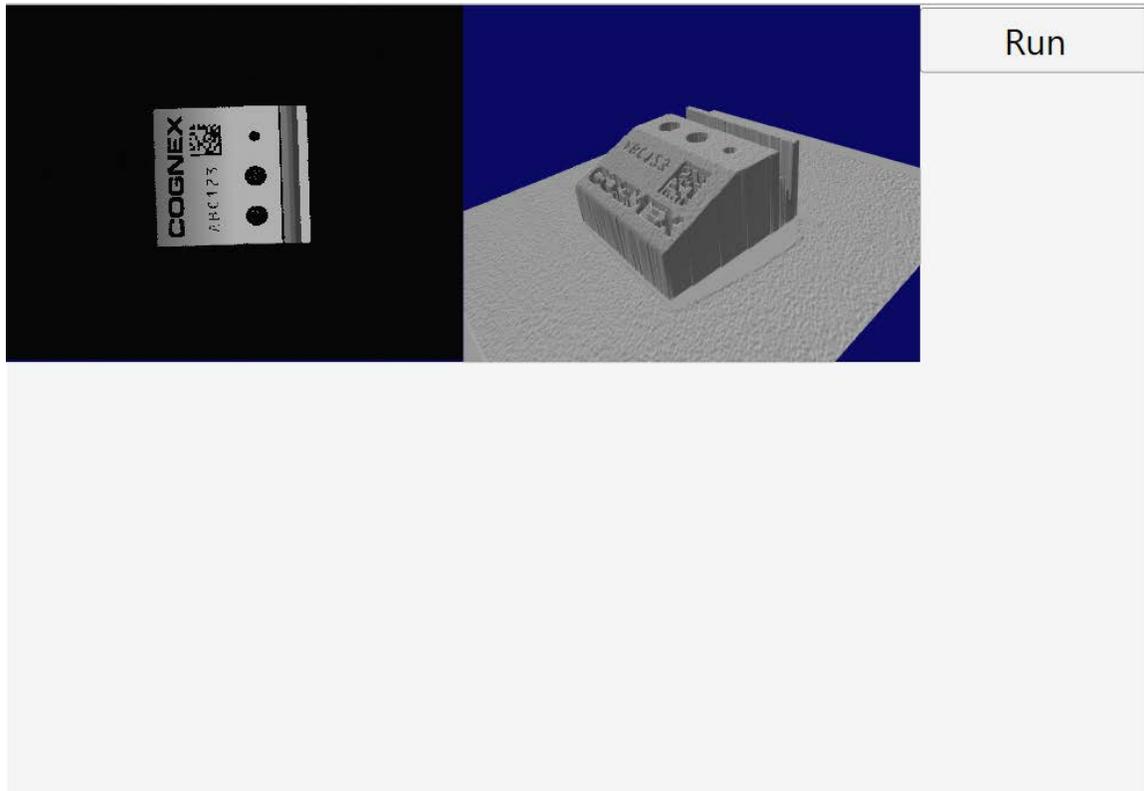


Cognex Designer Standard – Section 4
Building an HMI Lab
Approximate Duration: 30 minutes

EXPECTED OUTCOMES:

- View an Intensity Image of the Demo Block
- View a 3D Image of the Demo Block
- Ability to run the Sequence from the HMI

EXPECTED VISUAL RESULT:

