

Programming Logic - Beginning Belts

50 points

The following exercise gives you additional practice working with Radio Button, Check Box and decision control structures. Refer to the last page for general application requirements.

Belt's Ice Cream Stand

The customers at Belt's would like a program to estimate the cost of their sundae order while standing in line.

Belts has 4 flavors of Sundaes. You can only select one type of sundae. The costs are: Hot Fudge: \$0.85, Strawberry: \$1.05, Butterscotch: \$.70, Carmel: \$.80. (Use radio buttons)

The sundaes come in 3 sizes: Small: \$1.00, Medium: \$1.45, Large: \$1.90. (Use radio buttons)

The sundaes have a few toppings that can be added but you do not have to have any toppings. You can add any combination of topping. The toppings are: nuts, extra syrup and bananas. The cost is: for one topping, \$.50, for 2 or more toppings, they cost \$.40 each. (Use check boxes)

Display the cost for one sundae and the add-on cost for one sundae. Then display the total cost for one sundae ordered. Format your output appropriately. You must use ElseIf and If statements appropriately.

When the application loads, establish defaults for each group of radio buttons and checkboxes. Follow proper naming conventions for all controls. Establish appropriate focus on fields.

Programming Logic - Beginning

Program Evaluation Form Name: _____

Belts Ice Cream (50 points):

IPO

- (1 point) Input column identifies all input fields
- (1 point) Output column identifies all Output fields
- (1 point) Meaningful variable names
- (1 point) Variable names follows naming convention
- (1 point) Processing logic describes what has to be done

Solution Algorithm

- (1 point) Names in algorithm match input and output variables name in IPO
- (1 point) Processing logic gets the correct variables
- (1 point) Processing logic follows flow of logic from IPO
- (1 point) Processing logic correctly solves the problem
- (1 point) Processing logic displays the correct variables

Desk Check

- (1 point) One set of test data
- (1 point) Correct expected results
- (1 point) Relevant variable names from algorithm are included in table
- (1 point) Correct statement numbers match algorithm
- (1 point) One pass thru the algorithm

Screen Layout

- (1 point) Form includes all identified inputs and outputs from IPO
- (1 point) Descriptive Labels identify output results
- (1 point) Form has a title
- (1 point) Flow of the form is logical (layout) and consistent
- (1 point) Common controls grouped

Controls, Names and Properties List

- (1 point) All controls from screen layout are listed
- (1 point) Valid control names
- (1 point) Values are listed for Controls
- (1 point) Step 1, 2, 3, and 5 are typed

Form Objects

- (1 point) Radio buttons added to form to allow user to select type of sundae
- (1 point) Radio buttons added to form to allow user to select size of sundae
- (1 point) Radio buttons appropriately named
- (1 point) Check boxes added to form to allow user to select toppings
- (1 point) Check boxes appropriately named
- (1 point) Calculate button is form Accept button
- (1 point) Clear button is form Cancel button

Class-Level Constants/Variables

- (1 point) Class-level constants created to hold costs for each type of sundae, size of sundae and toppings

Calculate Click Event

- (1 point) Variables created to hold selected sundae size cost and flavor cost
- (1 point) Variables created to hold sundae cost, toppings cost, total sundae cost.
- (2 points) Sundae cost calculated by adding sundae size cost and flavor cost
- (2 points) ELSEIF used to determine sundae type
- (2 points) ELSEIF used to determine sundae flavor
- (2 points) Topping cost calculated by adding each topping's cost if the topping is selected
- (2 points) Topping cost calculated by using IF statements
- (1 point) Total cost calculated by adding sundae cost and topping cost
- (1 point) Outputs are appropriately formatted (currency)
- (1 point) Focus set to btnClear after all processing

Clear Click Event

- (1 point) *Clear* procedure selects default radio buttons
- (1 point) Clears all check boxes

Form Load Event

- (1 point) Form Load selects default radio buttons