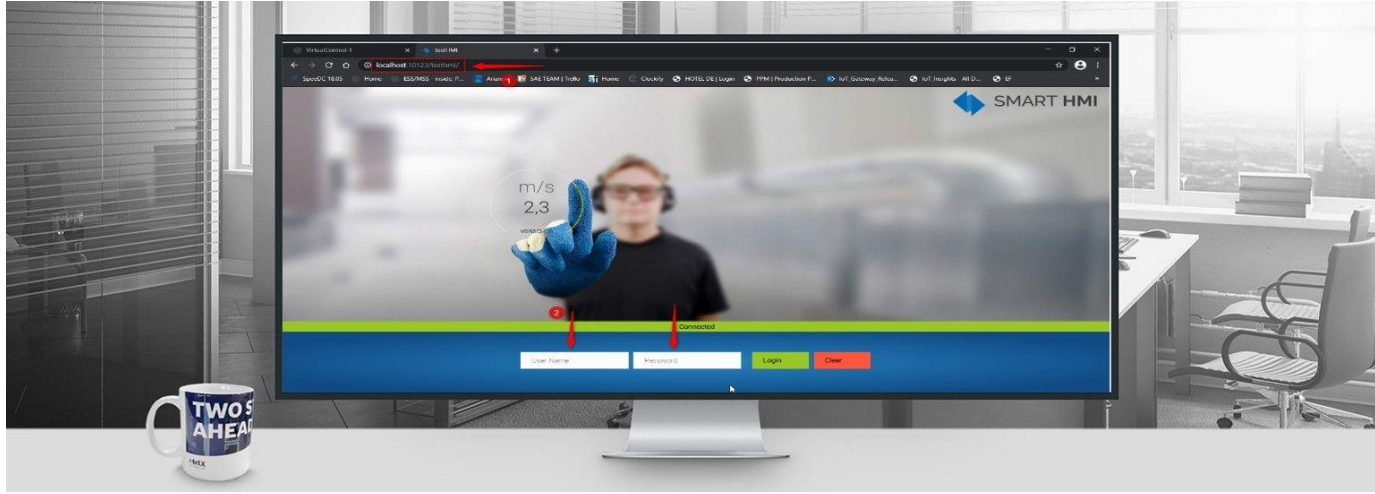




# Challenge 05: Smart HMI – WebIQ

## Task 02

## Challenge 05: ctrlX WebIQ | Task 02



### Description

You are part of an automation team in a factory that produces high-tech electronic devices. You are equipping your factory with the “Smartphone of Automation” controller made by Bosch Rexroth that enables you to design and implement a Web-Based HMI to control the machines on the factory. Your task is to create the interface to trigger the outputs of the controller

