



## LAB EXAM

### OOPs with Java

Time: 1.5 hours

1. Create a class named "Account" with the following members
  - a. Data Members
    - a. accNo
    - b. Name
    - c. accType
    - d. accBalance
  - b. Function members
    - a. Constructor to accept all values
    - b. Deposit(int amt) accepting amount and adds with the accBalance
    - c. Withdraw(int amt) accepting amount to subtract from the accBalance
    - d. checkBalance() to return the present account balance

Inherit classes such as "SavingsAccount" "PrivilegedAccount" classes from the class "Account". The rules of these account types are as follows:-

- a. SavingAccount
  - a. Deposit – can deposit upto a maximum of 50000 only in one transaction.
  - b. Withdraw – a minimum balance of 1000 should be there at any time.
- b. PrivilegedAccount
  - a. Deposit – can deposit any amount
  - b. Withdraw – can take an overdraft of maximum 5000. I.e, account balance can go upto - 5000.

Write a main() function, which creates different types of account and do transactions on these accounts.

```
Package Explorer X
exam [java master]
  JRE System Library [JavaSE-1.8]
  src
    com.exam.entity
      Account.java
      PrivilegedAccount.java
      SavingsAccount.java
    com.exam.main
      AppMain.java

1 package com.exam.entity;
2
3 public class Account {
4     protected int accNo;
5     protected String Name;
6     protected String accType;
7     protected Double accBalance;
8
9     public Account(int accNo, String name, String accType, Double accBalance) {
10         super();
11         this.accNo = accNo;
12         Name = name;
13         this.accType = accType;
14         this.accBalance = accBalance;
15     }
16
17     public void deposit(int amt) {
18         System.out.println("Enter deposited is"+amt);
19         accBalance = accBalance+amt;
20         System.out.println("Updated balance in account is "+accBalance);
21     }
22
23     public void withdraw(int amt) {
24         System.out.println("amount to be withdrawn is"+amt);
25         accBalance=accBalance-amt;
26         System.out.println("Updated balance amount in account after withdraw is "+accBalance);
27     }
28
29     public void checkBalance() {}
30         System.out.println("Your current Balance Amount is "+accBalance);
31     }
32 }
33
```

```
Package Explorer X
exam [java master]
  JRE System Library [JavaSE-1.8]
  src
    com.exam.entity
      Account.java
      PrivilegedAccount.java
      SavingsAccount.java
    com.exam.main
      AppMain.java

1 package com.exam.entity;
2
3 public class SavingsAccount extends Account {
4
5     public SavingsAccount(int accNo, String name, String accType, Double accBalance) {
6         super(accNo, name, accType, accBalance);
7         // TODO Auto-generated constructor stub
8     }
9     @Override
10    public void deposit(int amt) {
11        if(amt<50000) {
12            System.out.println("You can deposit");
13            accBalance=accBalance+amt;
14            System.out.println("Updated Balance is "+accBalance);
15        }
16        else{
17            System.out.println("You can only deposit maximum 50,000 in one transcation");
18        }
19    }
20
21
22    @Override
23    public void withdraw(int amt) {
24        if(accBalance-amt<1000) {
25            System.out.println("you can't withdraw your balance is below 1000");
26        }
27        else{
28            System.out.println("You can withdraw");
29            accBalance=accBalance-amt;
30            System.out.println("updated balance after withdraw is "+accBalance);
31        }
32    }
33 }
34
```

```
Package Explorer X
exam [java master]
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  src
    com.exam.entity
      Account.java
      PrivilegedAccount.java
      SavingsAccount.java
    com.exam.main
      AppMain.java

1 package com.exam.entity;
2
3 public class PrivilegedAccount extends Account {
4
5     public PrivilegedAccount(int accNo, String name, String accType, Double accBalance) {
6         super(accNo, name, accType, accBalance);
7         // TODO Auto-generated constructor stub
8     }
9
10
11     @Override
12     public void deposit(int amt) {
13         System.out.println("You can deposit");
14         accBalance=accBalance+amt;
15         System.out.println("Updated balance after deposit is "+accBalance);
16     }
17
18     @Override
19     public void withdraw(int amt) {
20         if(accBalance-amt>=5000) {
21             System.out.println("You can withdraw");
22             accBalance=accBalance-amt;
23             System.out.println("Updated balance after the withdraw is "+accBalance);
24         }
25         else {
26             System.out.println("Sorry ! you can't withdraw");
27         }
28     }
29 }
30
```

```
Package Explorer X
exam [java master]
  JRE System Library [JavaSE-1.8]
  src
    com.exam.entity
      Account.java
      PrivilegedAccount.java
      SavingsAccount.java
    com.exam.main
      AppMain.java

1 package com.exam.main;
2
3 import com.exam.entity.PrivilegedAccount;
4 import com.exam.entity.SavingsAccount;
5
6 public class AppMain {
7
8     public static void main(String[] args) {
9
10         SavingsAccount s1 = new SavingsAccount(11, "Akash", "Savings", 1150.00);
11         System.out.println("Savings Account");
12         s1.deposit(50001);
13         s1.checkBalance();
14         s1.withdraw(500);
15         s1.withdraw(500);
16         s1.checkBalance();
17
18         PrivilegedAccount p1 = new PrivilegedAccount(12, "Dhiraj", "Privileged", 0000.00);
19         System.out.println("Privileged Account");
20         p1.checkBalance();
21         p1.withdraw(4999);
22         p1.checkBalance();
23         p1.deposit(200000);
24         p1.checkBalance();
25     }
26 }
27
```

Savings Account

You can only deposit maximum 50,000 in one transcation

Your current Balance Amount is 1150.0

you can't withdraw your balance is below 1000

you can't withdraw your balance is below 1000

Your current Balance Amount is 1150.0

Privileged Account

Your current Balance Amount is 0.0

YOU can withdraw

Updated balance after the withdraw is -4999.0

Your current Balance Amount is -4999.0

YOU can deposit

Updated balance after deposit is 195001.0

Your current Balance Amount is 195001.0