

Documentation

Goal

Use tip strips, descriptions, and the VI properties to document a VI, as well as block diagram labels to fully document your code.

Scenario

Document the VI created from Numeric Data Types. You modify it to be user-friendly and easy for another developer to understand your VI.

Design

The finished VI will look like Figure 1 and Figure 2.



The screenshot shows a LabVIEW front panel titled "Order Your Meal Here". It features three rows of controls for ordering items. Each row has a category label, a list box with a scroll arrow, a multiplier "x", and a numeric spinner control. The first row is for "Main" items, with "Chicken Nuggets" selected and a spinner set to "0". The second row is for "Drink" items, with "Water" selected and a spinner set to "0". The third row is for "Side" items, with "Onion Rings" selected and a spinner set to "0". Below these rows is a "Tax Percentage" spinner control set to "0". At the bottom, a horizontal line separates the order items from a "Total Price" label, which is followed by a numeric spinner control set to "0". The text "Your total comes to" is positioned to the left of the total price spinner.

Figure 1. Completed Front Panel

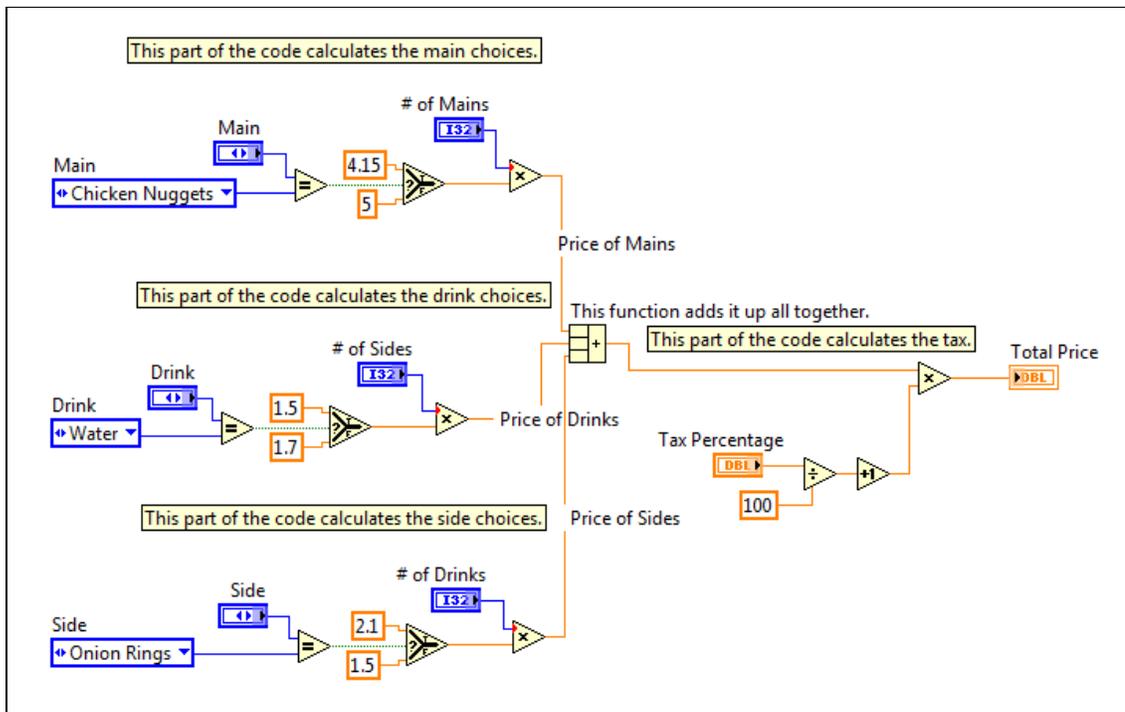


Figure 2. Completed Block Diagram

Implementation

The files that you need to complete this exercise are here: <NI eLearning>\LV Core 1\Documenting Code\Exercise.

1. Open Meal Calculator.vi.
 - Open LabVIEW.
 - Select **File>Open**.
 - Navigate to Meal Calculator.vi from the <Exercise> directory and click **OK**.
2. Save the VI.
 - Select **File>Save**.
3. Add a title on the front panel.
 - Double-click the front panel to create a free label.
 - Type Order Your Meal Here.
 - Place the free label on the top of your VI.