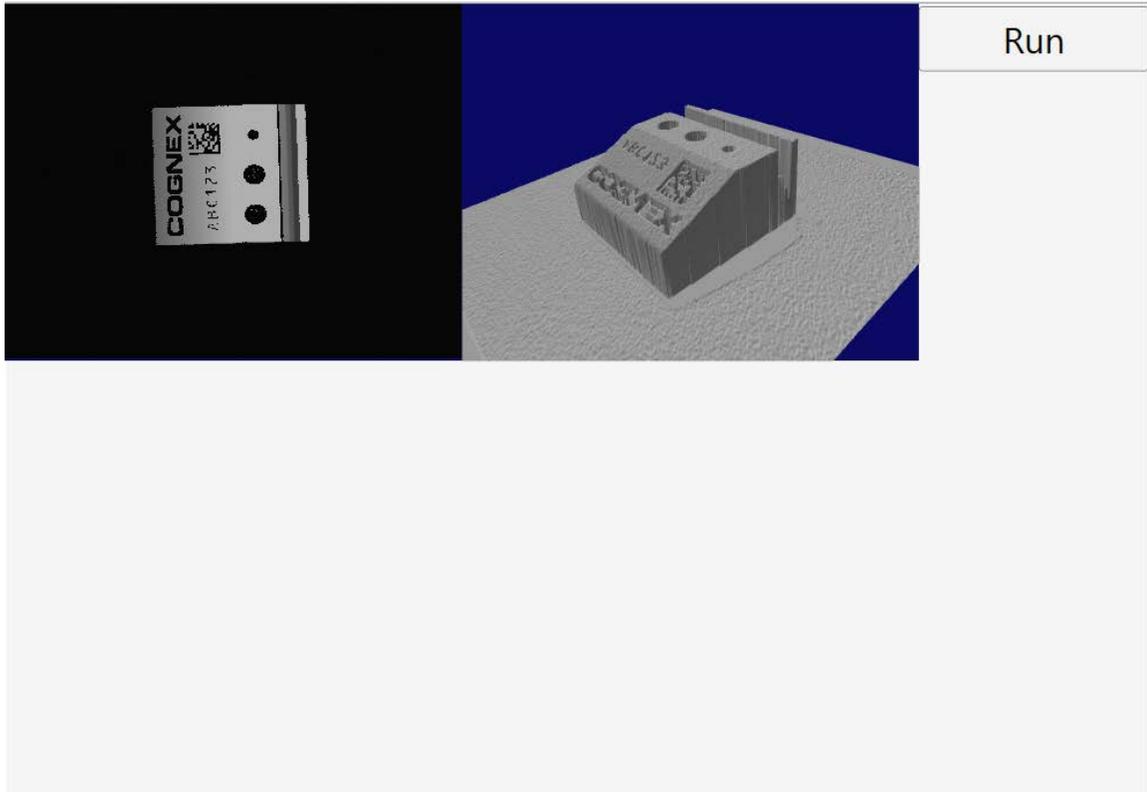


OUTLINE OF LAB:

1. Add Tags to the Sequence for each of the displays
2. Add Displays to the HMI
 - a. Use tag to set 3D display
 - b. Use PatMax result to set 2D display
3. Add a button to HMI
 - a. Have the button run the Sequence once
4. Go into Test Mode and Run the Application

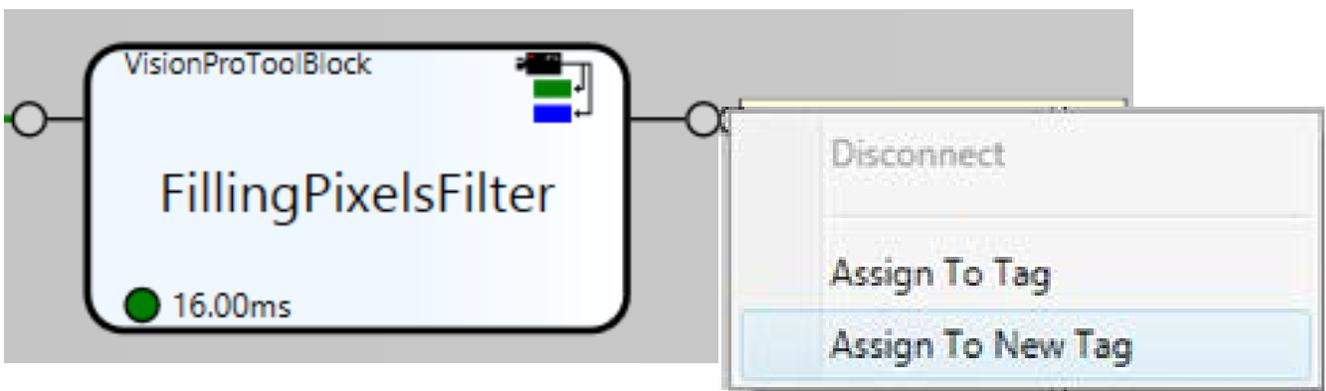
Steps for the Lab:

We'll be building a user interface that looks like this:

