PRACTICE (SAMPLE)
for the
FOUNDATIONS OF CS ONLINE CULMINATING ACTIVITY

General Instructions

1. This is an open note test. You may access any programs you have written, your packets, and your personal notes.
2. Sit at assigned computer and work on the assigned problem.
3. Do NOT talk during the activity for any reason. Raise your hand if you have a question.
4 You may not have help from any other person.

Specific Instructions

1. Solve problem. Write classes to implement the `Yard` interface shown below. Your implementing classes should be named `CustomerSmallYard`, `CustomerMediumYard`, and `CustomerLargeYard`, which must store and manipulate customer information. You will need additional classes named `PanelSampleYard` and `DisplaySampleYard` which contain the GUIs. You will need a driver class called `DriverSampleYard`. You may write additional classes if you need them. For a penalty, you may omit the GUI.

2. Add program code to your `PanelSampleYard` class to read data from a file. Enter the file name from the keyboard. You may find the data files at:

   R:\Computer Science\Sample\greenGrow.txt

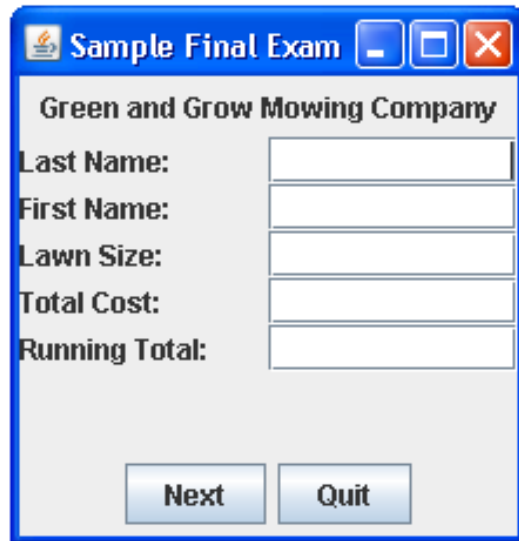   For a penalty, you may either read the data from the keyboard or use JOptionPane.

3. Store all data into an array after it has been read. For a penalty, you may omit this step.

4. Alphabetize the data in the array by last name. For a penalty, you may omit this step.

5. Add program code to `PanelSampleYard` to perform the buttons' tasks.

6. Add program code to `DisplaySampleYard` to display all the data in a grid layout and display the running total of individual calculations.

```
public interface Yard
{
     public abstract String getFirstName();
     public abstract String getLastName();
     public abstract int getSize();
     public abstract double getCost();
     public abstract int compareTo(Yard y);
     public abstract String toString();
}
```

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The Green and Grow Lawn Mowing Company charges its customers based on the size of their yards to be mowed. Those with a yard of 10,000 square feet or smaller are charged $0.005 per square foot, those with yards larger than 10,000 square feet, but not more than 20,000 square feet are charged $0.004 per square foot, and those with yards larger than 20,000 square feet are charged $0.003 per square foot.

Your before and after GUIs look like the following:
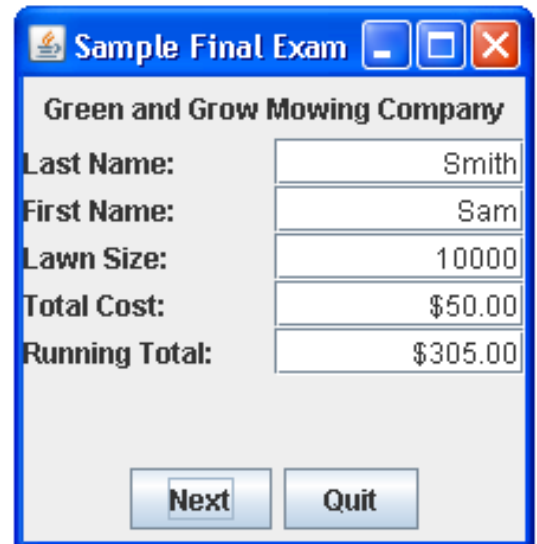
The Running Total for the five customers in the file below will total $305.00.

To assist you, the file at R:\Computer Science\Sample\greenGrow.txt has has the data, one item per line, as: last name, first name, and area.

5
Jeffers
Tom
5000
Smith
Sam
10000
Nevar
Tina
15000
Kim
Lisa
20000
Black
Kim
30000