Quiz 2B – November 1
CS 2102 B19

Use the code in the accompanying handout to help you answer these questions.

1. (4 points) A `LyftCab` is a kind of `Cab` that keeps track of the name of the cab driver and whether or not the driver has a good safety record. Since Lyft usually only hires drivers with good safety records, the Lyft would like to create `LyftCab`s where the safety record field defaults to true. However, Lyft would also like the ability to create `LyftCab`s where they can manually set the driver's safety record field, just in case. Finally, the name of the cab company is always "Lyft", so Lyft never needs to specify it manually.

```java
public class LyftCab extends Cab {
    String driverName;
    boolean goodSafetyRecord;

    public LyftCab (String driverName, boolean goodSafetyRecord,
                    int id, int odom) {
        this.driverName = driverName;
        this.goodSafetyRecord = goodSafetyRecord;
    }

    public LyftCab (String driverName, int id, int odom) {
        this.driverName = driverName;
        this.goodSafetyRecord = true;
    }
}
```

There is a line of code missing from this class. Write it below, and explain where in this class it goes and what it does. (HINT: The missing line of code goes in two places.)

ANS: The line of missing code is

```
super("Lyft", id, odom);
```

This is the first line of each constructor body, and it calls the constructor in the superclass.

Grading:
+1 for specifying the `super()` constructor
+1 for the correct parameters (including `"Lyft"` as the first parameter)
+1 for correctly specifying where it goes (-0.5 points if both constructors are not mentioned)
+1 for correctly specifying what it does
Do not penalize for any additional information provided.

2. (3 points) Does the `LyftCab` class use overloading (yes or no)? If the answer is yes, describe how the `LyftCab` class uses overloading. If the answer is no, provide a general definition of overloading.

ANS:
Yes, the LyftCab class uses overloading. LyftCab uses two constructors, one where the user can pass in a goodSafetyRecord value and one where the value is set to true by default. Both constructors use the same name but have different parameters.

1.5 points: Correctly identifies that overloading is used
1.5 points: Correct identifies that the overloading is occurring in the constructors since both have the same name but different parameters

3. (3 points) Does the `LyftCab` class use overriding (yes or no)? If the answer is yes, describe how the `LyftCab` class uses overriding. If the answer is no, provide a general definition of overriding.

ANS:

No, the LyftCab class does not use overriding. Overriding is where a subclass defines a method with the same signature as its superclass.

1.5 points: Correctly identifies that overriding is not used.
1.5 points: Correct definition of overriding.