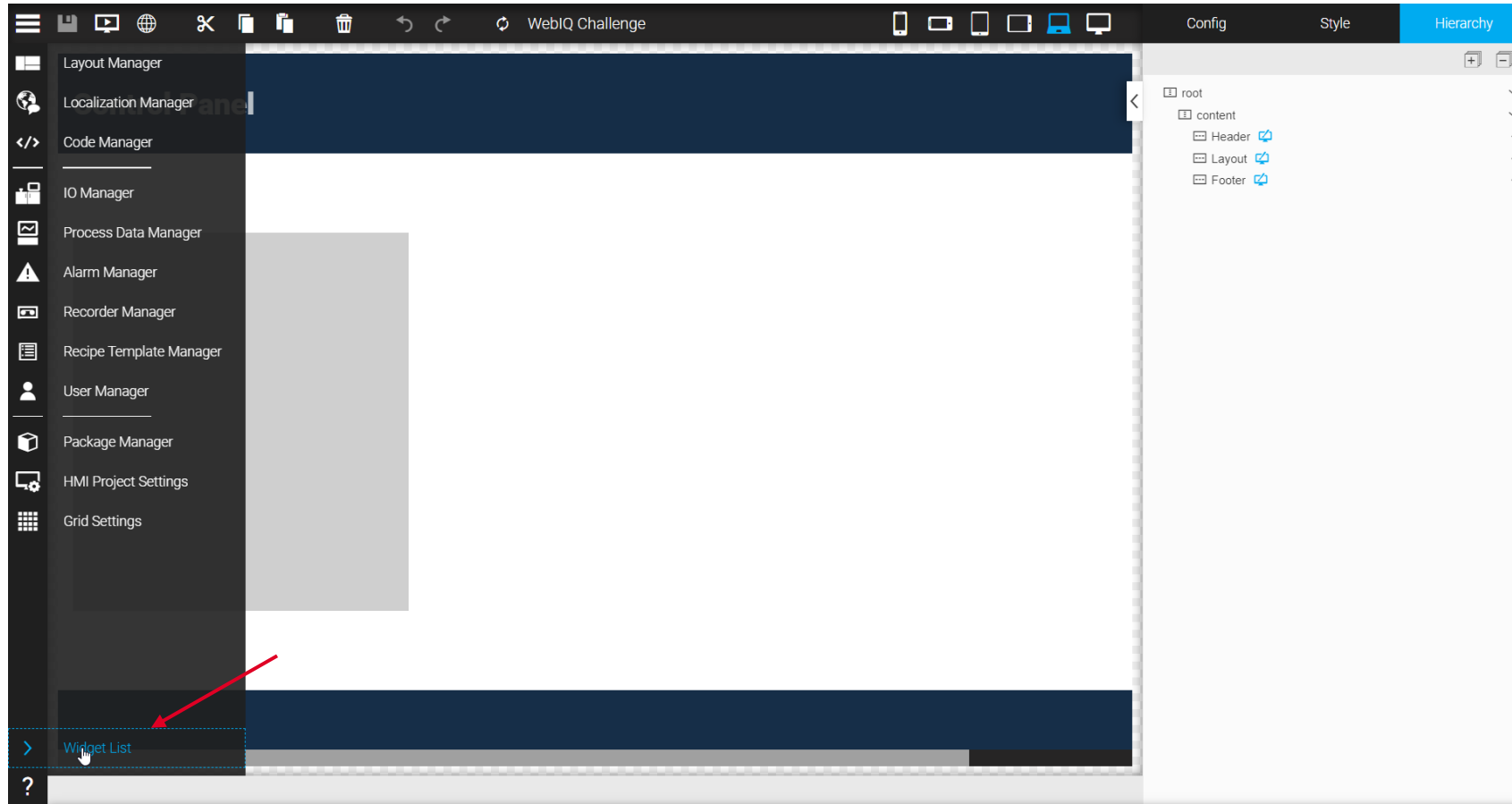
### Task

This task will test your ability and understanding on developing a simple HMI and running it on a web-browser. In this final part, you are required to set up the “Image Changer” widget to work with the PLC outputs.

