```
//_____________________Account file_____________________________

package week3project;

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
    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 dateFormat = new SimpleDateFormat("dd-MM-yyyy hh:mm a");

//  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
    @Override
    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,dateFormat.format(billGenerationDate),billPaymentDate
==null?"":dateFormat.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
           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(new Bill(1,1,new Date(1662976221000L),null,1001,false));
        billList.add(new Bill(2,2,new Date(1663062621000L),null,500,false));
        billList.add(new Bill(3,3,new Date(1663062621000L),null,1000,false));

       //creating the object of transaction
        Transaction transaction = new Transaction(customerList,billList);
        transaction.payBill();
}

}
```