Tutorial : One

Sample Application Configuration

The configuration of the sample application in this tutorial will expose you to :

- Plantwatch Configuration Editor
- How to create *Variables*
- Create and configure logic charts
- Use Graphic editor to create a graphics screen
- Manipulate string data & save to new file

We will configure Plantwatch to receive a RS232 string from a bar code scanner, place the data in a Plantwatch *variable*, select the first eight characters of the string in that variable and then place them into a file which Excel can open.

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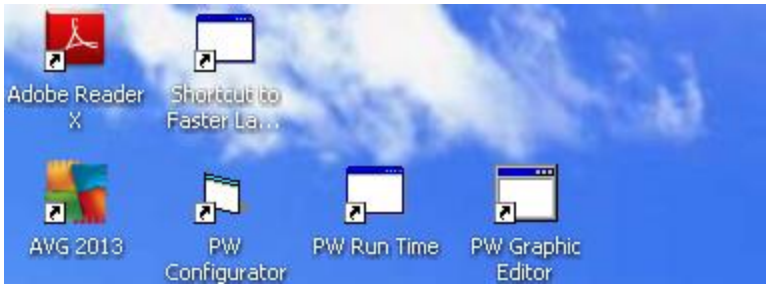
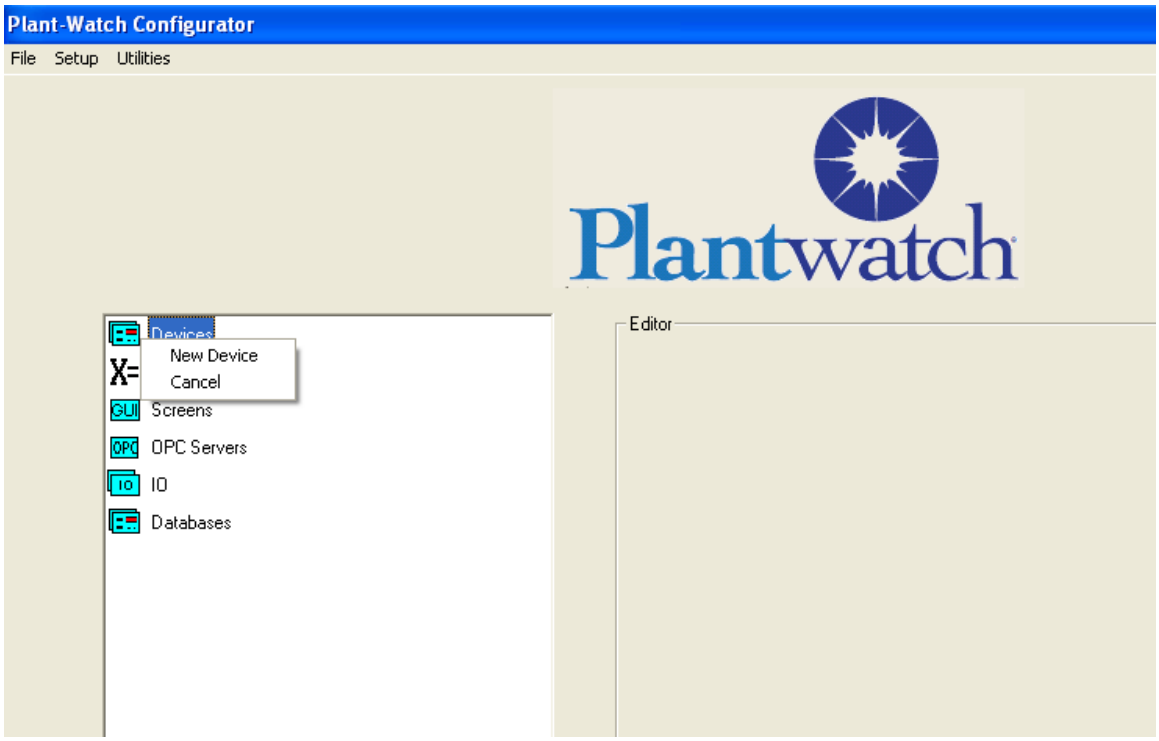
Part 1: Set up communication to RS232 scanner

Step1 Open the Plantwatch Configuration Editor by clicking the Icon
Step 2 Create a new application
Step 3 Create a *Device* within Plantwatch.

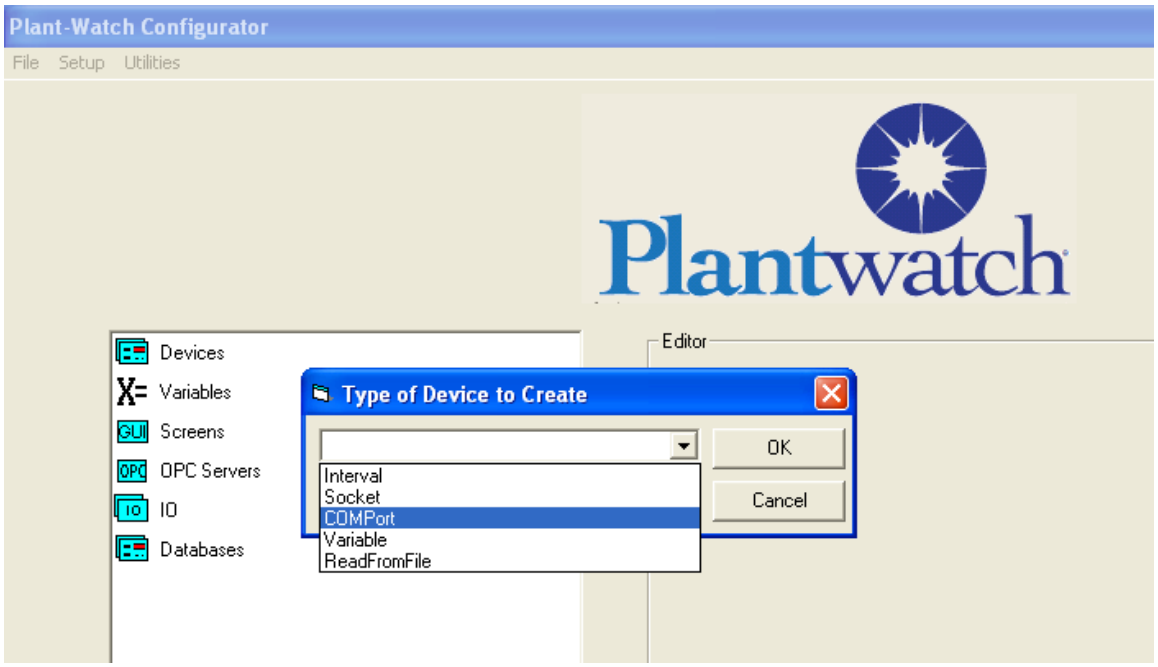


Procedure:

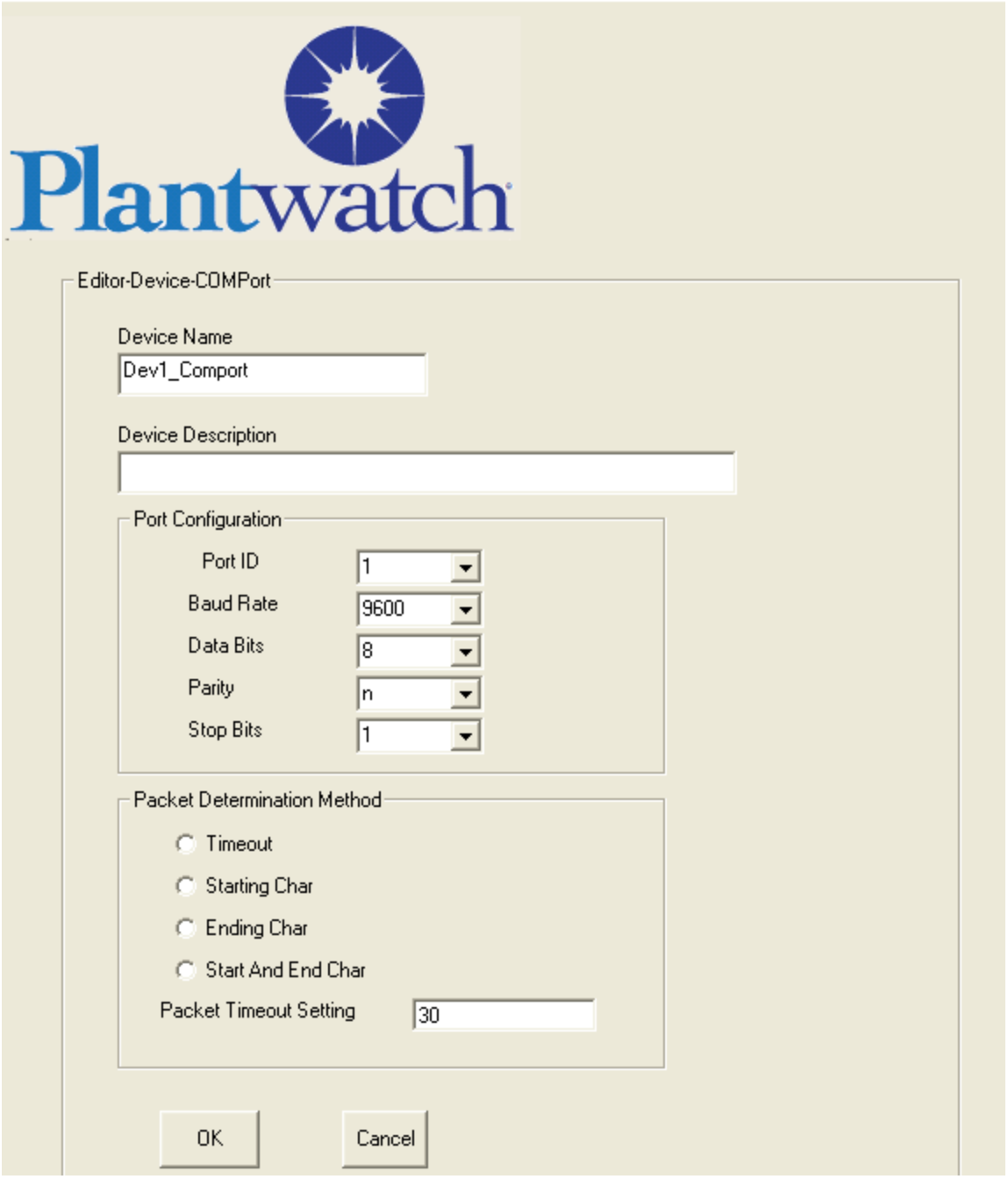
Right Click on ***Devices*** within the *Development Tree,* and then click on ***New Device.***



