Lab 12

Create a new Eclipse project named YourStudentId_Lab12.

In this lab, you will learn a basic example of using Java Interface. An interface is declared by using the interface keyword. It provides total abstraction; means all the methods in an interface are declared with the empty body

1. Given the Drawable interface:

```
1  public interface Drawable {
2      void setMarker(char marker);
3      void draw();
4  }
```

The Drawable interface has two methods, setMarker(char marker) will change style of marker, draw() will print the diagram to console.

2. Create the RectangleDrawable class which extends the Drawable interface.
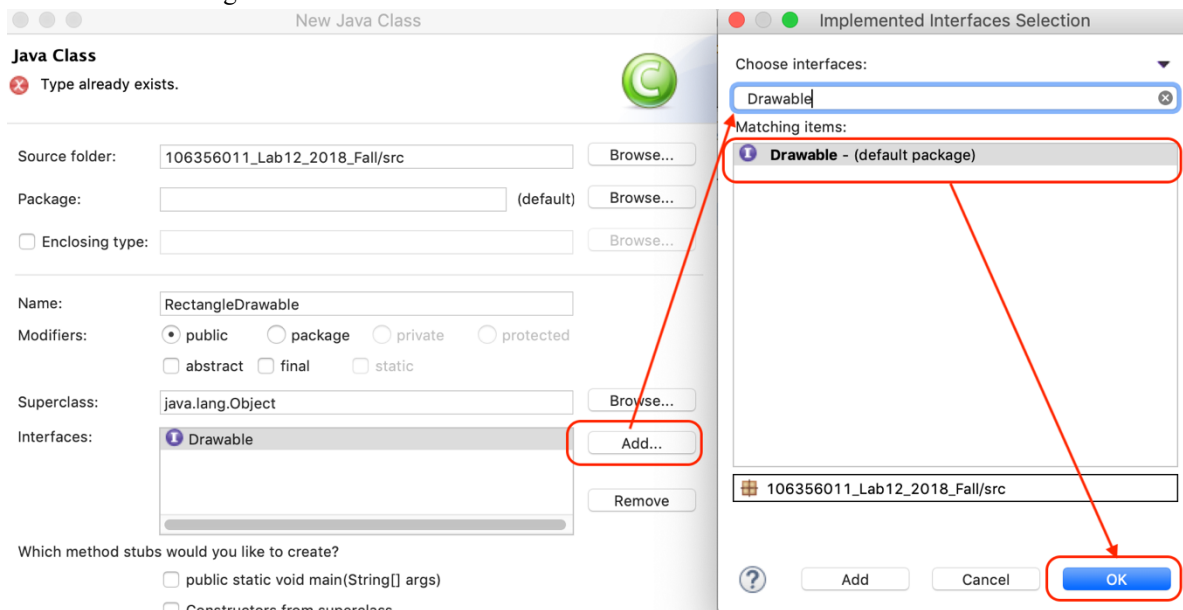
The default schema of class is like the following:

```
2  public class RectangleDrawable implements Drawable {
3
4      @Override
5      public void setMarker(char marker) {
6          // TODO Auto-generated method stub
7
8      }
9
10     @Override
11     public void draw() {
12         // TODO Auto-generated method stub
13
14     }
15
16 }
```

Add instance variable marker and complete the instance methods: setMarker() and draw().

```java
 2  public class RectangleDrawable implements Drawable {
 3      private char marker;
 4⊖     @Override
 5      public void setMarker(char marker) {
 6          // TODO Auto-generated method stub
 7          this.marker = marker;
 8      }
 9
10⊖     @Override
11      public void draw() {
12          // TODO Auto-generated method stub
13          for(int i = 0; i <= 3; i++){
14              for(int j = 0; j <= 10; j++){
15                  System.out.print(this.marker);
16              }
17              System.out.println();
18          }
19      }
20  }
```

Now test the RectangleDrawble in your tester. Create a RectangleDrawble instance and set the marker to '$'.

```java
RectangleDrawable rectangleDrawable = new RectangleDrawable();
rectangleDrawable.setMarker('$');
rectangleDrawable.draw();
```

Call draw() and the output will like the following:

```
$$$$$$$$$$$
$$$$$$$$$$$
$$$$$$$$$$$
$$$$$$$$$$$
```

Now it's your turn:

Create the **TriangleDrawable** and **CircleDrawable** class, and test the output in your tester.

You can find the reference code of drawing circle and triangle by Google.

If you want to get more information about interface, you can visit following websites:

https://www.javatpoint.com/interface-in-java
https://beginnersbook.com/2013/05/java-interface/

Submission: Submit your project as "zip (or rar) file" via WM5. No other submissions will be graded.

Reminder: Please zip the whole project

Deadline: Tomorrow's midnight (for both Mon56 and Tue23)