# Challenge 05: ctrlX WebIQ | Task 02

## Steps

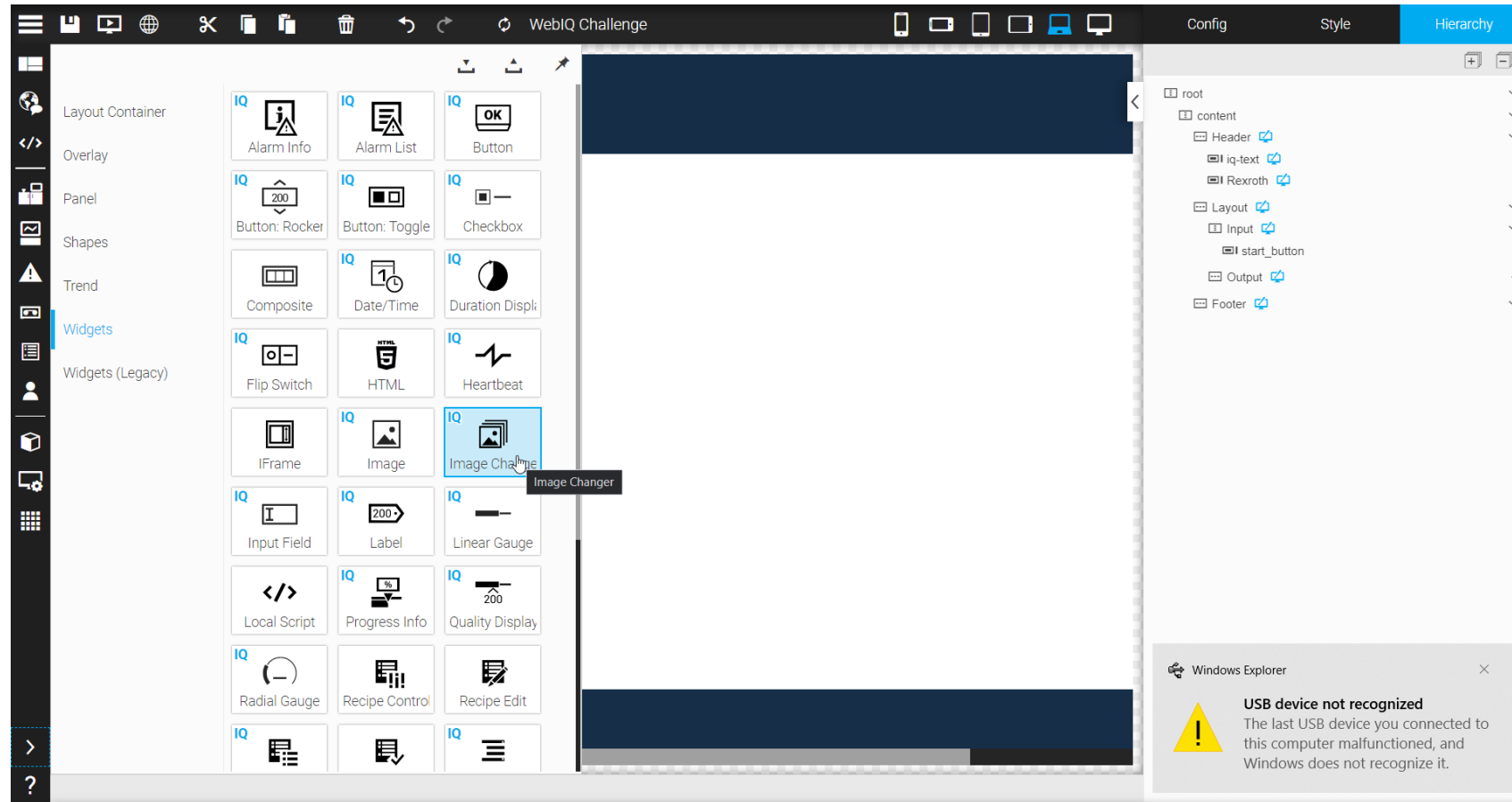
Step 1: From the slide menu, select Widget List.