You will see the dialog for a new device, Choose ***COMPort*** device type

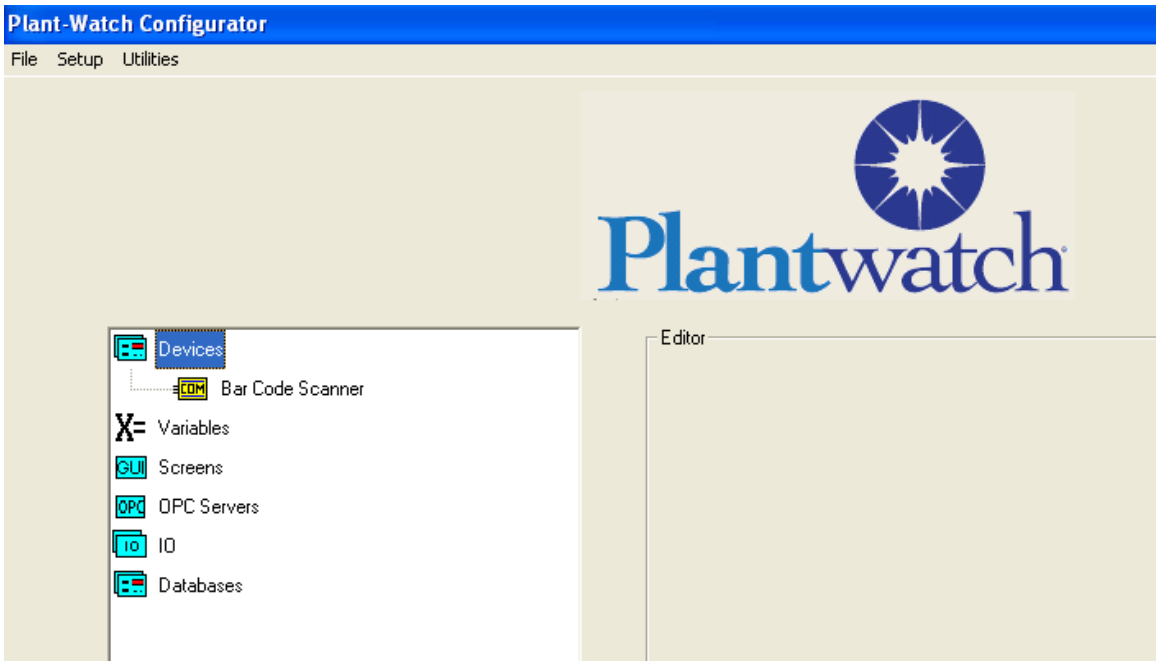


You will see the default dialog for configuring the new *COMPort Device*.



Adjust the port as desired and then give it a name *BarCodeScanner*. The new *Device* is created. Click **OK** to exit

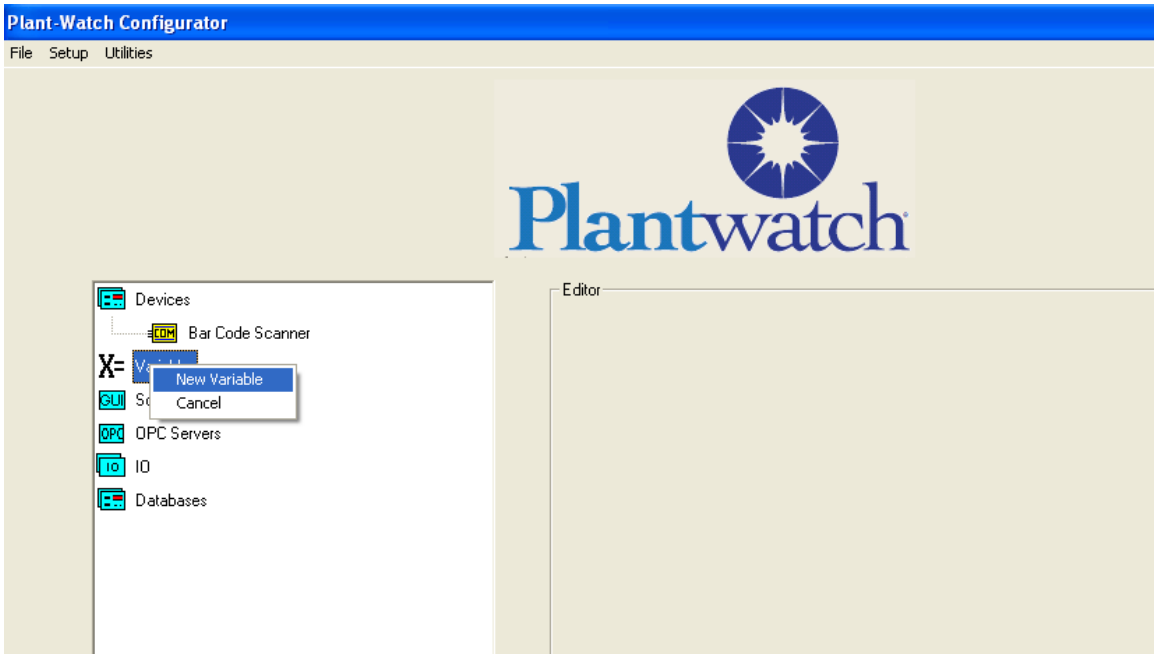
Now the device is visible within the *Development Tree*.



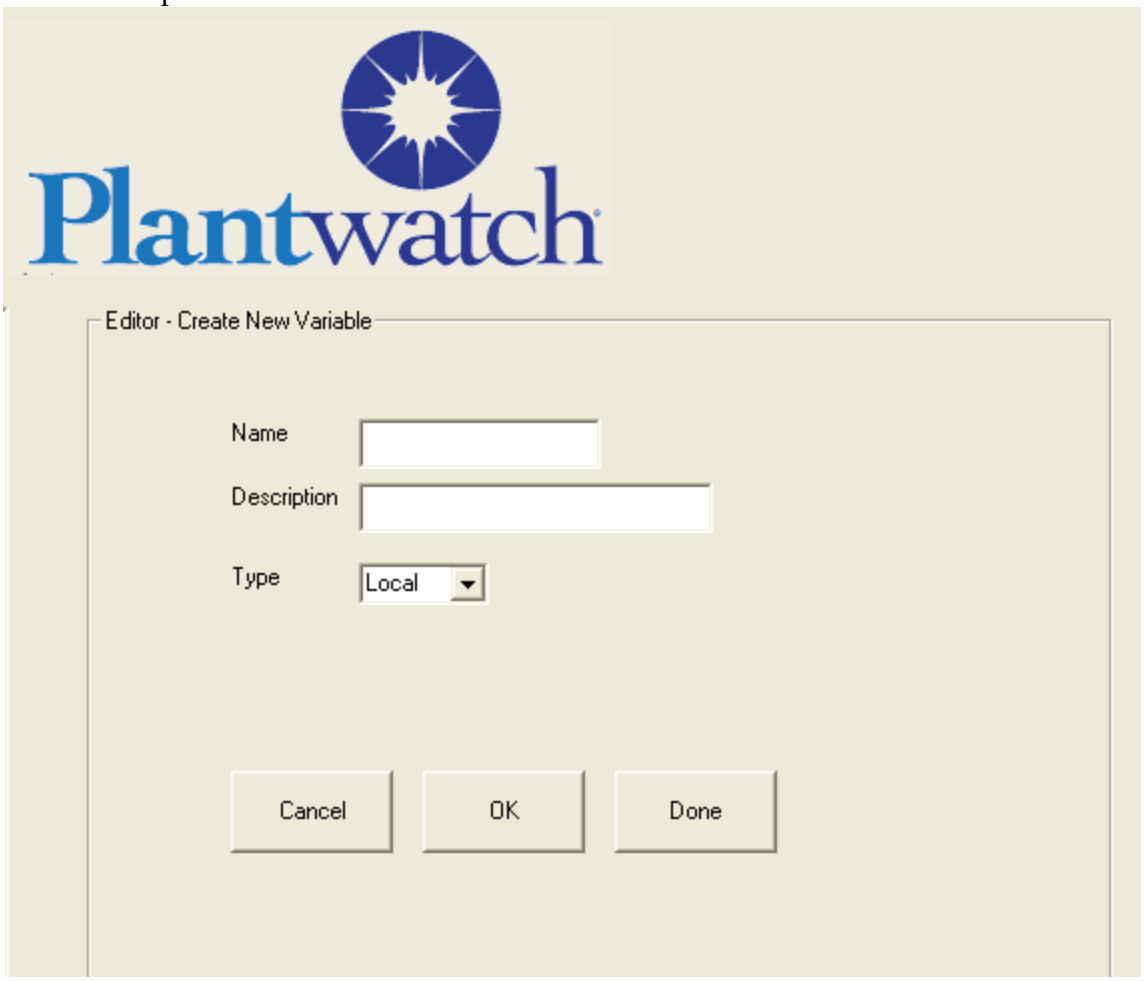
Part 2: Extract data from a RS232 Device

