

```
// _____Account file_____
```

```
package week3;
```

```
public class Account {
    private int acctno;
    private double
    balance;

    // default Constructor
    public Account() {
    }

    // parameterized constructors
    public Account(int acctno, double balance) {
        this.acctno = acctno;
        this.balance = balance;
    }

    // getters and setters
    public int getAcctno() {
        return acctno;
    }

    public void setAcctno(int acctno) {
        this.acctno = acctno;
    }

    public double getBalance() {
        return balance;
    }

    public void setBalance(double balance) {
        this.balance = balance;
    }

    // to
    String
    @Override
    public String toString() {
        return String.format("AccountNo: %-
10s\tBalance:$%- 10s\n",acctno,balance);
    }
}
```

```
// _____Customer file_____
```

```
package week3project;
```

```
public class
    Customer {
        private int id;
        private String
```

```
    name; private
    String phone;
    private Account account;

    // default
    Constructor
public Customer() {
```

```

    }
// parameterized constructors
public Customer(int id, String name, String phone, Account
account) {
    this.id = id;
    this.name =
name;
    this.phone =
phone;
    this.account = account;
}
// getters and setters
public int getId() {
    return id;
}

public void setId(int id) {
    this.id = id;
}

public String getName() {
    return name;
}

public void setName(String name) {
    this.name = name;
}

public String getPhone() {
    return phone;
}

public void setPhone(String phone) {
    this.phone = phone;
}

public Account getAccount() {
    return account;
}

public void setAccount(Account account) {
    this.account = account;
}
// to
String
@Override
de
public String toString() {
    return String.format("Customer details:\nCustomer Id: %-
10s\tName: %- 10s\tPhone: %-10s\nAccount details:\n%-
10s", id, name, phone, account);
}

```

```
}
```

```
// _____ Bill File _____
```

```
package week3project;
```

```
import java.text.SimpleDateFormat;
```

```
import java.util.Date;
```

```

public class Bill {
    private int id;
    private int
    custid;
    private Date
    billGenerationDate;
    private Date
    billPaymentDate; private
    double amount;
    private boolean paid;

    SimpleDateFormat format = new SimpleDateFormat("dd-MM-yyyy");

    // default
    Constructor
    public Bill() {
    }
    // parameterized
    constructors
    public Bill(int id, int custid, Date
    billGenerationDate, Date billPaymentDate, double
    amount, boolean paid) {
        this.id = id;
        this.custid = custid;
        this.billGenerationDate =
        billGenerationDate;
        this.billPaymentDate =
        billPaymentDate; this.amount =
        amount;
        this.paid = paid;
    }

    // getters and setters
    public int getId() {
        return id;
    }

    public void setId(int id) {
        this.id = id;
    }

    public int getCustid() {
        return custid;
    }

    public void setCustid(int custid) {
        this.custid = custid;
    }

    public Date getBillGenerationDate() {
        return billGenerationDate;
    }

    public void setBillGenerationDate(Date billGenerationDate) {

```

```
        this.billGenerationDate = billGenerationDate;
    }

    public Date getBillPaymentDate() {
        return billPaymentDate;
    }

    public void setBillPaymentDate(Date billPaymentDate) {
        this.billPaymentDate = billPaymentDate;
    }
}
```

```

    public double getAmount() {
        return amount;
    }

    public void setAmount(double amount) {
        this.amount = amount;
    }

    public boolean isPaid() {
        return paid;
    }

    public void setPaid(boolean paid) {
        this.paid = paid;
    }

    // to
    String
    @Overri
    de
    public String toString() {
        return String.format("Bill details: \nBill Id: %-
10s\tCustomer Id: %- 10s\tAmount:$%-10s\tGeneration Date: %-
10s\tPayment Date: %-10s\tPaid: %-
10s\n",id,custid,amount,format.format(billGenerationDate),billPayme
ntDate
==null?"" :format.format(billPaymentDate),paid? "Paid": "Not
Paid");
    }

}

//_____Transaction file_____

package week3project;

import
java.util.Date;
import
java.util.List;

public class Transaction {
    private List<Customer>
    custList; private
    List<Bill> billList;

    // default
    Constructor public
    Transaction() {
    }
    // parameterized constructors
    public Transaction(List<Customer> custList, List<Bill>
    billList) { this.custList = custList;
    this.billList = billList;

```

```
}
```

```
// get method  
public Customer getCustomer(int  
    id) { for (Customer customer :  
    custList) {  
        if(customer.getId() ==  
            id){ return  
                customer;  
        }  
    }  
    return null;  
}
```



```

// pay method

void payBill(){
    for (Bill bill : billList) {        // checking bill id
bill is present or not
        int custid = bill.getCustid();
        Customer customer =
            getCustomer(custid); if(customer
            == null){
            System.out.println(String.format("Customer with
            customer id
%d does not exists ",custid));
            continue;
        }

        double balance =
            customer.getAccount().getBalance();
        if(balance >= bill.getAmount()){
            bill.setPaid(true);
            bill.setBillPaymentDate(new
            Date());
            customer.getAccount().setBalance(balance-
            bill.getAmount());
            System.out.println(String.format("Bill paid for
            customer id
%d ",custid));
        }else{
            bill.setPaid(false);
            System.out.println(String.format("Bill cannot
            be paid for customer id %d",custid));
        }

        // printing the Customer
        and Bill
        System.out.println(customer
        );
        System.out.println(bill);
    }
}
}

```

```

// _____Main file_____

```

```

//imported the essential
libraries import
java.sql.Date;
import
java.util.ArrayList;
import
java.util.List;

```

```

//created main class with main

method public class Main {

public static void main(String[] args) {
    // TODO Auto-generated method stub

        //creating object of customer
        Bill b=new Bill();
        List<Customer> customerList = new ArrayList<>();

        customerList.add(new Customer(1,"Tom","9090901010",new
Account(1,1000))); customerList.add(new Customer(2,"Jerry","9090902020",new
Account(2,1500)));

        //creating object of bill

        List<Bill> billList = new ArrayList<>();

        billList.add(newBill(1,1,b.format.parse("12-09-
2022"),null,1001,false));
        billList.add(newBill(2,2, ,b.format.parse("13-09-
2022"),null,500,false));
        billList.add(newBill(3,3,b.format.parse("14-09-
2022"),null,1000,false));

        //creating the object of transaction

        Transaction transaction = new
Transaction(customerList,billList); transaction.payBill();
    }
}

```

```
assignment - Assg3Week/src/week/Bill.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Problems Javadoc Declaration Console
<terminated> Main (2) [Java Application] C:\Users\harsh.bansal\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.4.v20220805-1047\jre\bin\javaw.exe (16-Sep-2022, 5:18:41 pm - 5:18:42 pm) [pid: 30880]
Bill cannot be paid for customer id 1
Customer details:
Customer Id: 1      Name: Tom      Phone: 9090901010
Account details:
AccountNo: 1      Balance:$1000.0
Bill details:
Bill Id: 1      Customer Id: 1      Amount:$1001.0      Generation Date: 12-09-2022      Payment Date:      Paid: Not Paid

Bill paid for customer id 2
Customer details:
Customer Id: 2      Name: Jerry      Phone: 9090902020
Account details:
AccountNo: 2      Balance:$1000.0
Bill details:
Bill Id: 2      Customer Id: 2      Amount:$500.0      Generation Date: 13-09-2022      Payment Date: 16-18-2022      Paid: Paid

Customer with customer id 3 does not exists
```