# Challenge 05: ctrlX WebIQ | Task 02

## Steps

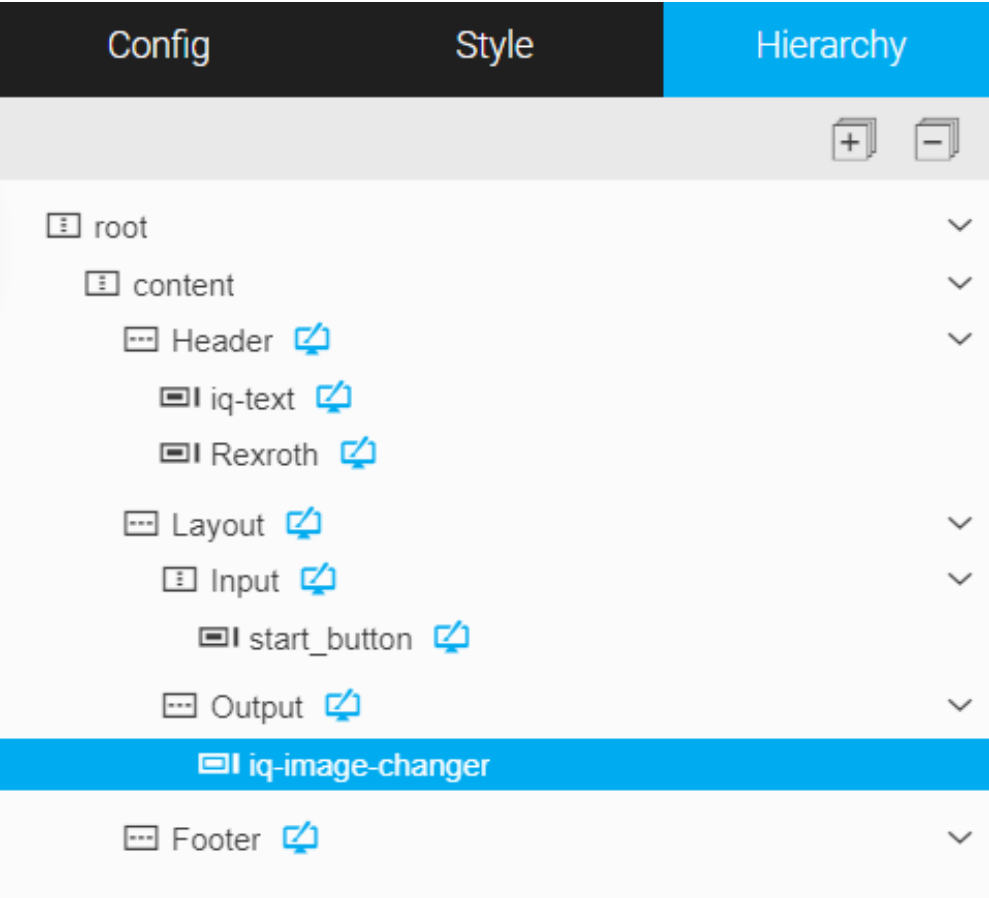
Step 2: From the Widget List, find for Image Changer Widget



# Challenge 05: ctrlX WebIQ | Task 02

## Steps

Step 3: From the Widget List, drag the Image Changer Widget and drop it under Layout and under output category



# Challenge 05: ctrlX WebIQ | Task 02

## Steps

Step 4: Go to the configuration cockpit for image changer.


Step 5: Find the control name option that placed under Referential Attributes section and name it as “green\_lamp”

Config

Style


Hierarchy

iq

 Image Changer

Width: 506 px  
Height: 506 px

LAYOUT



REFERENTIAL ATTRIBUTES

Control Name

green\_lamp


Template

default/iq-image-changer.iq-variant-01

...

Class Name

iq-image-changer iq-variant-01



## Challenge 05: ctrlX WebIQ | Task 02

### How to get lamp image

Step:

1. For the configuration that required image/ icon, there will be a (...) button, click the button. (Refer Figure 1)
2. The system will now pop out a window tat required you to select the image, now click “pics” and select “custom”.
3. Now, you can select the lamp image that you want. (Refer Figure 2)