Step 1 Create a new *Variable* called ***BarCodeData***
Step 2. Create a *Logic Chart* that gets the string data from the *BarCodeScanner Device* through the PC comm. port
Step 3

Procedure:
Right Click on "Variables" within the Development Tree, and click on "New Variable"

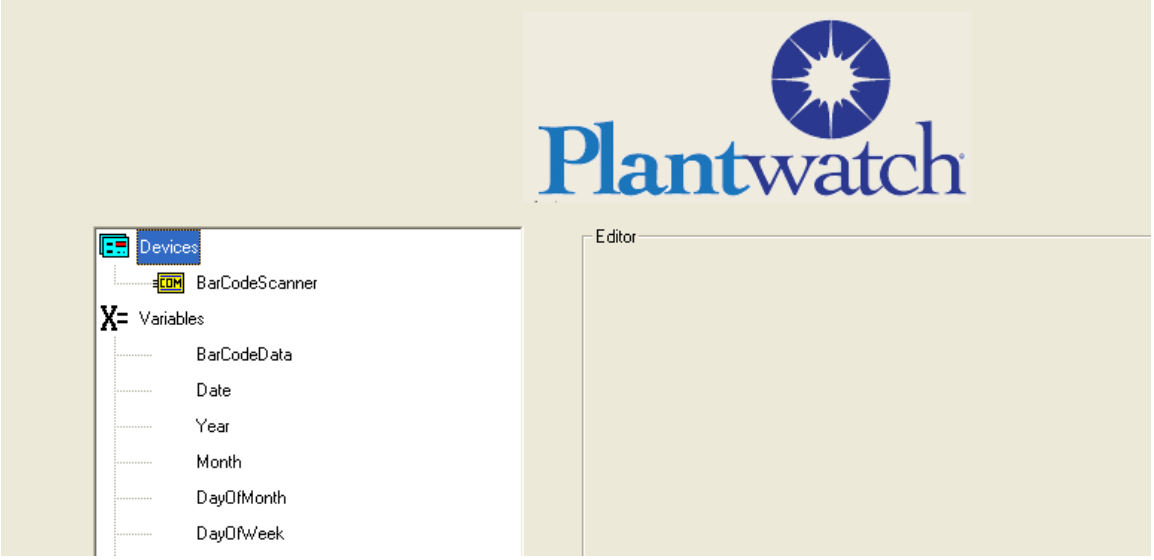


You will be presented with the *Create New Variable* Editor.



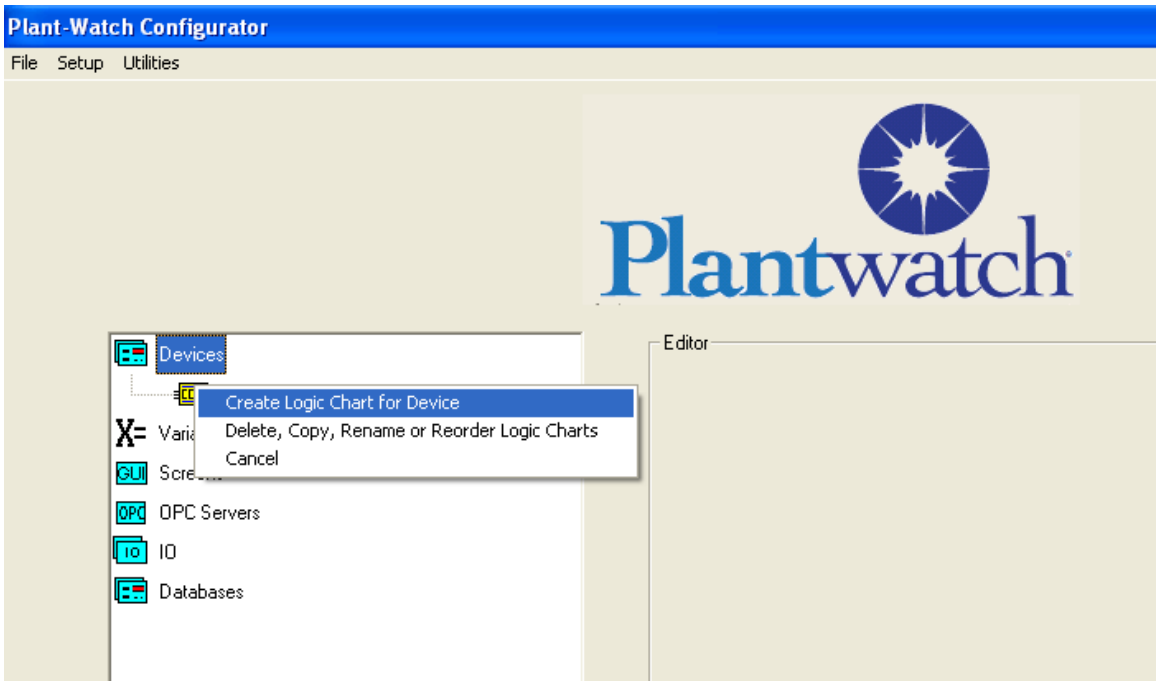
Enter "*BarCodeData*" for the name of the new variable and click on "OK". Variable names are case sensitive. You can also enter a description.

This completes creating the Variable *BarCodeScanner*. To see the new variable expand the variable list by double clicking on the X. The new variable *BarCodeData* is visible and ready for use inside Plantwatch.



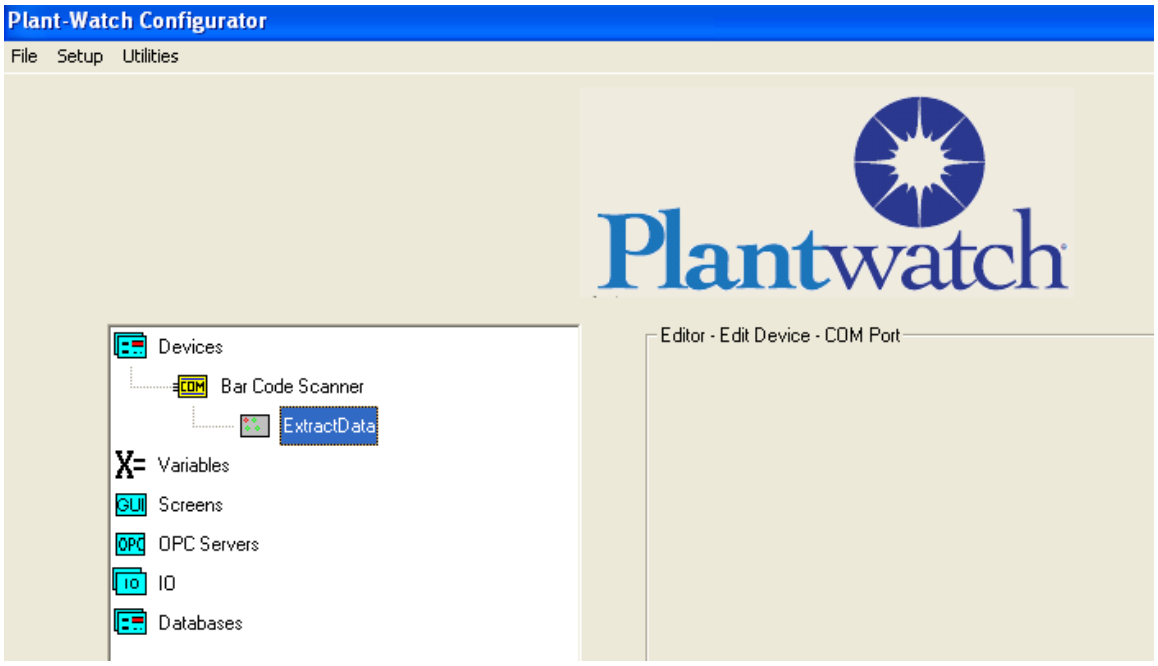
We will now place the data from the bar code scanner into this variable.