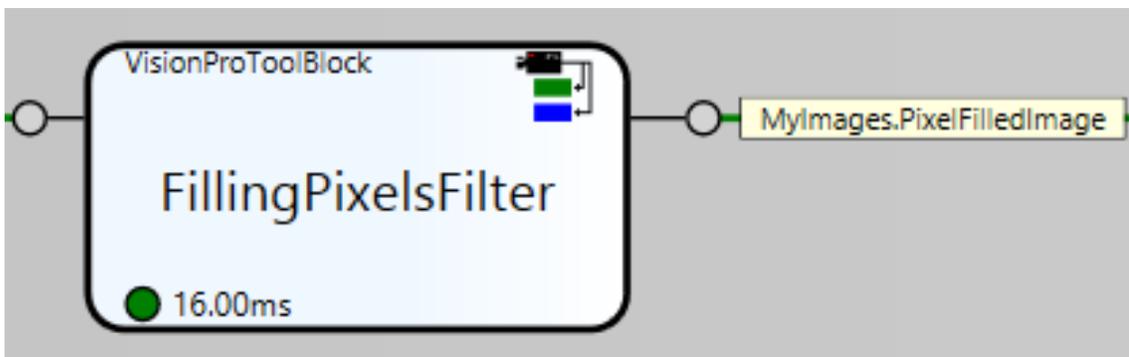
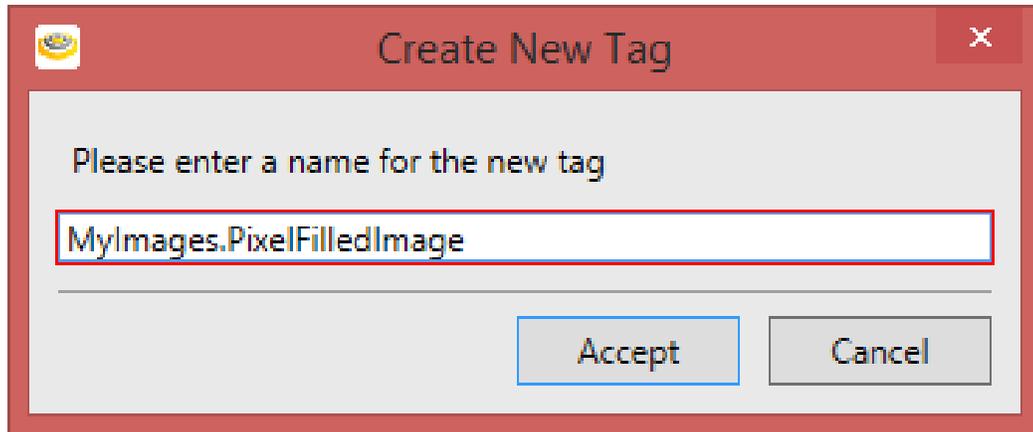


1. Add Tags to the Sequence for each of the displays

- Go to the sequence and right-click on the output pin of the FillingPixelsFilter Tool Block and select “Assign To New Tag”

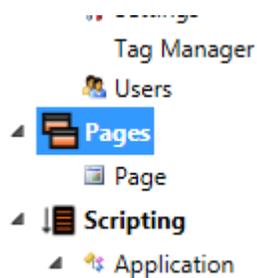


- Call it “MyImage.PixelFilledImage” and press “Accept”. Note the Tag reference now on the Sequence.

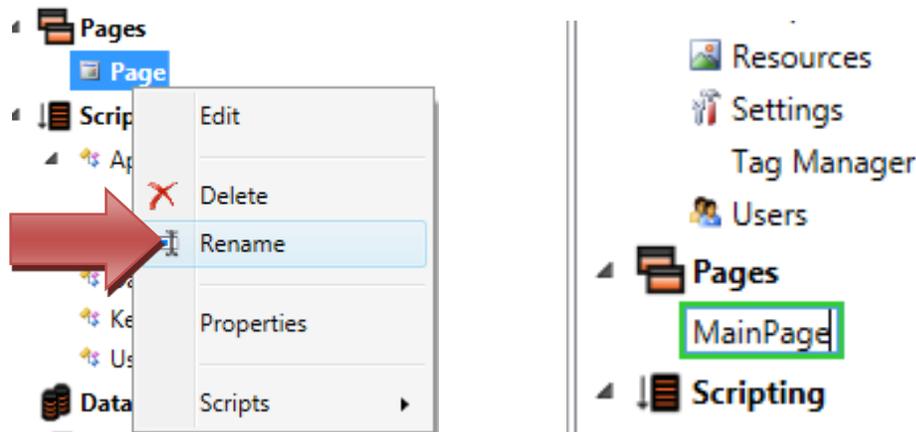


2. Add Displays to the HMI

- Go to the Page tab. If it is not showing, look at the Explorer bar and go to the Pages Area.

