```
package weeklyAssignment3;

import java.sql.Date;
import java.text.ParseException;
import java.util.ArrayList;
import java.util.List;

public class Main {
        public static void main(String[] args) throws ParseException{
    // TODO Auto-generated method stub
                //create customer list
                  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)));
            Bill b=new Bill();

//create bill
           List<Bill> billList = new ArrayList<>();
            billList.add(new Bill(1,1,b.format.parse("12-09-2022"),null,1001,false));
            billList.add(new Bill(2,2,b.format.parse("13-09-2022"),null,500,false));
            billList.add(new Bill(3,3,b.format.parse("16-09-2022"),null,1000,false));




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


        }
```

```
}



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

//create default and parameter constructor

             public Account() {
             }



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



             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;
        }


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


    }



package wweklyAssignment3;

public class Customer {
        private int id;
```

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

//create default and parameter constructor

    public Customer() {
    }


    public Customer(int id, String name, String phone, Account account) {
        this.id = id;
        this.name = name;
        this.phone = phone;
        this.account = account;
    }


    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;
        }


//generate to string method
        @Override
        public String toString() {
            return String.format("Customer details:\nCustomer Id: %-10s\tName: %-10s\tPhone: %-10s\nAccount details:\n%-10s",id,name,phone,account);
        }


}



package wweklyAssignment3;

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-yyy");

//create default and parameter constructor

  public Bill() {
  }

  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;
  }

//generate getter and setter for all fields

  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;
  }

//generate To string method
```

```
  @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,format.format(billGenerationDate),billPaymentDate
==null?"":format.format(billPaymentDate),paid? "Paid": "Not Paid");
   }
}



package wweklyAssignment3;


import java.util.ArrayList;
import java.util.Date;
import java.util.List;
//create transaction class
public class Transaction {
            private List<Customer> custList;
             private List<Bill> billList;

//create default and parameter construter for all field

             public Transaction() {
             }



             public Transaction(List<Customer> custList, List<Bill> billList) {
                this.custList = custList;
                this.billList = billList;
             }
```

```
//add get customer method

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



//add paybill method

        public void payBill(){
            for (Bill bill : billList) {
                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));
                }
                System.out.println(customer);
                System.out.println(bill);
            }
        }
}
```