Account.java

```
package weeklyassignment2;

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", acctno,
balance);
	}

}
```

Customer.java

```
package weeklyassignment2;

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);
    }

}
```

Transaction.java

```
package weeklyassignment2;

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
	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);
		}
	}

}
```

Bill.java

```
package weeklyassignment2;

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
	@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");
	}

}
```

Main.java

```
package weeklyassignment2;

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

//created main class with main
public class Main {

	public static void main(String[] args) throws ParseException {
//creating object of Bill
		Bill b = new Bill();
//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)));

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

	}
```

Gaurav Bhatt week 3 assignment