



COMSATS University Islamabad, Islamabad Campus

Department of Computer Science

Mid Term Examination

Course Title: Object Oriented Programming Lab

Instructor Name: Fazila Shams

BSE 3A+BSE3B

Due Date/Time: 25-04-2022 at 8:30 AM

Instructions

- Read all the instructions very carefully.
- It's **NOT** a group task. Any copied assignment will be marked zero, for the one who copies and the one who provides the assignment to be copied.
- **Do not** change the names of the already provided class name, attributes, and methods.
- Classes, methods or attributes that you create must **follow the conventions**
- Follow the conventions while assigning names of variables, methods, classes, and objects. Write comments as well, even a fool can write code that computers understand, good programmers write code that humans can understand
- Upload the solution of paper on MS Teams on/before given time and date.
- Viva will be conducted in upcoming lab. Bring your laptops for demonstrating the project.
- Any individual who fails to follow the instructions will be penalized

In Pakistan, people use several courier companies to make the delivery of items possible. Some of the common courier companies include TCS, Leopard, and Pakistan Post. All the companies use few common attributes including sender and receiver name, address, phone number, and weight of item to be delivered. However, rate/kg of item to be delivered and minimum delivery time varies from company to company.

You have to create a menu driven application that allow users to choose any of the above-mentioned courier services for their items to be delivered. Each item placed to be delivered must have a tracking ID for the user to track the order. Tracking ID should be composed of courier company name, date and some serial number. For example

For TCS: TCS-18042022-01

For Leopard: LEO-18042022-01

For Pakistan Post: PK-18042022-01

The standard delivery time for TCS courier service to deliver an order is 48 hours, for Leopard is 72 hours and for Pakistan Post is 120 hours. Rate/kg is Rs.350, Rs. 300, and Rs. 260 for TCS, leopard and Pakistan Post respectively. Moreover, you have to keep record of total number of orders/deliveries placed.

The supporting UML is given below:

Courier

- sender:Address
- receiver:Address
- weight:double
- trackingID:String
- deliveryTime:int
- rate:int
- serialNo:int
- total:int

- *setTrackingID(date:String):void*
- *calculateRate(weight:double):double*

Call methods polymorphically.

Few sample outputs are given blow:

Welcome to courier.com

Please select one of the following:(1-3)

1)TCS

2)Leopard

3)Pakistan Post

Or press 0 to exit

1

*****Welcome to TCS*****

The Standard Delivery time is 48 hrs

and rate/kg is: Rs.350

Please enter sender's detail:

Name:

Ali

Address:

Islamabad

Phone Number:

0333333333

Please enter receiver's detail:

Name:

Ahmed

Address:

Lahore

Phone Number:

03333334565

Enter Net Weight of parcel(kg):

1.5

DETAIL OF YOUR PARCEL IS AS BELOW

Tracking ID: TCS170420221

Order ID: 1

____Receiver Detail____

Name: Ahmed

Address: Lahore

Phone Number: 03333334565

____Sender Detail____

Name: Ali

Address: Islamabad

Phone Number: 0333333333

Total price of your parcel is: Rs. 525.0 and will be delivered with in 48 hrs

Welcome to courier.com
Please select one of the following:(1-3)
1)TCS
2)Leopard
3)Pakistan Post
Or press 0 to exit
2
*****Welcome to Leopard*****

The Standard Delivery time is 72 hrs
and rate/kg is: Rs.300

Please enter sender's detail:

Name:

Ali

Address:

Islamabad

Phone Number:

03454545454

Please enter receiver's detail:

Name:

Ahmed

Address:

Lahore

Phone Number:

03555546214

Enter Net Weight of parcel(kg):

2

DETAIL OF YOUR PARCEL IS AS BELOW

Tracking ID: LEO170420221

Order ID: 2

____Receiver Detail____

Name: Ahmed

Address: Lahore

Phone Number: 03555546214

____Sender Detail____

Name: Ali

Address: Islamabad

Phone Number: 03454545454

Total price of your parcel is: Rs. 600.0 and will be delivered with in 72 hrs

Welcome to courier.com

Please select one of the following:(1-3)

1)TCS

2)Leopard

3)Pakistan Post

Or press 0 to exit

3

*****Welcome to Pakistan Post*****

The Standard Delivery time is 120 hrs

and rate/kg is: Rs.260

Please enter sender's detail:

Name:

Ahmed

Address:

Rawalpindi

Phone Number:

03554564458

Please enter receiver's detail:

Name:

Umer

Address:

Quetta

Phone Number:

03454545658

Enter Net Weight of parcel(kg):

3

DETAIL OF YOUR PARCEL IS AS BELOW

Tracking ID: PK170420221

Order ID: 3

____Receiver Detail____

Name: Umer

Address: Quetta

Phone Number: 03454545658

____Sender Detail____

Name: Ahmed

Address: Rawalpindi

Phone Number: 03554564458

Total price of your parcel is: Rs. 780.0 and will be delivered with in 120 hrs