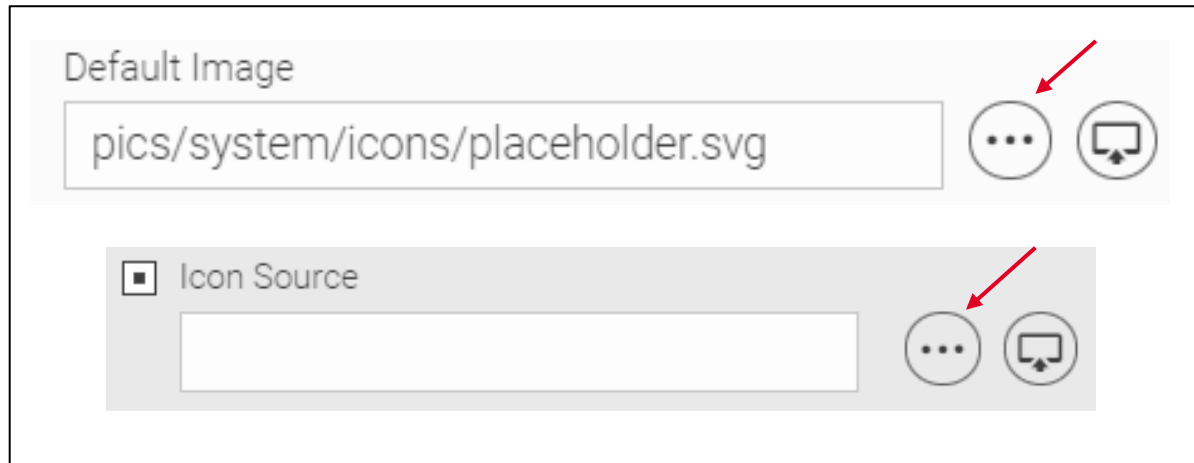


Figure 1

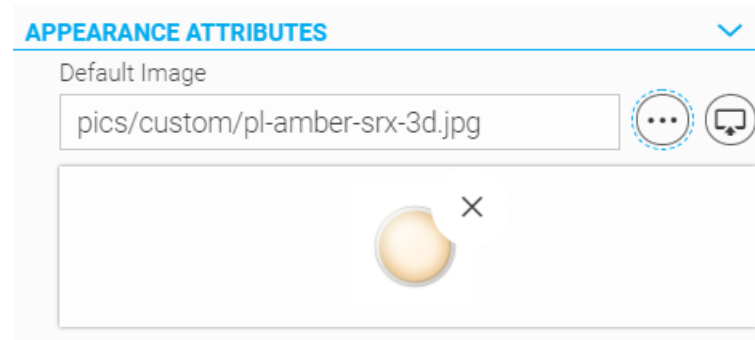


Figure 2

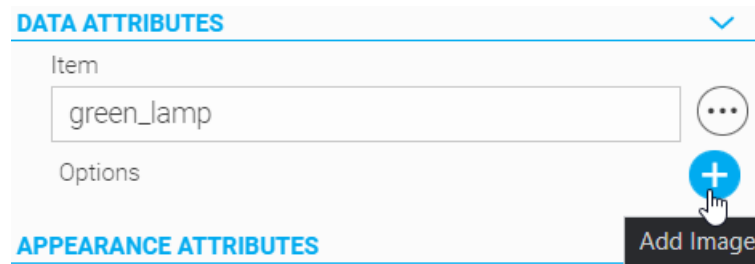
## Challenge 05: ctrlX WebIQ | Task 02

### Steps

Step 6: Under the Appearance Attributes, change the Default Image to amber lamp to present the lamp is off.



Step 7: Under Data Attributes section, select green\_lamp as item and click the (+) button to add image





## Challenge 05: ctrlX WebIQ | Task 02

### Steps

Step 8: For the Value/ Bitmask option, change the bitmask to binary and set the value to 1

Step 9: Enable the icon source by ticking the tick box beside it and select Green Lamp icon

The screenshot shows the 'DATA ATTRIBUTES' configuration window for an item named 'green\_lamp'. The 'Options' section is expanded, showing a list with one item: '1 LABEL'. The 'Label of Object' is set to 'label'. The 'Value / Bitmask' section has 'Integer' selected for the value type and 'binary' selected for the bitmask. The value field is set to '1'. The 'Icon Source' checkbox is checked, and the path 'pics/custom/pl-green-srx-3d.jpg' is entered. Red arrows point to the 'binary' dropdown, the value '1', the 'Icon Source' checkbox, and the file path.