Double click the **Devices** icon to expand the branch of the **Development Tree**, right click on the **Device** *BarCodeScanner* and click on **Create Logic Chart for Device.**

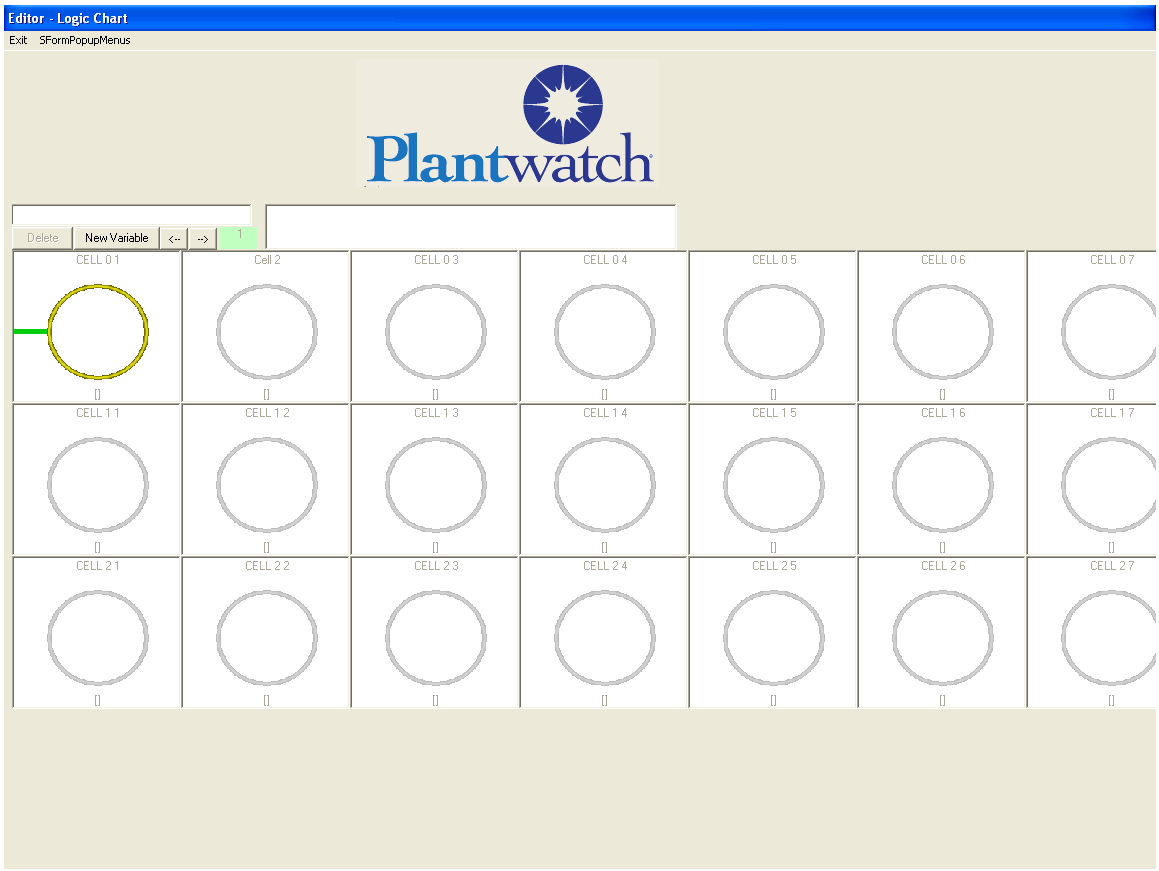


You will see the dialog for creating a **Logic Chart**. Enter in a name such as *Extract Data*, and click on "**OK"**

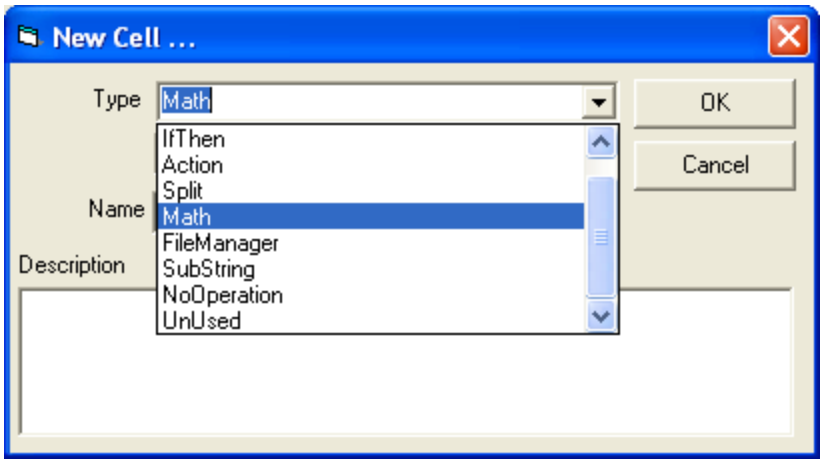
You will see that the **Development Tree** now has a **Logic Chart** named "*ExtractData*" associated to the **Device** named "*BarCodeScanner"*. Single click on the "**ExtractData**" logic chart Icon to start the **Logic Chart Editor**.



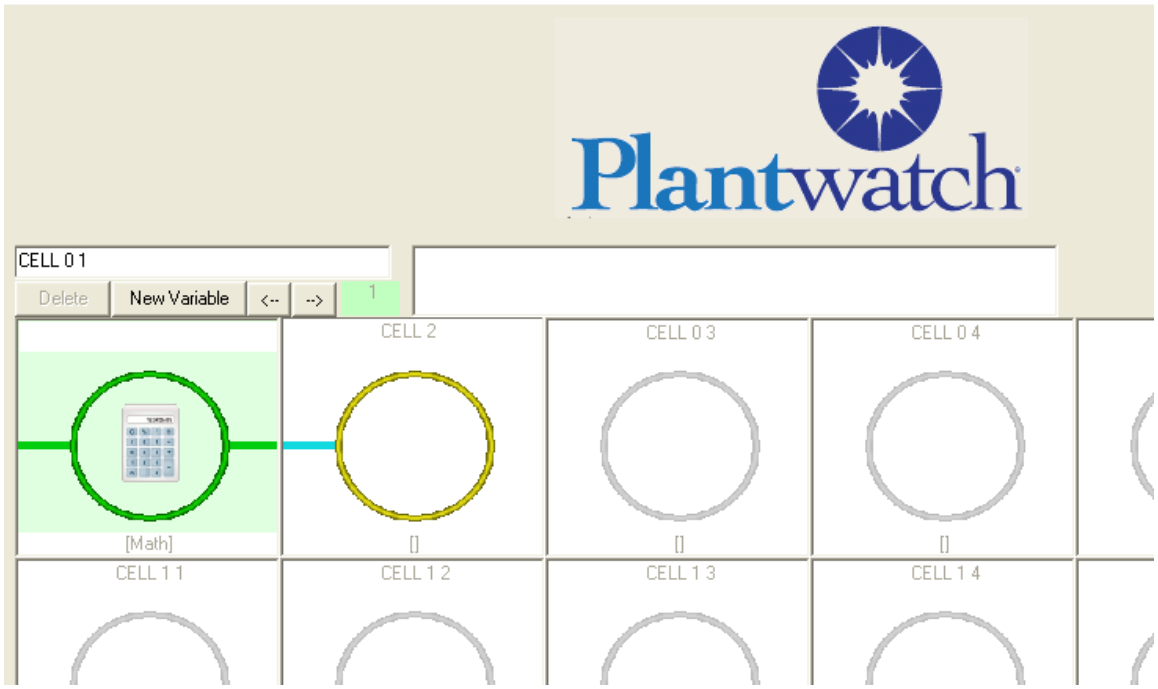
You will see the new *Logic Chart* you created.



Double click on the top left cell to select the type of cell needed. In this case select "Math"

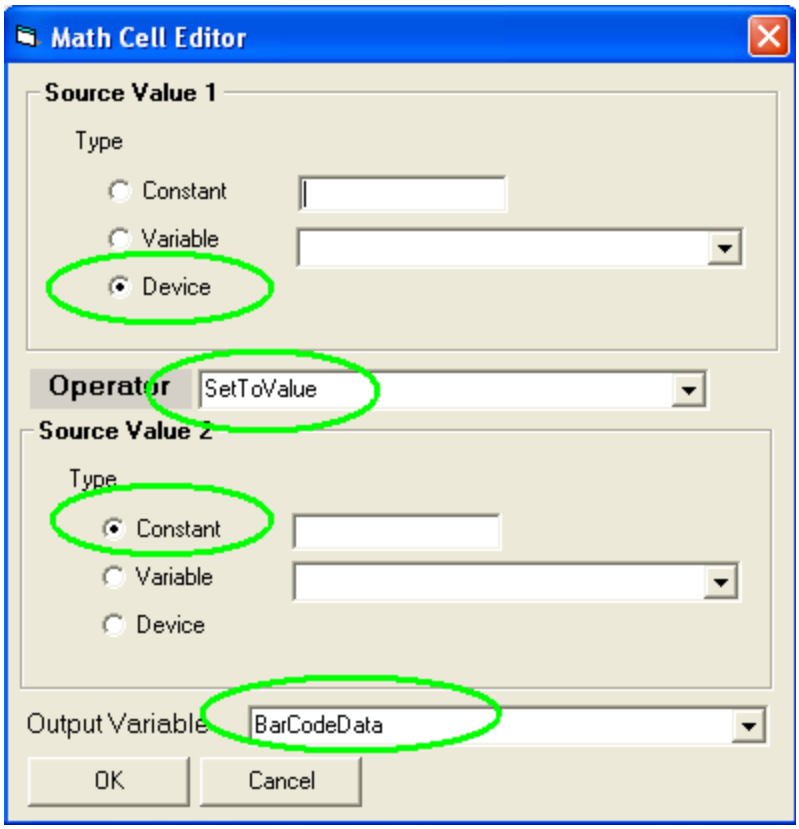


Then give this cell a name such as GetData and click on OK. You will again see the logic chart but now the top left cell is presented as a *Math* cell.



Double Click on the top left *Math* cell type, and you will be presented with the *Math Cell Editor*.
We want to take the value from the bar code device and place its value in the *Variable* BarCodeData. To do this we will

Set *Source Value 1* to "Device"
Set *Operator* to "SetToValue"
Set *Source Value 2* to "Constant"
Set *Output Variable* to "BarCodeData"



Click on **OK**
Save and Exit Plantwatch configurator.

