

```
import java.util.Scanner;
class Account {
    String cust_name, type;
    long account_num;
    double balance;
    boolean check_book;
    static double min = 500.0, sercharge
                        = 100;
    Scanner ss = new Scanner(System.in);
    void getdata() {
        System.out.println("Enter name:");
    cust_name = ss.nextLine();
    System.out.println("Enter the account
                        number:");
    account_num = ss.nextLong();
    System.out.println("Enter the balance
                amount:");
    balance = ss.nextDouble();
}
    void display() {
      System.out.println("Customer name:"
                        + cust_name);
```

```
System.out.println("Account number: " +
                    account_num);
System.out.println("Current Balance: "
                    + balance);

}
}
class Savings extends Account {
    double interest, rate = 0.03, withdraw_amt;
    int n, time;
    Scanner SS = new Scanner(System.in);
    void calc_interest() {
        System.out.println("Enter the time
                    in years: ");
        time = SS.nextInt();
        System.out.println("Enter the number
                    of times the interest is to be
                    compounded: ");
        n = SS.nextInt();
        interest = balance * (Math.pow((1+(rate/n))
                    , (time * n)));
        balance += interest;
        System.out.println("The interest amount
                    is: " + interest);
        System.out.println("The balance after
                    calculating interest is: " + balance);
    }
    void withdrawal() {
        System.out.println("Enter the amount
                    to be withdrawn: ");
        withdraw_amt = SS.nextDouble();
        if (balance > withdraw_amt)
            balance -= withdraw_amt;
        else
            System.out.println("Balance
```

```
                amount is insufficient");
System.out.println("The total balance
        after withdrawal is :"+balance);
}
void penalty(){
    if(balance<min){
        balance=balance-sercharge;
    System.out.println("The balance
            amount after the penality:"+balance);
    else
        System.out.println("No penalty
                is inposed.");
    }
}
class Current extends Account{
    Scanner ss=new Scanner(System.in);
    double deposit;
    void getdeposit(){
        System.out.println("Enter the
                amount to deposited:");
        deposit=ss.nextDouble();
        balance+=deposit;
        System.out.println("The total balance
                after deposition is:"+balance);
    }
void penalty(){
        if(balance<min){
            balance=balance-sercharge;
        System.out.println("The balance
        amount after the penalty:"+penalty);
} else
    System.out.println("No penalty was
            inposed.");
}
}
```

```
class BankMain {
    public static void main(String args[]){
        int type;
        Savings s = new Savings();
        Current c = new Current();
        Scanner ss = new Scanner(System.in);
        System.out.println("Enter the type of
        account");
    System.out.println("Enter 1 for savings &
            2 for Current:");
    type = ss.nextInt();
     if(type == 1) {
            int withdraw = 0;
            s.getdata();
            s.display();
            s.calc_interest();
          System.out.println("Would you
            like to withdraw money
            from your account?");
          System.out.println("Enter 1 if yes
            and 2 if no:");
          withdrw = ss.nextInt();
          if(withdrw == 1)
              s.withdrawal();
          s.penalty();
    }
      if(type == 2) {
          int deposit = 0;
          c.getdata();
          c.display();
      System.out.println("Enter 1 to deposit & 2 if no");
          deposit = ss.nextInt();
          if(deposit == 1)
              c.getdeposit();
      c.penalty();    } } }
```