

More Data Types

Goal

Use the Boolean and string data types to create a basic login interface.

Scenario

From a blank VI, create a VI that has a username and password interface. When you run this VI a message and an LED are used as indicators to output if the username and password are correct.

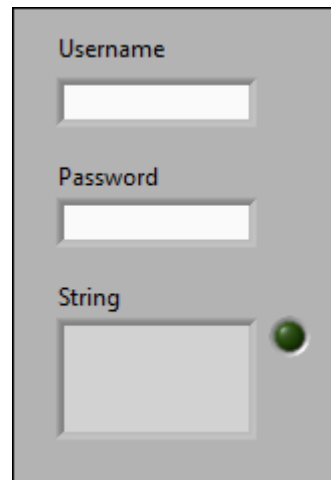


Figure 1. Login.vi Front Panel

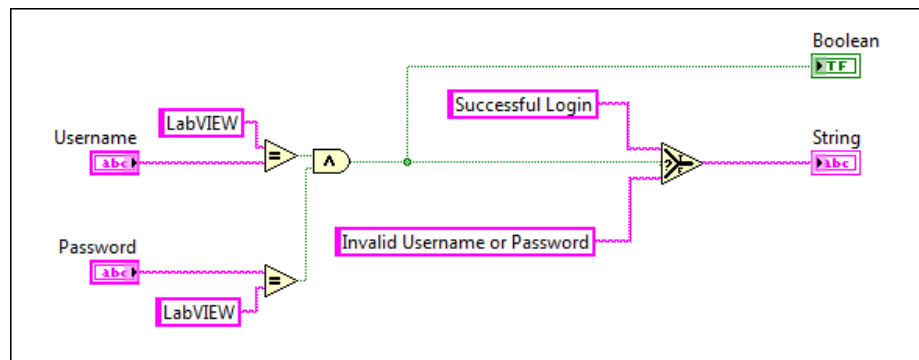


Figure 2. Login.vi Block Diagram

Implementation

The folder that you need to save this exercise is here: <NI eLearning>\LV Core 1\More LV Data Types\Exercise.

1. Open a blank VI.

- ☐ Click **File»New VI**.

2. Save the VI.

- ☐ Select **File»Save As**.

- ☐ Save the VI as `Login.vi` in the <Exercise> directory

3. Add two String Controls and a String Indicator to the front panel.

- ☐ Name the first string control `Username`.

- ☐ Name the second string control `Password`.



4. Add a **Round LED** onto the front panel.

- ☐ Right-click the indicator and select **Visible Items»Label**.

5. Compare the Username and Password.

- ☐ Press <Ctrl-E> to switch to the block diagram.



- ☐ Add two **Equal?** functions onto the block diagram.

- ☐ Wire the Username control to the y input of the first Equal? function.

- ☐ Wire the Password control to the x input of the second Equal? function.

- ☐ Right-click the x input of the first Equal? function and select **Create»Constant**.

- ☐ Enter the text `LabVIEW` into the constant.

- ☐ Right-click the y input of the second Equal? function and select **Create»Constant**.

- ☐ Enter the text `LabVIEW` into the constant.



6. Add an **And** function onto the block diagram.

- ☐ Wire the outputs of the two Equal? functions into the x and y inputs of the And function.



7. Add a **Select** function onto the block diagram.
 - ☐ Wire the output of the And function into the s input of the Select function.
8. Add two String Constants to the block diagram.
 - ☐ In the first string constant, enter the text `Successful Login`.
 - ☐ Wire this constant into the t input of the Select function.
 - ☐ In the second string constant, enter the text `Invalid Username or Password`.
 - ☐ Wire this constant into the f input of the Select function.
9. Wire the output of the Select function to the string indicator.
10. Wire the output of the And function to the Boolean indicator.

Test

1. Switch to the Front Panel. Enter any incorrect username and password into the corresponding string controls.
2. Run the code. The string indicator should say "Invalid Username or Password", the LED should be off.
3. Type in the correct username and password (LabVIEW).
4. Run the code. The string indicator should say "Successful Login", the LED should be on.
5. Compare your VI to the provided solution VI.
6. Close the VI when you are finished.

End of Exercise

Notes