Part 4: Display a Variable on a Plantwatch *Screen.*

Procedure:
Open the Plantwatch **User Interface Editor** by clicking the Icon on the desktop
Create a new screen by left click on non bolded "screen" to create a new screen called "MainMenu".
Click **OK**

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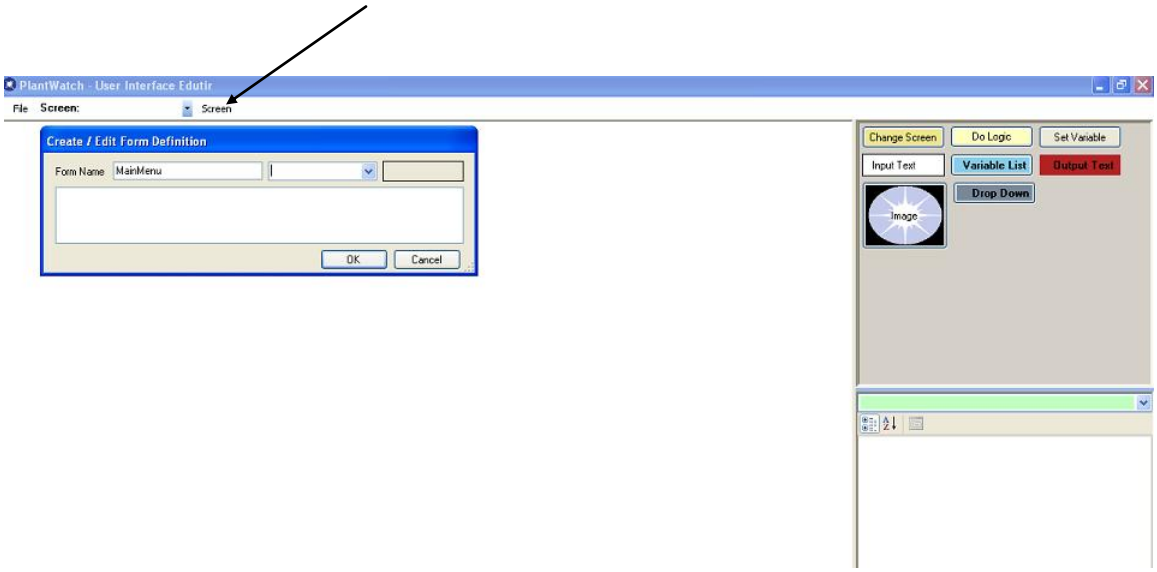
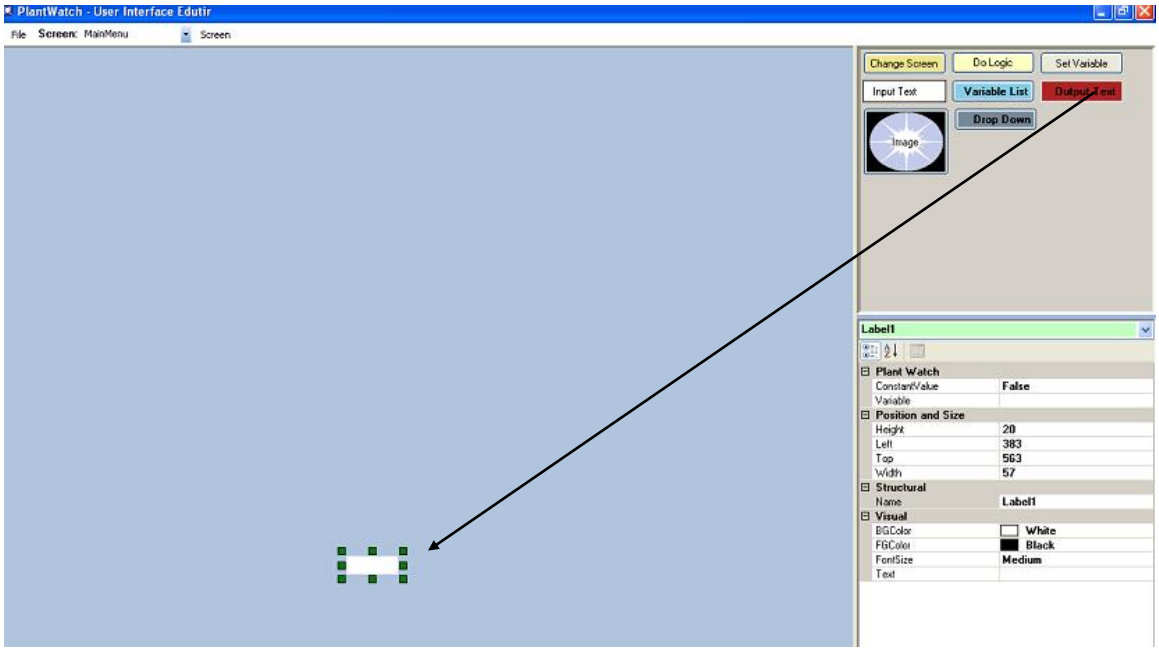
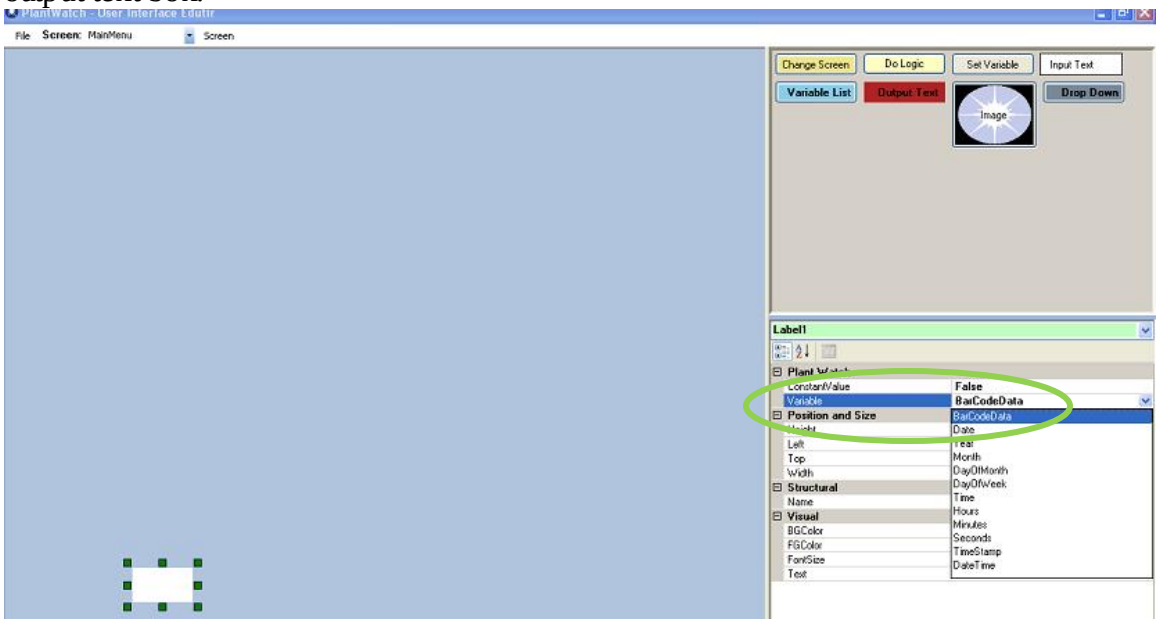


The new screen “MainMenu” opens
Drag an *Output Text* onto the screen by left click the output text button , hold button down and drag to desired position.

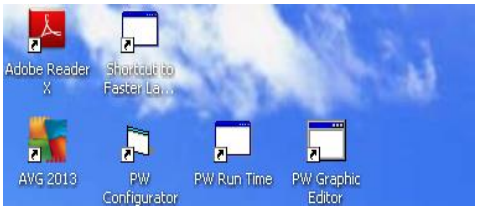
Position and size as required using 8 squares around the box

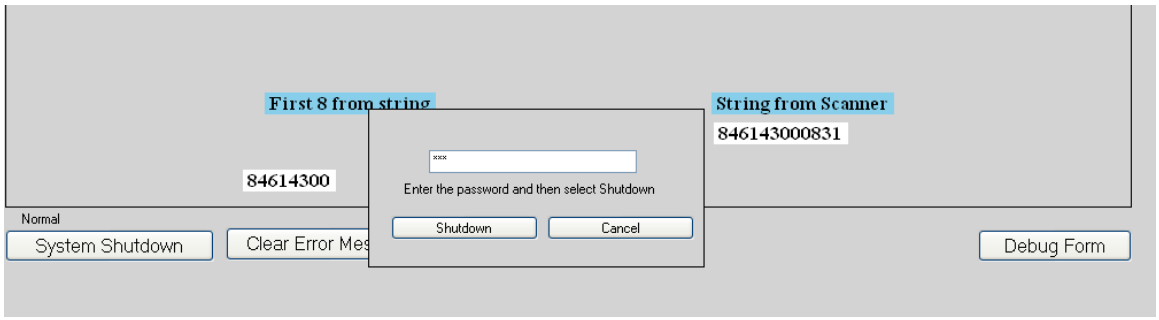


Click on "**Variable**" text to get the variables drop down to appear
Select the **Variable** "*BarCodeData*" from the drop down list.
This animation will display the values contained in the **Variable** "*BarCodeData*" in the output text box.



Save your work.
Exit user interface Editor.
Click on the Plantwatch runtime Icon to run the application.
As you scan bar codes the value will appear in the output text box.