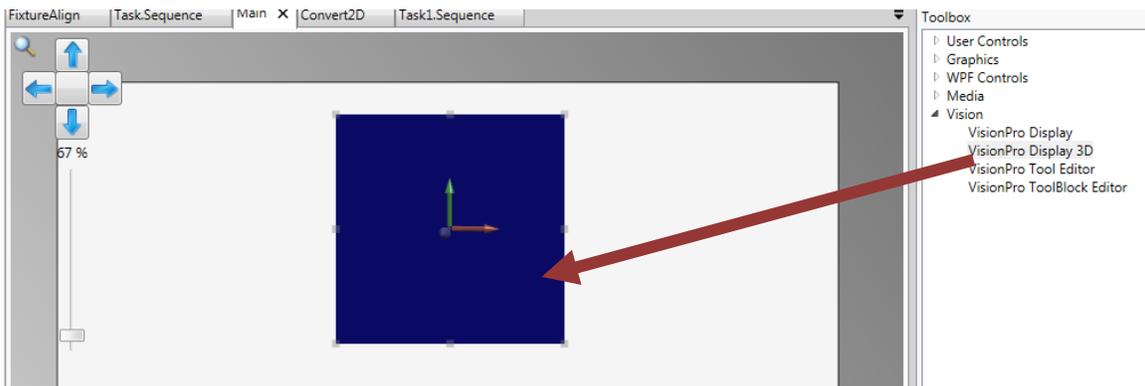


- Right-Click on Page and rename it “MainPage” to make it easier to identify as the main page later.

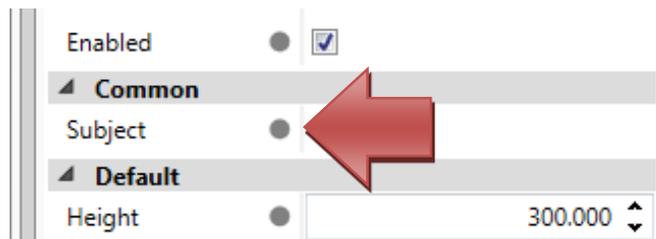


a. Use tag to set 3D display

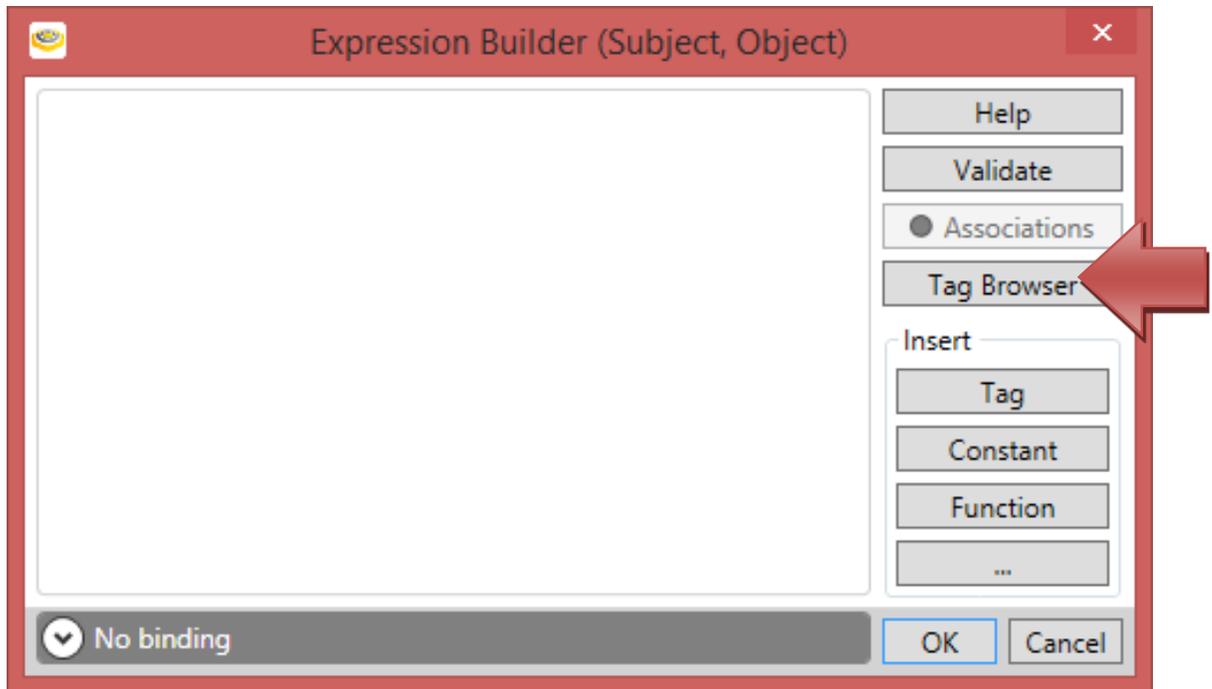
- i. Add a 3D Display to the Main page.



