



UPES

UNIVERSITY OF THE FUTURE

Assignment- 12

Subject- Java SE Programming Lab

Submitted By:

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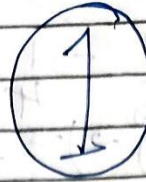
Roll No.- R201220011

Submitted To:

Inder Singh Sir

Date

Experiment-12



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package Lab 12;

enum Branch {
LA ("Basic"), BOSTON ("Loan"), Bangalore
("Full"), Mumbai ("Full");

String service Level;

private Branch (String service Level) {

 this.service Level = service Level;

public String getServiceLevel () {

 return service Level;

}

Date

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package Lab 12;

// get Balance(), deposit(), withdraw(), and get
Description()

public class Account {

public String FirstName;

public String LastName;

double balance;

public Branch branch;

public int AccountType;

public String toString() {

return "Current balance is " + balance;

public Branch getBranch() {

return branch;

Date

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package Lab12;

```
public interface Bank Operations {  
    // add Customer(),  
    // getNumOfCustomers(), and getCustomer()  
    void add Customer(Account a);  
    int getNumOfCustomers();  
    Account getCustomer(String Firstname);  
    void get generate Report();  
}
```

package Lab12;

```
import java.util.ArrayList;  
import java.util.List;
```

```
package class Bank implements BankOperations {
```

```
    private List<Account> AccountList;  
    static int NumOfCustomers;  
    public Bank() {  
        this.AccountList = new ArrayList<>();  
    }
```

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@Override

```
public void add Customer(Account A) {  
    AccountsList.add(A);  
    NumOfCustomers++;  
}
```

@Override

```
public int getNumOfCustomers() {  
    return NumOfCustomers;  
}
```

@Override

```
public Account getCustomer(String Firstname) {  
    for (Account a: AccountsList) {  
        if (a.FirstName.equalsIgnoreCase(Firstname)) {  
            return a;  
        }  
    }  
    return null;  
}
```

@Override;

```
public void generateReport() {  
    System.out.println("CUSTOMERS REPORT \n" +  
        "=====");  
    for (Account a: AccountsList) {  
        System.out.println("Customer: " + a.FirstName +  
            a.LastName + "\n" + "a.getBranch() + ", " +  
            a.branch.getServiceLevel());  
    }  
}
```


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```
if (a.AccountType == 1)
    System.out.println("Checking Account  
balance is " + a.balance);
```

```
else if (a.AccountType == 2)
    System.out.println("Saving Account  
balance is " + a.balance);
```

```
}
```

package Lab12;

```
public class CheckingAccount extends Account {
    public CheckingAccount(String Firstname, String  
        Lastname, Branch b) {
```

```
        this.First Name = Firstname;
```

```
        this.Last Name = Lastname;
```

```
        this.branch = b;
```

```
        this.AccountType = 1;
    }
```

```
    public String get Description() {
```

```
        return "Customer:"
```

```
            + Lastname + ", "
```

```
            + Firstname
```

Date

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```
+ "\n Branch : " + branch + ", " +  
+ branch.getServiceLevel();  
}
```

```
public double getBalance() {  
    return balance;  
}
```

```
public void deposit(double amount) {  
    balance += amount;  
}
```

```
public void withdraw(double amount) {  
    balance -= amount;  
}
```

```
public String toString() {  
    return this.getDescription() + "Checking  
Account balance is " + balance;  
}
```


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package Lab12;

```
class SavingsAccount extends Accounts {  
    public SavingsAccount(String Firstname,  
        String Lastname, Branch b) {  
        this.First name = Firstname;  
        this.Last name = Lastname;  
        this.branch = b;  
    } this.AccountType = 2;
```

```
    public String getDescription() {  
        return "Customer"  
            + Last Name + ", "  
            + First Name  
            + "\n Branch: " + " + branch + ", "  
            + branch.getService level();  
    }
```

```
    public double getBalance() {  
        return balance;  
    }
```

```
    public void deposit (double amount) {  
        balance += amount;  
    }
```


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```
public void withdraw(double amount) {  
    balance -= amount;  
}
```

```
public String toString() {  
    return this.getDescription() + " Saving  
Account balance is " + balance;  
}
```

```
}
```

package Lab12;

```
public class main {  
    public static void main(String [] args) {  
        Bank bank = new Bank();  
        Savings Account SA1 = new SavingsAccount  
("Smith", "Will", Branch.Mumbai);  
SA1.deposit(20000);  
bank.addCustomer(SA1);
```

```
bank.addCustomer(new CheckingAccount("Cooper",  
"Bradly", Branch.BANGLORE));  
bank.addCustomer(new SavingsAccount("Simms",  
"Jane", Branch.BOSTON));
```

```
bank.generateReport();  
bank.getNumOfCustomers();  
}
```

```
Run: main x
"D:\Program Files\Java\jdk-17.0.2\bin\java.exe" "-javaagent:D:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2021.3.2\lib\idea_rt.jar=52383:D:\Program F
CUSTOMERS REPORT
=====
Customer: Smith, Will
Branch MUMBAI, Full
Saving Account balance is20000.0
Customer: Cooper, Bradly
Branch BANGALORE, Full
Checking Account balance is0.0
Customer: Simms, Jane
Branch BOSTON, Loan
Saving Account balance is0.0

Process finished with exit code 0
|
```

Version Control Run TODO Problems Build Terminal Event Log

Build completed successfully in 10 sec, 72 ms (moments ago) 15:1 CRLF UTF-8 4 spaces