First 8 from string
84614300
String from Scanner
846143000831
***
Enter the password and then select Shutdown
Shutdown
Cancel
Normal
System Shutdown
Clear Error Mes
Debug Form

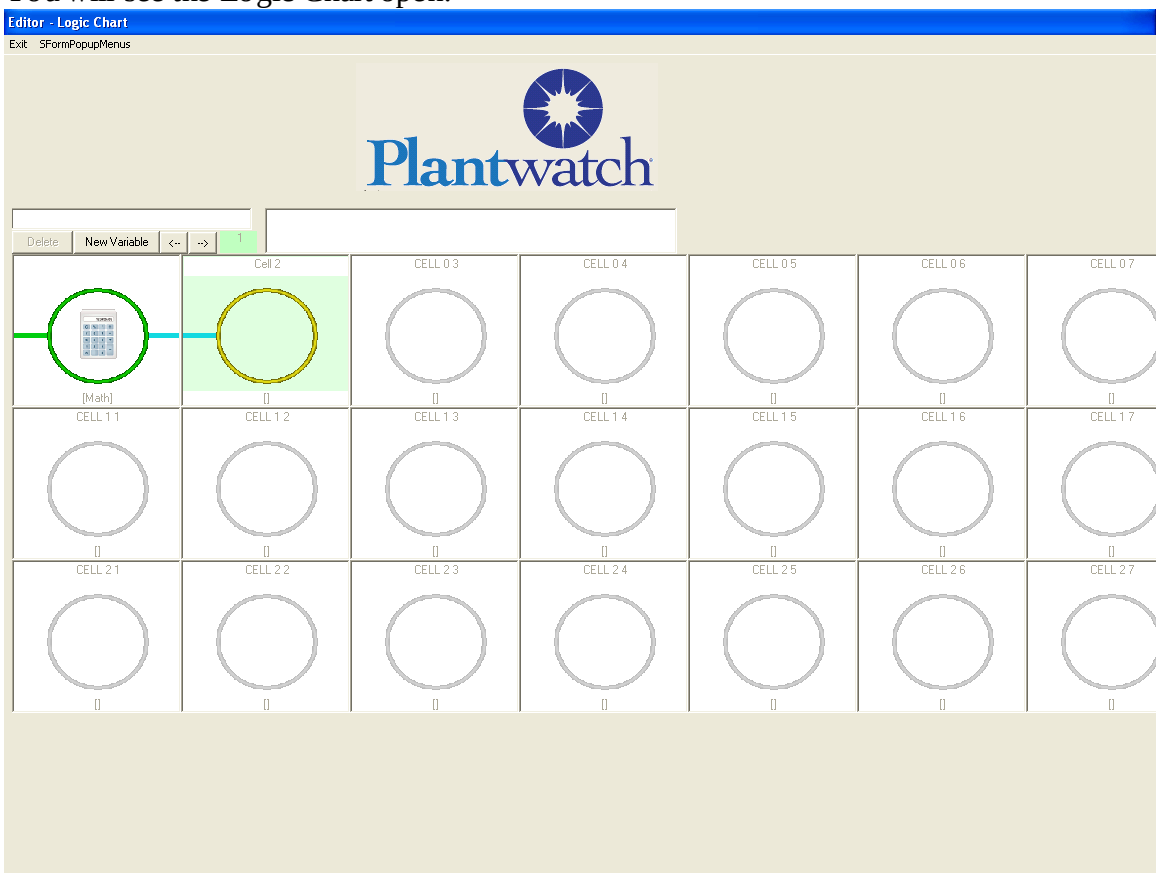
Part 3: Select part of the data from a Plantwatch *Variable* and place it into another Plantwatch *Variable.*

We will configure a logic chart to take the first 8 characters out of the Plantwatch *Variable* we created for the bar code data and put it into a new variable.

Procedure:
Open Plant Watch Configurator
Create a new Variable Named “BarCodeDataFirst8”.

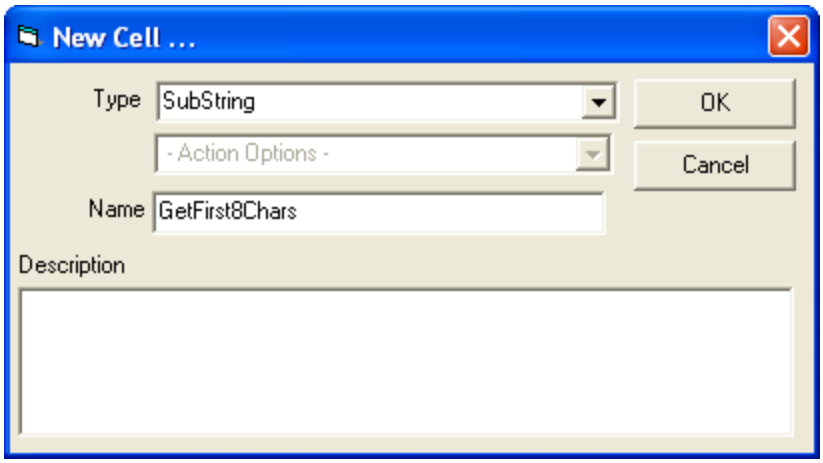
To open the existing *Logic Chart* named “ExtractData” expand out by left clicking? the Devices branch of the *Application Tree* to expose the scanner and then the logic chart.

You will see the Logic Chart open.

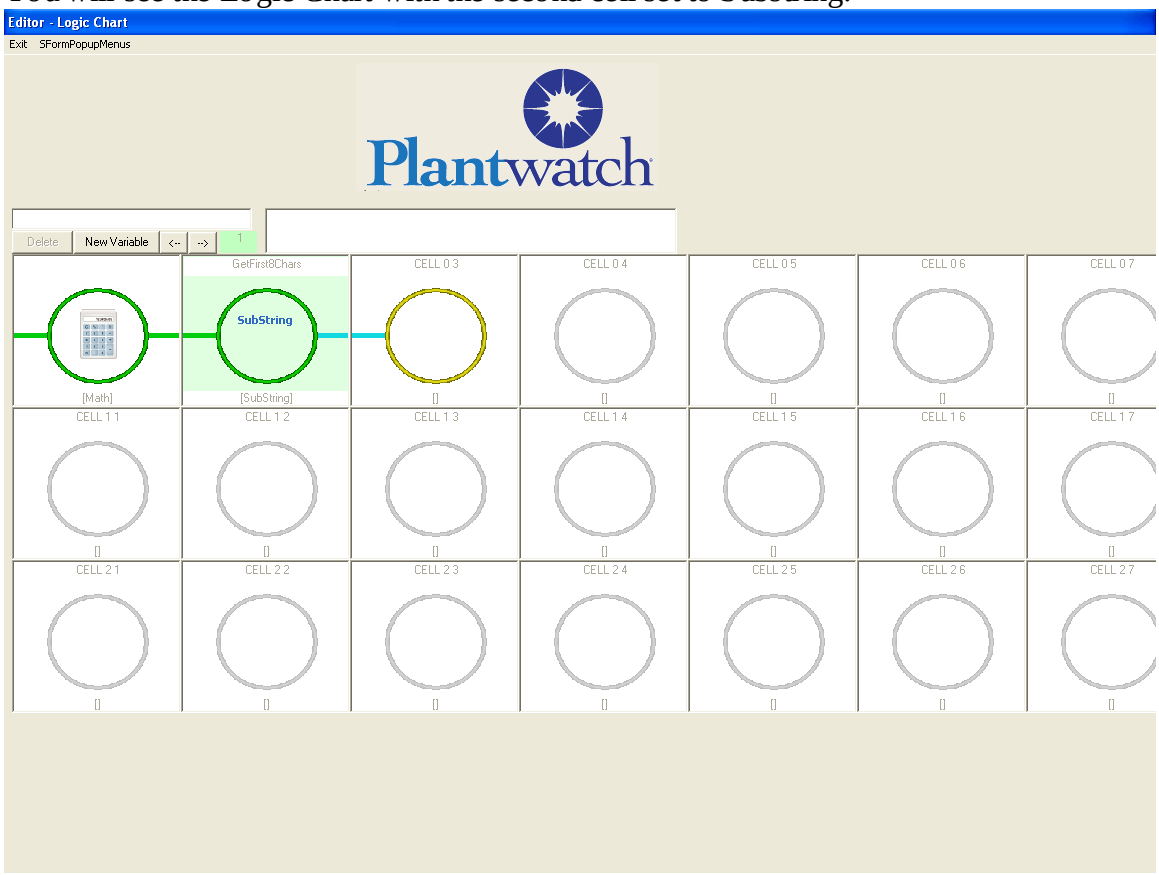


Double click on the top row, second from the left. You will be presented with the dialog for choosing what type of cell this is to be, as well as naming it something useful

