Quiz 1

You are to write the **`LyftDriver`** class as specified below and test it with the **`TestLyft-Driver`** class as provided in this folder.

Upload your code for **`LyftDriver.java`** to the Quiz1 Latte assignment before the class is over.

You may keep working on it and submit a revised version to the Latte assignment Quiz1-hw before midnight.

HOW LYFT DRIVERS GET PAID

Lets first look at a simplified model of how Lyft drivers get paid.

A Lyft driver's pay is calculated from several parts, including the following
- pickupFee (e.g. 3.00 dollars/ride)
- distanceFee (e.g. 2.00 dollars/mile)
- timeFee (e.g. 0.20 dollars/minute)

We are skipping several other features such as Lyft's commission and various bonuses and cancellation fees and will just use this simplified model.

AN EXAMPLE

So if “Tim" is a driver with a pickup fee of $3, a distance fee of $2/mile, and a time fee of $0.20/minute, then if he completes a 5 mile drive in 20 minutes, then he will earn $17.00:

```
      3.00   (the pickup fee)
+    10.00   (the distance charge at $2/mile * 5 miles)
+     4.00   (the time charge at $0.20/minute * 20 minutes)
= $17.00
```

If he then completes a 20 mile drive in 30 minutes, he will earn an additional $49.00:

```
      3.00
+    40.00    (2.00*20)
+     6.00    (0.20*30)
= $49.00
```

and his total pay will be $17+$49 = $66

LYFTDRIVER SPECIFICATION

You will write a program to help a LyftDriver record their drives and keep track of how much money they have made…

The **LyftDriver** object keeps track of private instance variables for
• totalPay - the total pay and
• numRides - the number of completed rides
as well as the driver's name, lyft id, pickup fee, distance fee, and time fee.

It has a constructor

```
LyftDriver tim = new LyftDriver("Tim", 1, 3.00, 2.00, 0.20);
```

which has five parameters
- the driverName (a String, e.g. "Tim")
- the driverID (an int, e.g. 1)
- their pickupFee (a double, e.g. 3.00)
- their distanceFee (a double, e.g. 2.0)
- their timeFee (a double, e.g. 0.20)

LyftDriver also has the following instance methods
• **`completeRide(passengerId,distance,time`**): called when a ride is done
• **`toString()`** - prints out the drivers name, id, totalPay and numRides
• **`getTotalPay()`** - this returns the Lyft Driver's totalPay in dollars
• **`getNumRides()`** - this returns the number of rides the driver has completed

Note that the call to completeRide should update the totalPay and numRides for the driver. For example, calling **`tim.completeRide(1729,5.0,20.0`**) will add $17 to Tim's totalPay.

TESTING THE CODE

If you compile and run the TestLyftDriver class, you should get the following output ...

```
% javac *.java
% java TestLyftDriver
Tim: driver(Tim,1,0.0,0)
Jiarui: driver(Jiarui,2,0.0,0)
Tim   completed   1 rides and has made $17.00 total pay. Should be 1 ride for $17
Jiarui completed   1 rides and has made $139.00 total pay. Should be 1 ride for $139
Tim   completed   2 rides and has made $66.00 total pay. Should be 2 ride for $66
Jiarui completed   2 rides and has made $158.00 total pay. Should be 2 ride for $158
Tim: driver(Tim,1,66.0,2)
Jiarui: driver(Jiarui,2,158.0,2)
```

WHAT TO HAND IN BY THE END OF THE RECITATION

Run the test code and cut/paste the output into a file output.txt.

Upload the following files to the Quiz1-inclass assignment on Latte:
- LyftDriver.java
- output.txt

We will run your LyftDriver.java on our TestLyftDriver.java to make sure we get the same output, so don't make any changes to TestLyftDriver

WHAT TO HAND IN BEFORE MIDNIGHT

Make revisions to LyftDriver.java if you need to and then upload the new code and new output to the quiz1-hw assignment on Latte. If you are happy with the code from the recitation, you should not submit to the quiz1-hw assignment.