DATA ATTRIBUTES

Item  
green\_lamp

Options  
1 LABEL

Label of Object  
label

Value / Bitmask  
Integer binary

1

☒ Icon Source  
pics/custom/pl-green-srx-3d.jpg

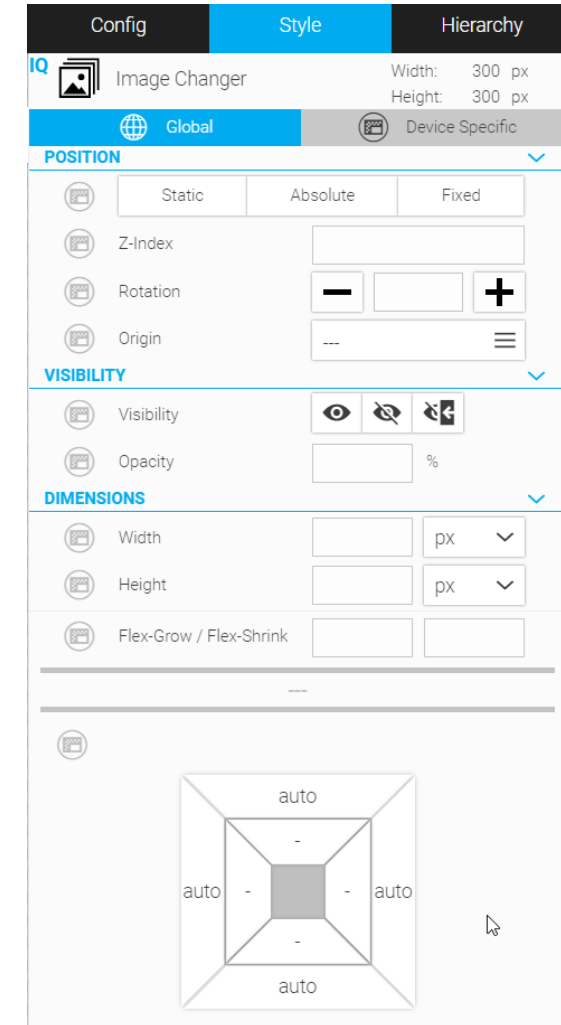
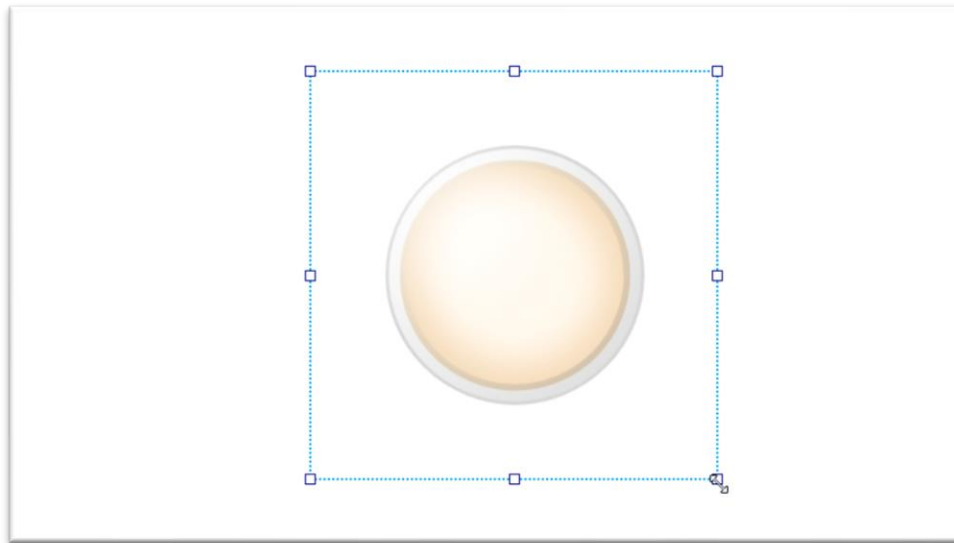
## Challenge 05: ctrlX WebIQ | Task 02

### Steps

Step 10: Under style cockpit, configure the spacing base on your preference

Step 11: Now, you can adjust the size of Image Changer widget base on your preference

Step 12: Congratulation you have successfully set up the Image Changer Widget. Now, it's your turn to create the Image changer for red\_lamp and also the buzzer. **Use blue lamp image to represent buzzer.**



# Challenge 05: ctrlX WebIQ | Task 02

## Steps

Once you have completed Task 2, follow the steps below.