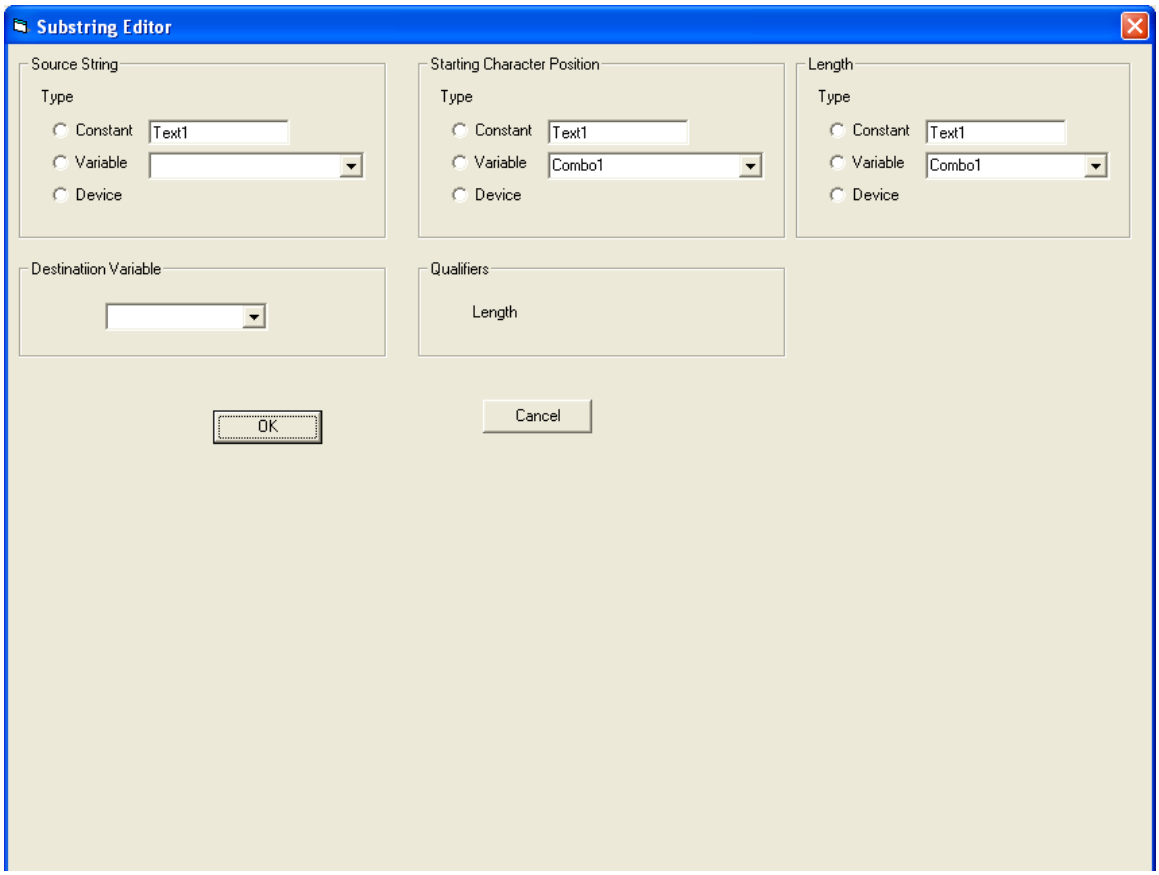
Step 1 select SubString from drop down for type
Step 2 type in name GetFirst8Chars



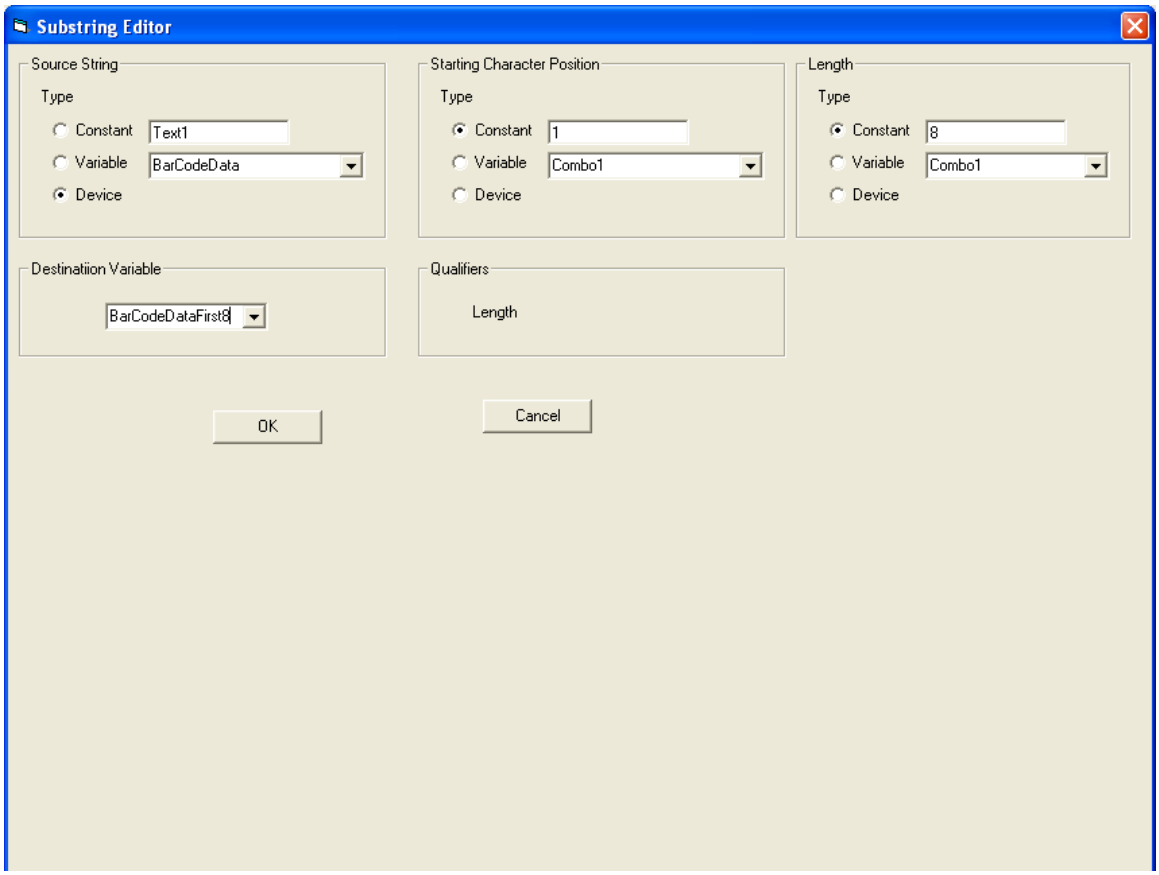
You will see the Logic Chart with the second cell set to Substring.



Double click the new cell called *substring*
You will see the *Substring* editor defaults



Set the source to *Device*
Set starting Character Position to constant of 1
Set Length to constant of 8
Select the Variable *BarCodeDataFirst8* form the drop down for Destination variable
Click on **OK**



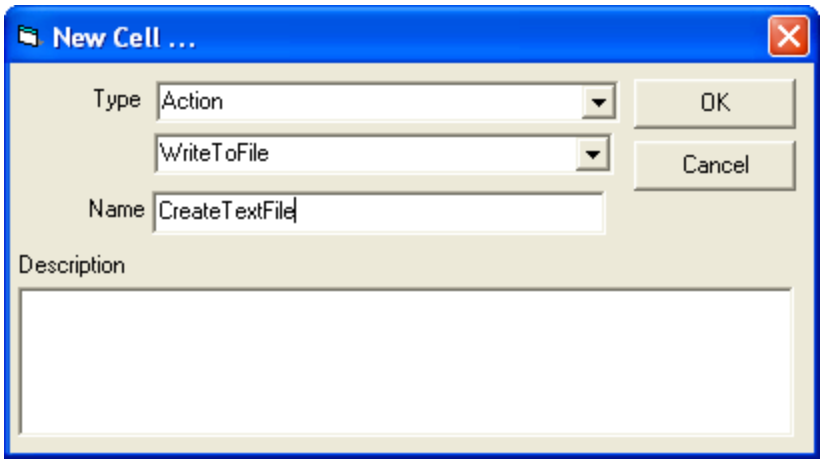
You will again be presented with the logic chart. Click on exit.

Close the Plantwatch configurator
Open the graphics editor
Add the variable to the existing screen as an output text to see the revised string output.

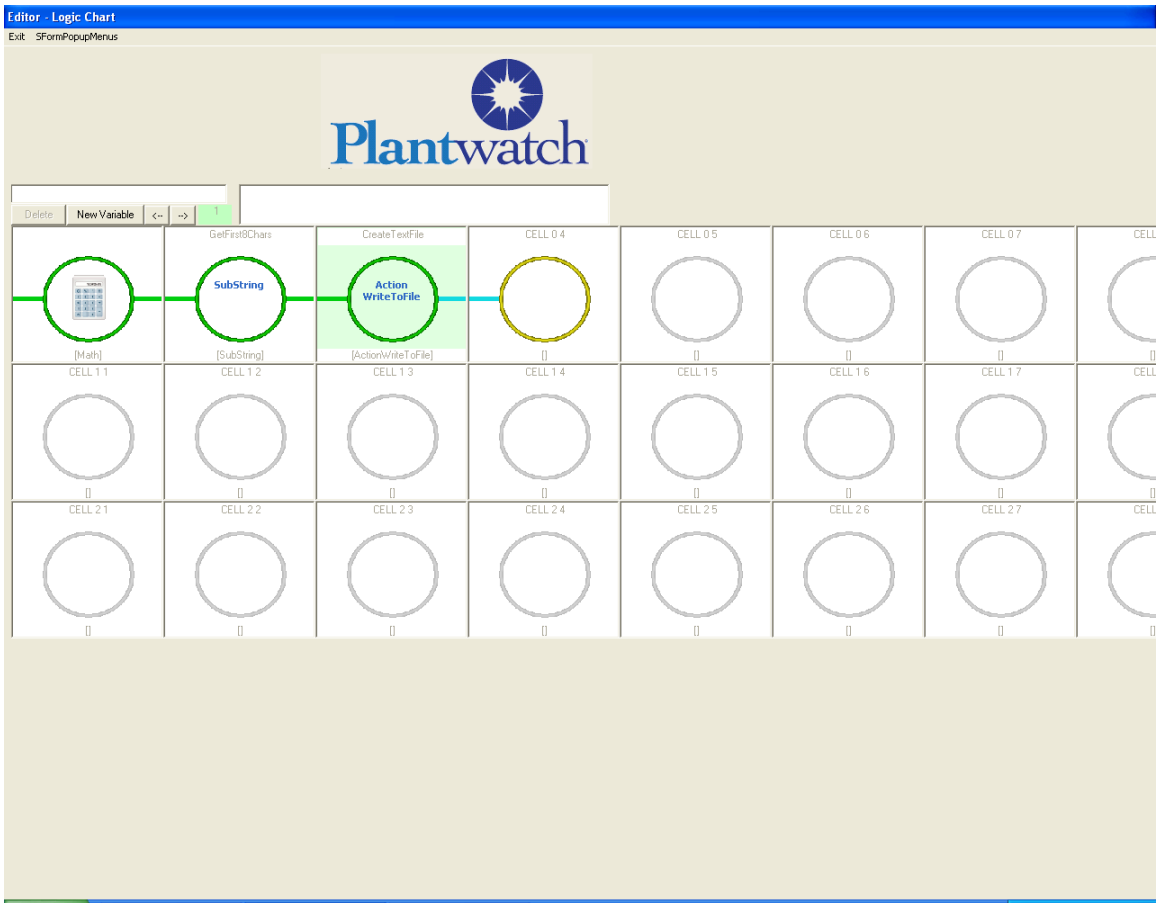
Click on OK. You will again be presented with the logic chart.

