

## Assignment 5

Date Due \_\_\_\_\_

### Program

There are two programs in this assignment: ASG4-6 and ASG4-Boards. ASG4-Boards is an optional extra credit program. The problem statement for both of these programs is shown below.

The user interfaces for the programs in this assignment have been designed. They will be e-mailed to you as a zip file containing the two Solutions Folders.

### ASG4-6 Requirements (This is a modification of 3-7 on page 142)

All text fields are required.

First 200 miles driven are always free. All miles between 201 and 500 inclusive are .12 cents per mile. Miles greater than 500 are charged at .10 cents per mile.

Validate the odometer readings and the days. Beginning Odometer reading must be less than ending odometer reading. Days must be greater than zero. Days cannot be greater than 45. The daily charge is \$15.00.

Use the Radio buttons for the Odometer readings to determine odometer measurement. The readings can be in either Miles or Kilometers. Hint: 1 Kilometer equals .62 Miles. If readings are in kilometers convert them to mileage for the output display and when performing your calculations (do not modify the text box readings). Do not make any conversions until the calculate button is clicked. ☐

Use the check boxes for AAA Member and Senior Citizen. AAA members receive a 5% discount and senior citizens get a 3% discount. A person can receive both discounts. Do not take the discount until the calculate button is clicked.

Include a summary button to display all totals (e.g. distance driven in miles, total charges, and number of customers). Display the totals using the MessageBox.Show method. This button should be disabled until at least one rental has been completed. ☐

When the user clicks the exit button, prompt the user with Yes/No buttons in a message box asking if they are sure they want to exit. Do not exit unless the user clicks the proper button.

Include input validation for all text boxes and a message box to display any improper input. Input validation should edit all fields before displaying a message box with all errors found if there is bad input. Don't forget to place the focus in the first text box in

the Tab Order with an error after the error message is displayed.

The user interface is shown below. Do not make any changes to this user interface.

Acme Car Rental Service

Customer Name

Address

City

State

Zip Code

Beginning Odometer Reading

Ending Odometer Reading

Number of Days

Distance Driven In Miles

Mileage Charge

Day Charge

Minus Discount

You Owe

Is Odometer in Miles or Kilometers?

☒ Miles

☐ Kilometers

Enter Any Discounts

☐ AAA Member Discount

☐ Senior Citizen Discount

Calculate Clear Summary Exit

#### Asg4-Boards Requirements (Optional Extra Credit):

The form is used to allow a company to place orders for shirts. Each order can have many different sizes of shirts. Each size shirt can either be monogrammed and/or have pockets.

When a clerk starts an order s(he) will enter the type and quantity of shirts for each different type of shirt. The Add button will then be clicked to add the shirt to this order. Verify that a shirt size and quantity have been entered. As shirts are added to the order you must keep a total of quantity and cost for each different type of shirt based on the shirt size, quantity, and whether or not monogramming and pockets are required.

When the next button is clicked, clear the radio buttons and check boxes and the quantity box in preparation for the next type of shirt in this order.

When the order is complete the user will click the 'Complete this order' button. This button should be disabled until an order has at least one type of shirt. Verify that a company name and order number has been entered in the text boxes.


When the user clicks the summary button display the total number of shirts ordered and the total cost for all orders that have been placed.

When the Start button is clicked, clear all items in preparation for the next order.

The form for this program is shown below. Do not make any changes to this form.

**Very Very Boards Shirt Sales**

**Shirt Sales**

 **Start Sale**

Company Name

Order Number

**Complete This Order**

This Order Quantity

This Sale Cost

**Type of Shirt and Quantity**

☐ Small-\$10.00      ☐ Monogram-\$2.00  
☐ Medium-\$10.00      ☐ Pocket-\$1.00  
☐ Large-\$10.00  
☐ Extra Large-\$11.00      Quantity   
☐ Extra Extra Large-\$12.00

**Add to Order**      **Next Shirt**      **Clear Item**

**Daily Sales Summary**

**Exit**

Note: Some code already exists in the code file to display the costs for each shirt based on named constants. Use these constants for your code.