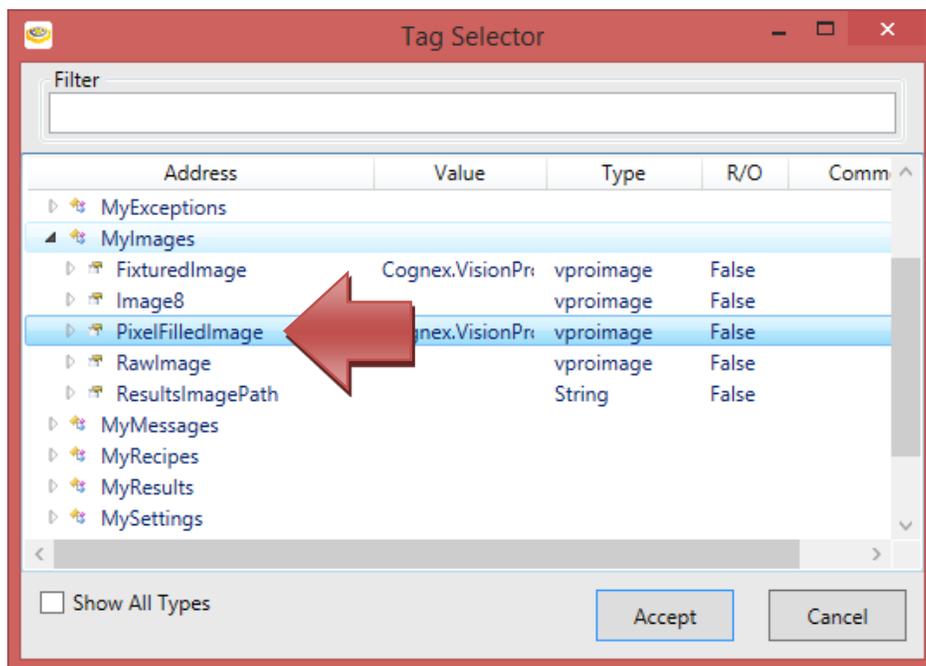
- ii. Go to the Subject of the Display in the Properties tab and select the grey dot.



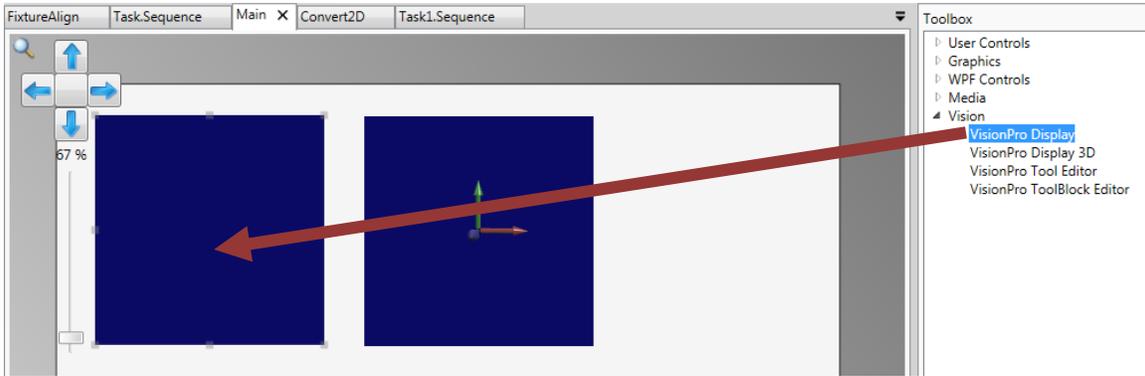
iii. The Expression Builder will appear. Select “Tag Browser”.



iv. Choose “Display.Image3D” from the list and select “Accept” on the Expression Builder.

