IS 380: Object-Oriented Programming
Spring 2017

Individual Assignment 5-2

Due Date: **3:59 PM, April 17, 2017** (Submit via WebCampus).
Weights: 2.5 % of total grades.

NOTE:

1. Please zip the **.java** files and upload the zip file to WebCampus for submission.
2. Please provide proper comments to document your code, including the following:
    a. Author's name;
    b. Purpose of the program;
    c. In-line comments for the statements.

QUESTION: Joe's Automotive

Joe's Automotive performs the routine maintenance services. Joe also performs other nonroutine services and

charges for parts and for labor ($20 per hour). For some loyal customers, Joe can choose to give a 10% off or 20%

off discount to the total. Create a GUI application that displays the total for a customer's visit to Joe's.

(1) Create a GUI as the following screenshot. This **JFrame** should incorporate three **JPanel** objects, each of
them representing the routine services, nonroutine services, and the discount setting.
The **RoutineServicePanel** and **DiscountPanel** are provided (please download them from
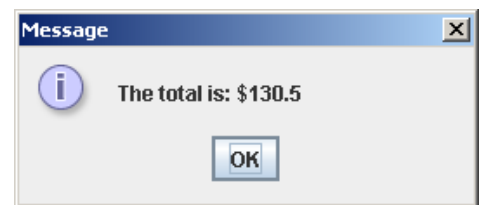**WebCampus**).

Please develop the **JPanel** for nonroutine services. Set the border with a proper title. Set the default text
of the two text fields to 0.

(2) In the the **JPanel** for nonroutine services, represent the price for labor per hour ($20) as named constants. The **JPanel** should also provide a method that calculates the total cost for nonroutine service. For example, when user enters 3 hours of labor and 50 for parts, the method should return 110.

(3) Implement the **Action Listener** of the button on the **JFrame**. When the button is pressed, calculate the total, based on the service selected, the labor hour entered, the charge for parts entered, and the discount option selected.

Test Data

Selected Routine Services	Labor hours	Charge for Parts	Discount	Total
Radiator flush Inspection	1	20	Regular Price	85
Radiator flush Inspection Muffler replacement	0	0	10% off	130.5
Oil change Tire rotation	0	0	10% off	41.4
Transmission flush	4	150	20 % off	248.0

Grading criteria:

(1) Correctness
    (a) The code can be compiled without any syntax error.
    (b) Variables and named constants are used.
    (c) The code can generate the requested results.
    (d) The program is properly documented using comments (/**…..*/ and   //.)

(2) Technique used
    (a) **JFrame**, **JPanel**, **JLabel**, **JTextField** and **JButton** are used, and named properly. Default values are set.
    (b) The method for getting total of nonrountine service is implemented in the **JPanel**.
    (c) The **ActionListener** is implemented to handle the event of the button.
    (d) **RoutineServicePanel** and **DiscountPanel** (provided) are properly incorporated in the **JFrame;** their methods are used.