Now we will write the first 8 characters to a text file

Double click on the top row, third from the left. You will be presented the dialog for choosing what type of cell this is to be. Select Action and Write to File. Use CreateTextFile for its name.



Click on OK and you will see the Logic Chart with the third cell set to Write to File.



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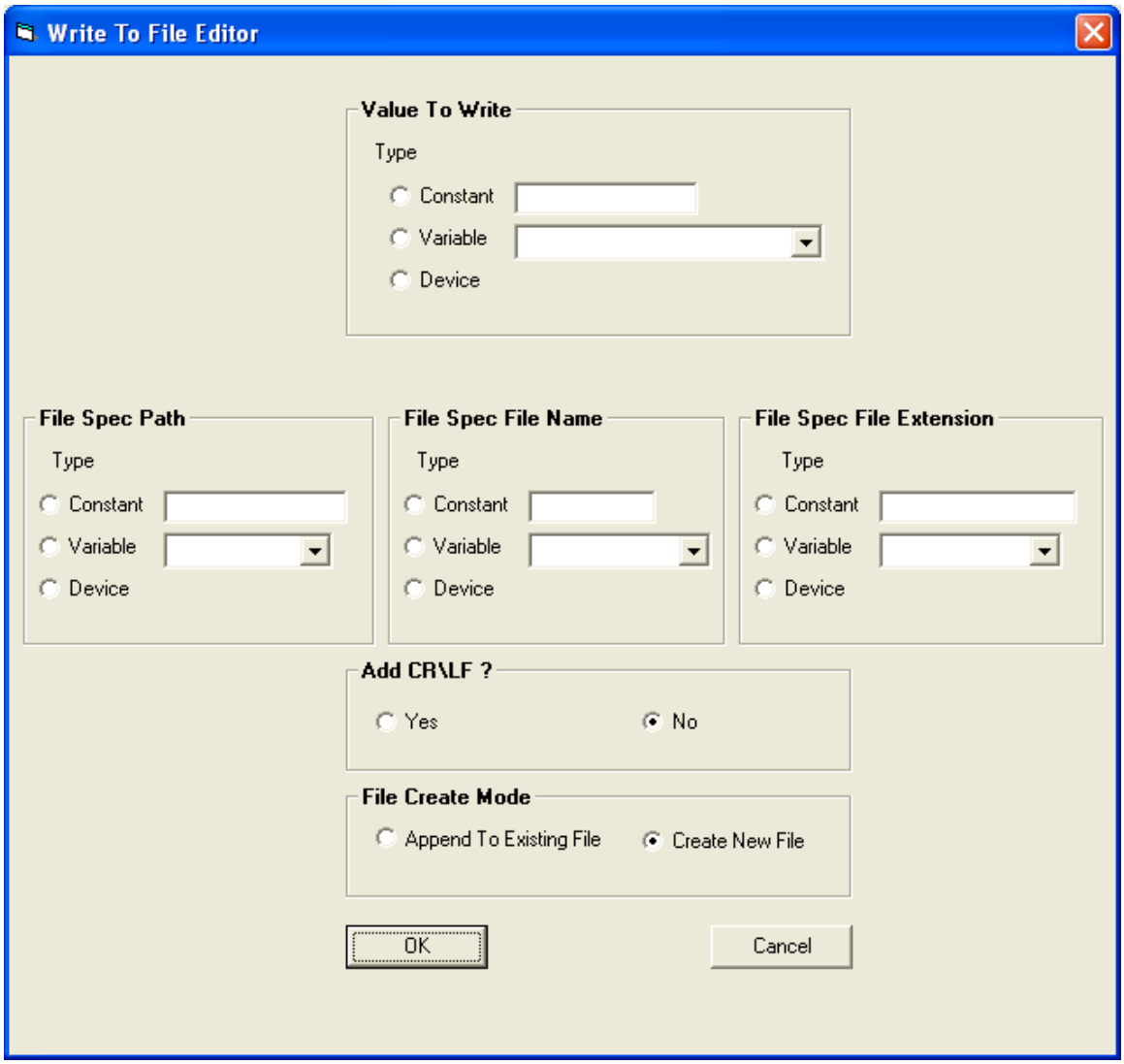
Double click the new cell

You will see the *Write To File* editor

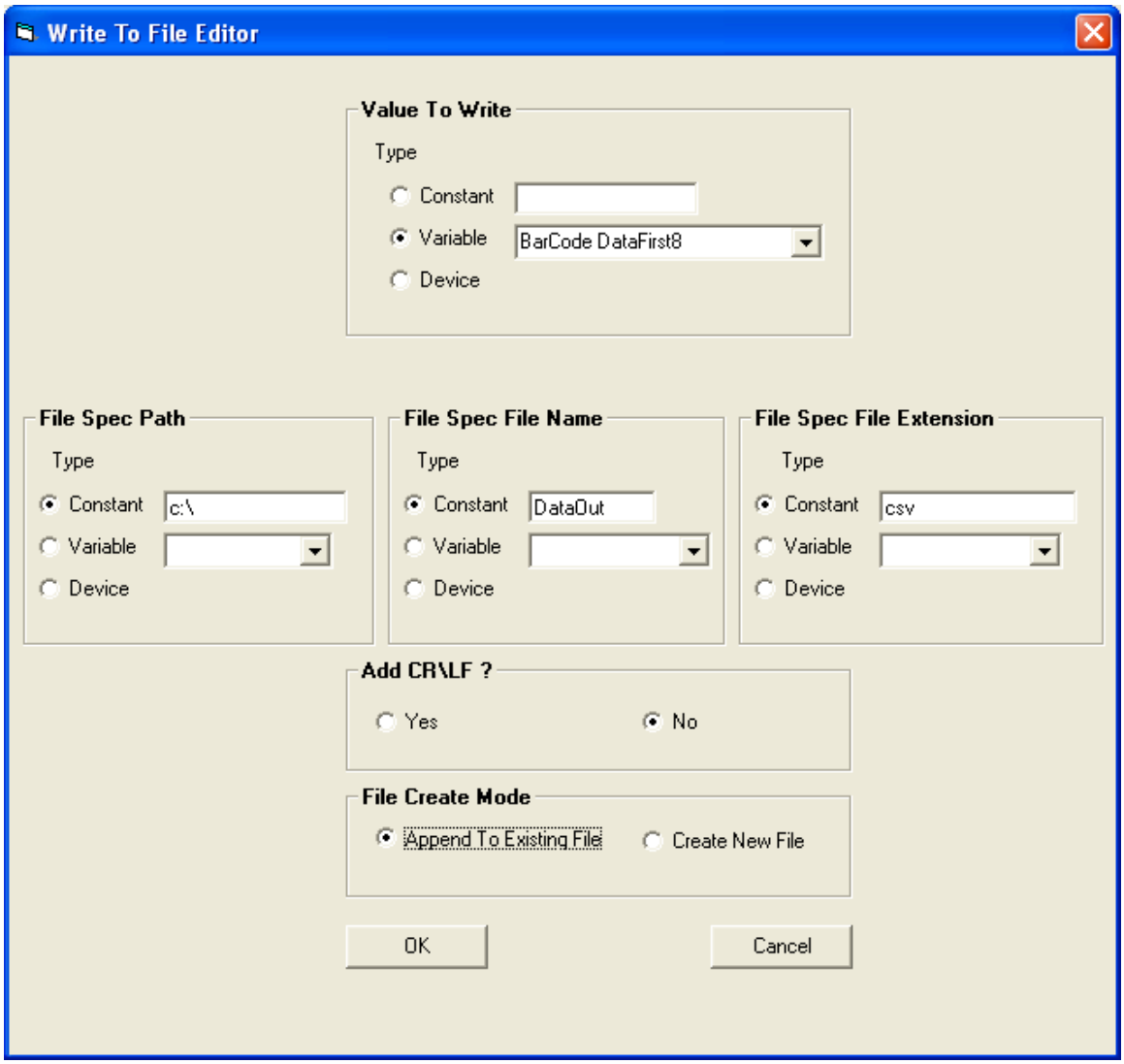


For the value to write we will use our Variable *BarCodeDataFirst8*.

We want to write to file c:\DataOut.csv so…

File Spec Path will be set to a constant of *c:*
File Spec File Name will be set to DataOut
File Spec Extension will be set to csv

We want to create a report of all scanned items so we will append each new record to the existing file.



Exit the logic chart.

Save the application

Close the plantwatch configurator

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