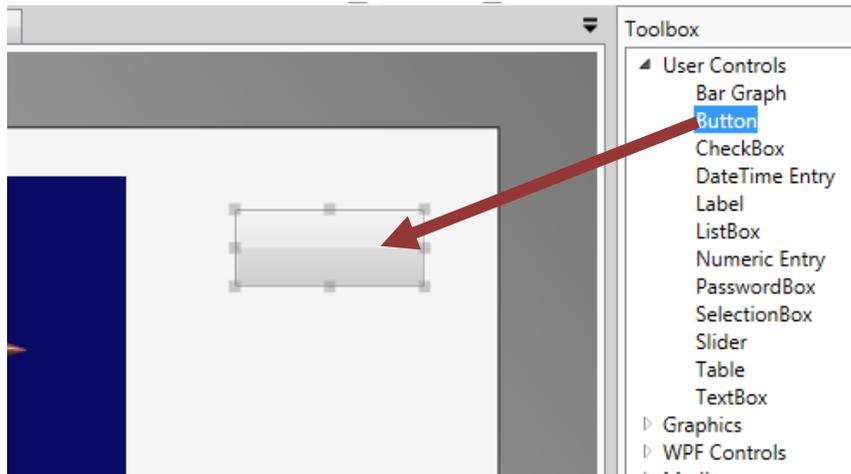


v. Repeat step a above to create a VisionPro Display

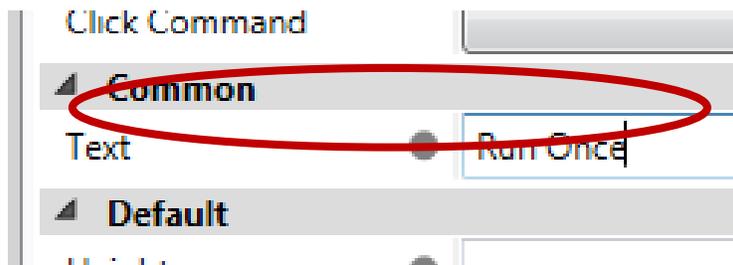


3. Add a button to HMI

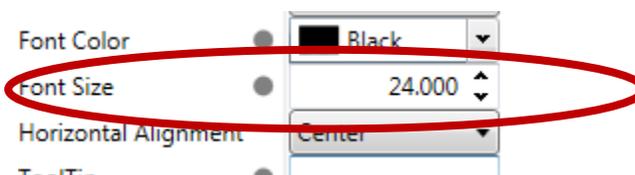
- Add a button



- Set its text property to “Run”



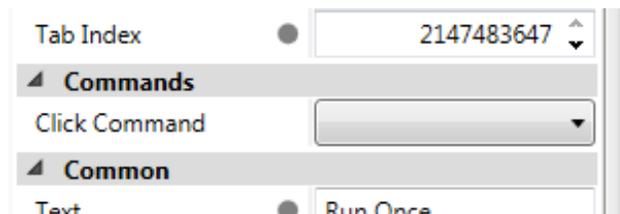
- Set its font size to 24



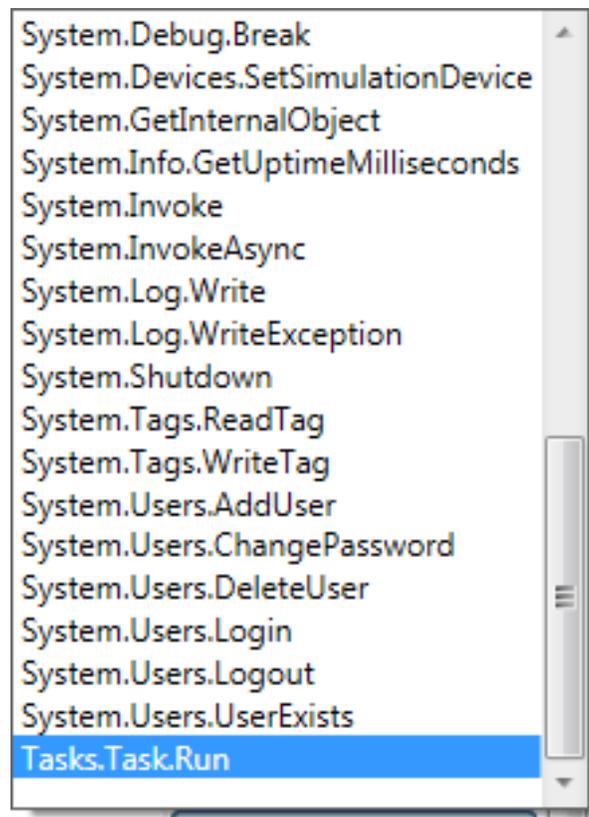
- ... so it looks similar to this one.