4. Between the Main Enum control and the # of Mains control, make a free label and enter `x`.
5. Repeat step 4 for the Drink Enum control and Side Enum control.
6. Add a **System Chiseled Line** decoration to the front panel.
 - Size and position the decoration to create a boundary above the Total Price indicator.
 - Create another free label and enter the text `Your total comes to`, and place it beside the Total Price indicator.
7. Set up the default tax value.
 - Type `8.5` inside the Tax Percentage control.
 - Right-click the control and select **Data Operations»Make Current Value Default**.
8. Add a free label to the block diagram.
 - Double-click the block diagram to create a free label.
 - Type `This part of the code calculates the main choices`.
 - Place this label on top of the part of the code where the main choices are calculated.
9. Repeat step 8, for Side, Drink and Tax parts of the code.
10. Add labels on the block diagram.
 - Right-click the output wire of the Multiply function that calculates the Main choices.
 - Select **Visible Items»Labels**.
 - Type `Price of Mains`.
11. Repeat step 10, for Side and Drink wires.
12. Add a label on a function.
 - Right-click the Arithmetic Compound function and select **Visible Items»Label**.
 - Type `This function adds it up all together`.

13. Modify the VI documentation.

- Select **File»VI Properties**.
- From the Category pull-down, select **Documentation**.
- Enter the description text as shown in Figure 3.
- Click **OK**.

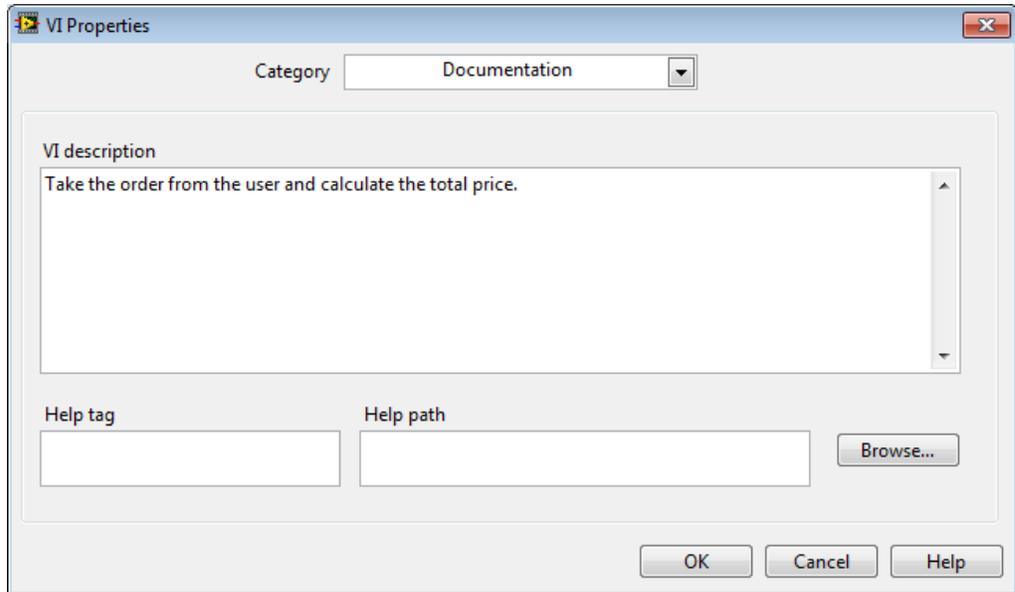


Figure 3. VI Properties Panel

Test

1. Check the documentation of the VI by pressing <Ctrl-H> to bring up the Context Help menu.
2. Drag your mouse and place it on the VI icon on the top-right side of the block diagram or the front panel.

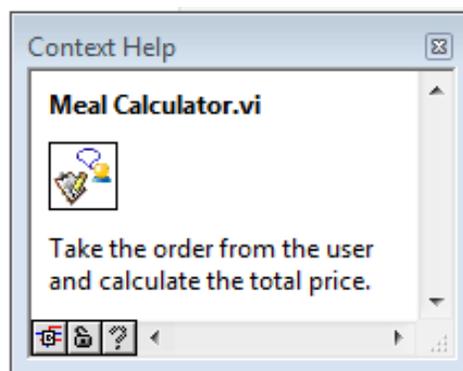


Figure 4. Context Help Window

3. Compare your VI to the provided solution VI.
4. Close the VI when you are finished.

End of Exercise

Notes