### How to complete Task 2 Smart HMI - WebIQ App

- You can test your solution against the Task description
- Once it satisfies the requirements, confirm that you have completed the task by informing the available instructor for verification
- In the ctrlX developR challenge [website](#), under the HMI WebIQ App challenge section, tick [✓] the Task 2 checkbox

**Congratulations, you've completed the tasks!**

**Follow the next step to complete the challenge!**

The screenshot displays the 'ctrlX developR Challenges' interface. On the left, a list of challenge categories includes 'PLC App', 'OPC UA App', 'Node-RED App', 'Motion App', 'HMI WebIQ App' (highlighted with a blue underline), and 'IDE App'. Below these categories are icons for 'WEBIQ SERVER' and 'WEBIQ DESIGNER'. On the right, the '5. HMI WebIQ App Challenge' section is shown, with the instruction 'Complete the tasks:'. Two tasks are listed: 'Task 1: Create a Web-Based HMI - Part 1' with a checked checkbox and a link to 'Download Task 1 Instructions', and 'Task 2: Create a Web-Based HMI - Part 2' with a checked checkbox and a link to 'Download Task 2 Instructions'. A yellow callout box with the text 'Tick the checkbox !' and a red arrow points to the checkbox for Task 2. A blue 'Complete Task' button is located below the task list. At the bottom of the page, the copyright notice '© Bosch Rexroth Sdn. Bhd., 2023, all rights reserved' is visible.

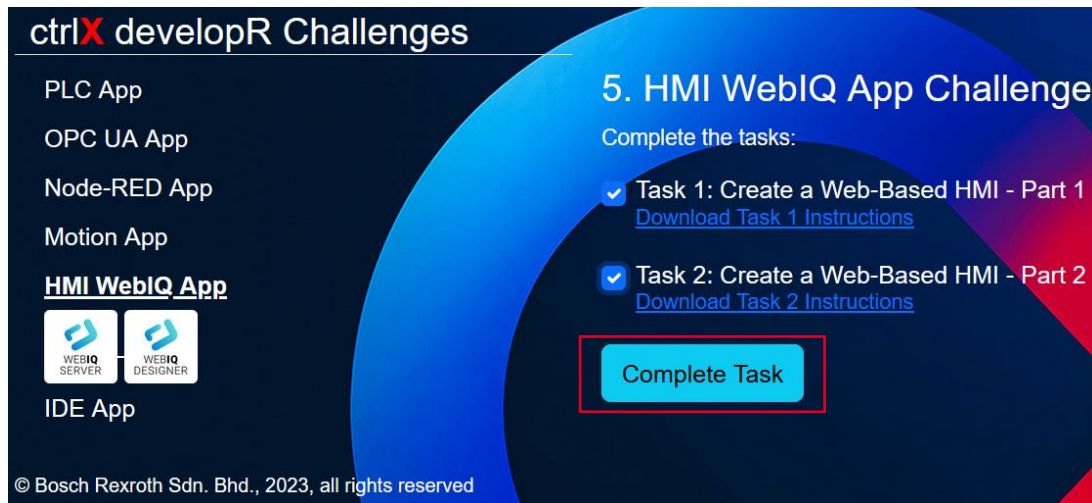
## Challenge 05: ctrlX WebIQ | Task 02

### Steps

Once you have completed Task 1 and Task 2, follow the steps below.

### How to complete the Smart HMI – WebIQ App Challenge

- Finally, click on the “**Complete Task**” button



- Once pressed, the button text will change to “Task Completed” and you will be notified with a message that the challenge has been successfully submitted.
- By pressing the “Complete Task” button, the duration it takes for the team to complete the challenge will be automatically submitted.
- Submission only can be done once per challenge.

**Congratulations, you’ve successfully completed the Smart HMI - WebIQ App challenge! You’re almost at the end!**

# Challenge 05: Smart HMI – WebIQ

## Congratulations!