

## Java Interfaces

Consider a Banking Scenario, There are many accounts, like Savings Account, Current Account, Demat Account and so on.

We have a base Class Account which contains all the basic properties and methods of an Account. We do have some Maintenance Charges that applies to only some of the accounts. If you would like to enforce that the Savings Account & Current Account should have maintenance charges, then the simplest way is to ask your class implement the interface.

If you do not implement the method in the class, it would raise a compilation error.

So, Java Interfaces essentially gives acts like a contract where its given that the methods declared in the interface has to be implemented in the class. Lets code the above Scenario.

Create MaintenanceCharge interface with computeMaintenanceCharge method.

Create a base Class Account with the fields - name, number, balance and startDate.

Create two subclassess CurrentAccount & SavingsAccount which extends Account and implements MaintenanceCharge interface.

In Savings Account the maintenance amount will be  $2mn+50$ .

In checking Account, the maintenance amount will be  $mn+200$ .

where m is the maintenance charge per year and n is the number of years.

Follow the IO pattern for the input & output.

**Note: Maintenance charge Rs.50 for saving account and 100 for Current account.**

**Sample input and output 1:**

1.Current Account

2.Savings Account

**1**

Name

**SB**

Account Number

**12345**

Account Balance

**5000**

Enter the Start Date(yyyy-mm-dd)

**2013-04-22**

Enter the Years

**2**

Maintenance Charge For Current Account 400.00

**Sample input and output 1:**

1.Current Account

2.Savings Account

**2**

Name

**SB**

Account Number

**54321**

Account Balance

**3000**

Enter the Start Date(yyyy-mm-dd)

2014-04-12

Enter the Years

5

Maintainence Charge For Savings Account 550.00