

Assignment 1 - Toyota Uganda Limited

Due Date: 6th March 2013

For this assignment, the auto store needs an application that will process mail order sales of repair parts. Parts are sold throughout Uganda. The application user will take information from customers by telephone and the application will compute the appropriate output information.

Design Requirements. Develop a form that is similar to the one shown below. You may have minor differences.

A separate order is processed for each part ordered. Customer information will eventually be retrieved from a database so that only the Customer Identification (Customer ID:), Name, and Town Code need be entered on the form. There are two types of customers: Retail and Wholesale. If the customer is a retail customer, this is indicated by checking the Retail CheckBox, while wholesale customers do not have the checkbox checked.

Customer Information		Shipping	
Customer ID:	123-45-6789	<input checked="" type="radio"/> UPS	<input type="radio"/> Fed Ex Ground
Name:	Tom Thumb	<input type="radio"/> US Postal Air	<input type="radio"/> Fed Ex Air
State:	CA <input checked="" type="checkbox"/> Retail Customer		

Part Ordered		Output	
Part Number:	10152	Cost:	\$15.02
Description:	Oil Filter	Sales Tax:	1.50
Price per part	\$7.51	Shipping & Handling:	14.00
Quantity:	2	Total:	\$30.52
<input type="checkbox"/> Oversize Container?			

Compute	New Order	Exit
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Application Use and Special Instructions

Cost. This is simply the price times the quantity rounded to the nearest penny. All quantities are integer values.

Sales Tax. The application user enters customer and part ordered information within the two GroupBox controls as shown in the figure. The firm is located within Kampala. Kampala retail customers (Town code = “KLA”) are charged a sales tax on purchases – the Kampala tax rate is 10%. Retail customers from Entebbe (Town code = “EBB”) and Mbarara (town code = “MBR”) are also taxed at a 5% tax rate. Retail customers from all other towns do not pay sales tax.

Wholesale customers (indicated by the Retail Customer CheckBox control not checked) do not pay sales tax regardless of their town code.

Shipping and Handling. All customers must pay for shipping, and there are four shipping methods as indicated by the RadioButton controls on the form. The United Parcel Service (UPS) shipping method is the default method. The cost of shipping is based on the quantity of the shipment and the shipping method selected as indicated in the table given below. The distance for shipment does not matter.

Shipping Charge	UPS	U.S. Postal Air	Fed Ex Ground	Fed Ex Overnight
Charge per part	\$7.00	\$8.50	\$9.25	\$12.00

There is an extra handling charge of \$5.00 per part for an oversize container (the Oversize Container CheckBox is checked).

Total. The Total is equal to the **Cost + Sales Tax + Shipping & Handling.**

Build and Code the Project

Design

- Use GroupBox and other controls as shown in the figure.
- The form should startup with focus on the customer CustomerIDTextBox control. This control is a MaskedTextBox control with Mask = Social security number.
- Data entered into the TextBox control for the town code should be automatically capitalized.
- The Retail CheckBox control should be checked on startup - most customers are retail.
- The Oversize CheckBox control should NOT be checked on startup.
- The tab order must be top to bottom, left to right within the group box controls.
- Left and right-align data as shown in the figure – the price and quantity price should be right-aligned.
- The output controls in the Output GroupBox control are read-only TextBox controls and all output values should be right-aligned.

Programming Events (where the directions require a function to be called, your program must call the appropriate function or you will not receive credit for coding that requirement).

- Add comments to the program as required.
- Compute button click event.
 - Your code must properly call a function named **ValidData** to validate the data (see the directions below on data validation rules).
 - Your code must call a function named **SalesTax** to compute the amount of sales tax. You must pass the **Cost** to the function as an argument of the function call. The function must compute the sales tax for customers rounded to the nearest penny, and return the sales tax value to the compute button click event.

- Your code must call a function named **ShippingHandling** to compute the charge for both shipping and handling of an order. You do not need to pass any arguments to this function because all of the information needed to compute the charges are available from the controls on the form. Return the combined cost of shipping and handling to the compute button click event.
- Display the computed values formatted as shown in the figure to the nearest penny.
- New Order button click event.
 - Clear all TextBox and MaskedTextBox control contents.
 - Check the Retail Customer CheckBox control.
 - Uncheck the Oversize Container CheckBox control.
 - Reset the Shipping RadioButton controls to the UPS shipping method.
 - Set focus to CustomerIDTextBox control.
- Exit click event.
 - Display a message box asking the application user to confirm to exit the application.
 - Exit the application if the user responds yes.

Data Validation Rules.

- You must code a function named **ValidData** that enforces the following business rules.
 - Rule #1: Customer ID cannot be missing and cannot contain any blank spaces.
 - Rule #2: Customer Name cannot be missing.
 - Rule #3: Town code must always be entered as exactly three characters
 - Rule #4: Part Number cannot be missing.
 - Rule #5: Description cannot be missing.
 - Rule #6: Price must be a number that is greater than zero.

- Rule #7: Quantity must be a number that is greater than zero.
- If a business rule is violated, you must display a message box with an appropriate error message, title, OK button, and error icon. You must set the focus to the control that has the error and highlight any invalid data that the control may contain.

Other Requirements. Ensure that you follow all standards for programming that you learned and used in earlier computer programming assignments including the use of comments, proper spacing of code, proper spelling, proper indentation of code, etc

Deliverables: In CD

- i) The Source Code
- ii) The working tool

Take note:

The following will be penalized

- Plagiarized work.
- Late submission.