

Q. Develop a java program to create a class Bank that maintains two kind of account for its customers, one called saving and another current account. The saving 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 Curr-act and Sav-act to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks.

- Accept deposit from customer and update the balance.
  - Display the balance
  - Compute and deposit interest.
  - Permit withdrawal and update the balance.
- Check for minimum balance, impose penalty if necessary and update the balance.

→

```
import java.util.*;
```

```
import java.lang.*;
```

```
class Account {
```

```
    String name, abc;
```

```
    int accNo;
```

```
    char accType;
```

```
    double deposit;
```

```
    Scanner in = new Scanner(System.in);
```

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```
void deposit () {  
    System.out.println("Enter an amount to deposit:");  
    deposit = in.next Double();  
    bal += deposit;  
    System.out.println("Balance has been updated");  
}  
void viewBalance()  
    System.out.println("Balance = " + bal);  
}  
public static void main (String[] args) {  
    Scanner s = new Scanner (System.in);  
    int x;  
    Account a1 = new Account();  
    a1.inputData();  
    if (a1.acctype == 'c' || a1.acctype == 'C') {  
        Current a2 = new Current();  
        do {  
            System.out.println("Welcome to Current account");  
            System.out.println("1. Deposit");  
            System.out.println("2. Check Balance");  
            System.out.println("3. Issue Cheque");  
            System.out.println("Enter your choice:");  
            x = s.nextInt();
```

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Switch (x) {

Case 1: a2.deposit();

break;

Case 2: a2.account\_balance();

break;

Case 3: a2.CBSave\_Cheque();

break;

Case 4: System.exit(0);

break;

default: System.out.println("Error: Invalid choice");

}

{ while (x <= 4 && x >= 1);

elseif (a1.accountType == 'S' || a1.accountType == 's') {

Saving a3 = new Saving();

do {

System.out.println("Welcome to Saving account");

System.out.println(" 1. Deposit In 2. View Balance In 3. Withdraw

In 4. Calculate compound interest In 5. Exit In");

System.out.println("Enter your choice");

x = S.nextInt();

Switch (x) {

Case 1: a3.deposit();

break;

Case 2: a3.view\_balance(); break;

Case 4: a3.compute\_CI(); break;

Case 5: System.exit(0); break;

default: System.out.println("Error / Invalid choice");

}

{ while (x <= 5 && x >= 1);

}

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else .

System.out.println("Invalid Account Type");

}

}

Class Current extends Account {

Current () {

System.out.println("Enter Your Name:");

name = in.nextLine();

System.out.println("Enter your account number:");

accNo = in.nextInt();

deposit();

}

double chq-amount;

void issue-Cheque() {

System.out.println("Enter amount for which cheque to be issued");

chq-amount = in.nextDouble();

if (chq-amount > bal) {

System.out.print("Insufficient Balance");

}

else {

bal = chq-amount;

System.out.println("Cheque has been issued successfully");

}

}



```
void Check_balance() {  
    if (bal < 1000) {  
        System.out.println("Current balance is less than required balance");  
        bal -= 100;  
        System.out.println("Service charge 100 is deducted");  
    }  
    view_balance();  
}
```

```
class Saving extends Account {  
    double CI, withdrawal = amount, time;  
    Savings() {  
        System.out.println("Enter your name");  
        name = in.nextLine();  
        System.out.println("Enter your account number:");  
        accNo = in.nextInt();  
        deposit();  
    }
```

```
void Compute_CI() {  
    System.out.println("Enter Time period:");  
    time = in.nextInt();  
    CI = (bal * (Math.pow(6, time))) - bal;  
    System.out.println("CI = " + CI);  
    bal += CI;  
    System.out.println("CI has been deposited");  
}
```

```
void withdraw - balance () {
```

```
    System.out.println ("Enter amount you want to withdraw?");
```

```
    withdraw - ammount = in.nextDouble();
```

```
    if (withdrawal - ammount > bal) {
```

```
        System.out.print ("Error Less Balance ");
```

```
    }
```

```
    else {
```

```
        bal -= withdrawal - ammount;
```

```
        System.out.println ("Amount Has Successfully withdraw.");
```

```
    }
```

```
}
```

```
}
```