- a. **Have the button run the Sequence once**
 - i. Go to the Click Command in the Properties.



- ii. Pull down the list and go to the last entry which should be Tasks.Task.Run



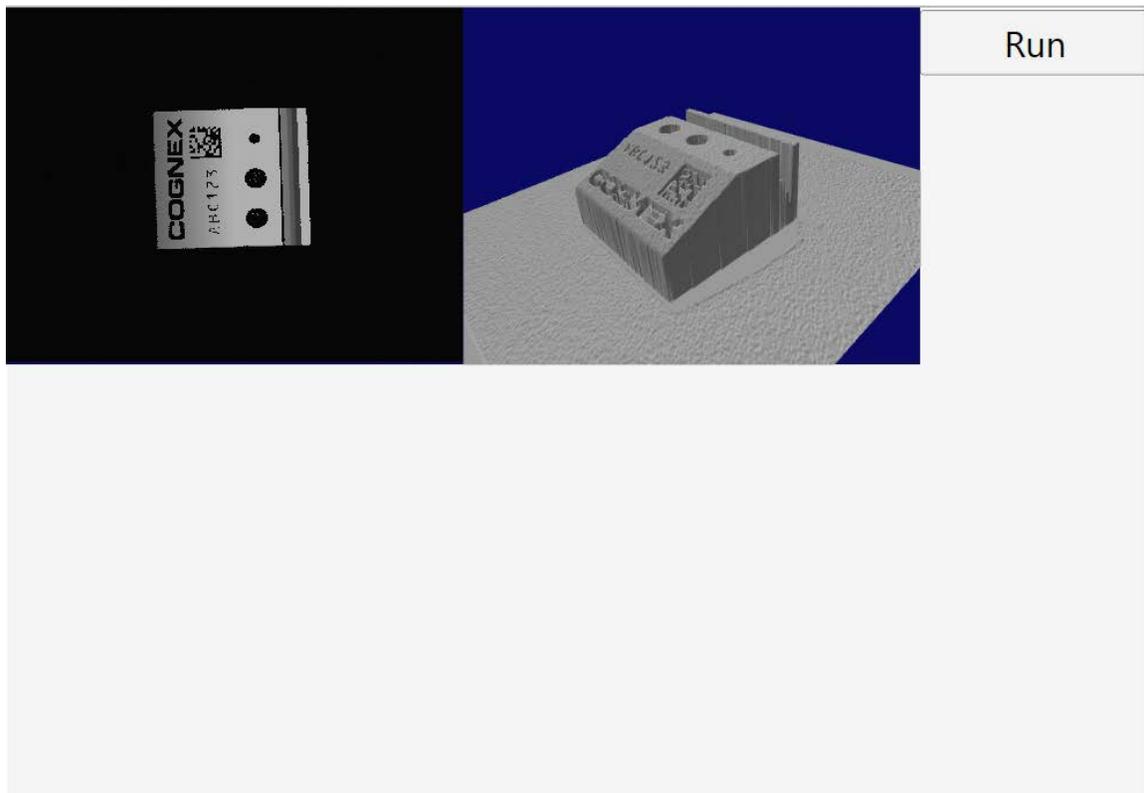
iii. Save the program.

4. Go into Test Mode and Run the Application

- Choose the Test Mode Button and press the Run Once – make sure you move your gantry the complete amount in order to get the full image and avoid a time out.



- Press F11 to go into full screen mode.



Extra Credit: Create a tag for the PMAAlignTool's score. Report the score to your HMI.