OCS Training Workshop
LAB2

Download, Monitor, Debug
and Forcing

Lab 2: Download, Monitor, Debug and Forcing

Objective:
The objective of this lab is to give you the knowledge to use Cscape to download a program, monitor its registers, debug the logic and force values to the signals.

Procedure:

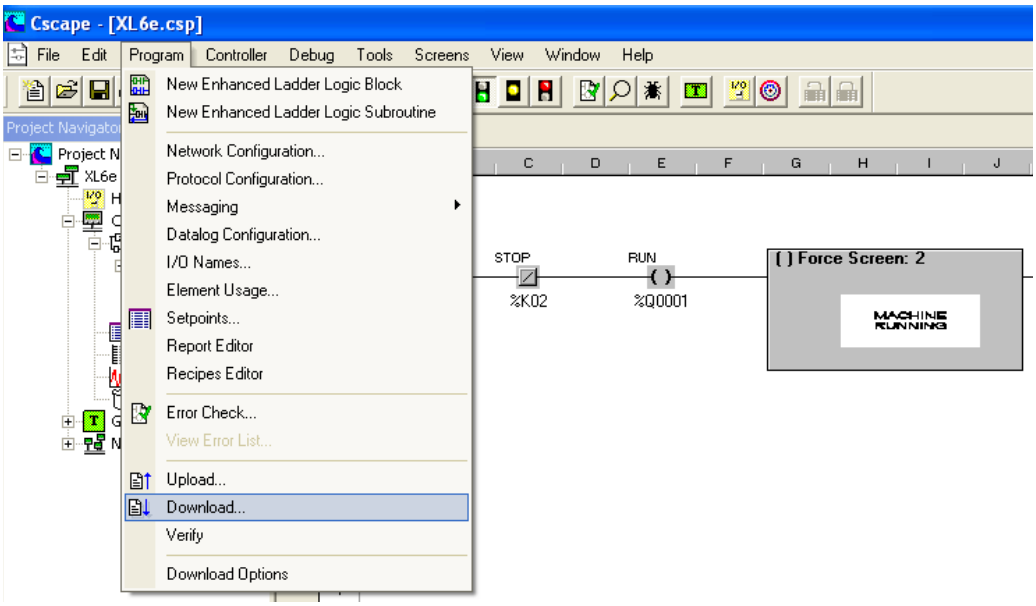
Step 1

- **Download the program to the XL6e.**

  Select the **Program** menu and click **Download**. Use the SmartLoad function when the Download dialog box appears. This helps to download only the blocks where changes have been made. The first download of a program however will download all the contents. Click OK.

  Once downloaded, make sure the XL6e is in Run mode (the green traffic light on the toolbar)

  Note that the controller will go in Stop mode temporarily during download.

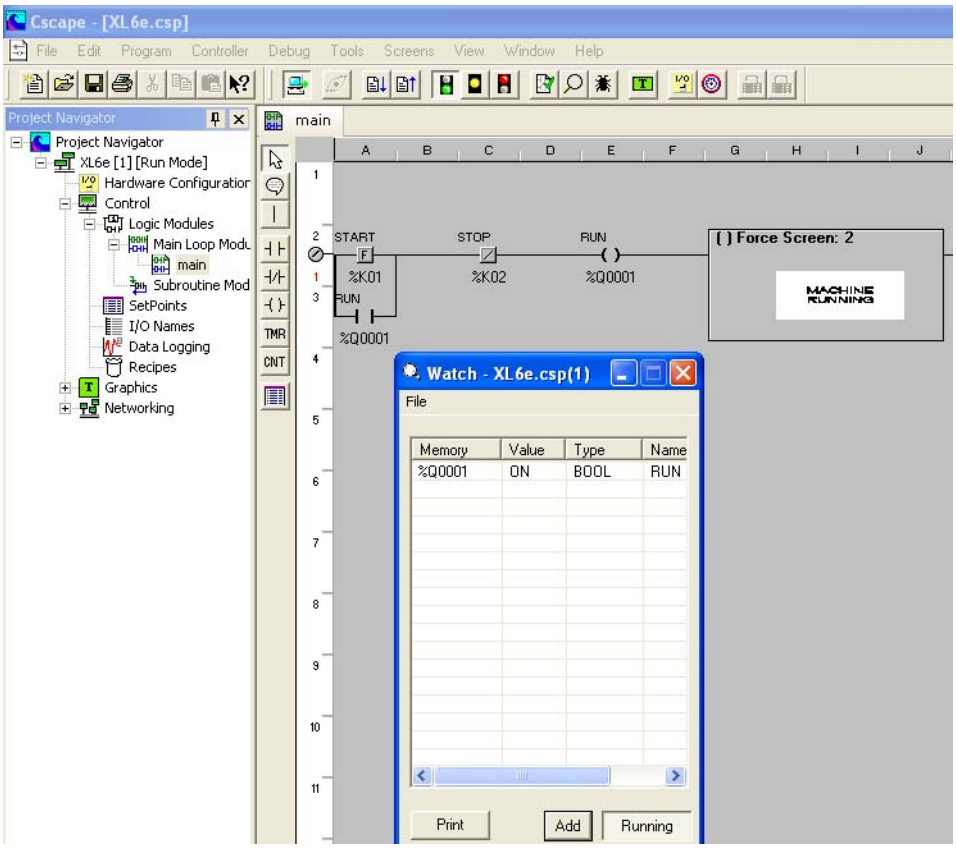


Lab 2: Download, Monitor, Debug and Forcing

Step 2

- **Monitor the program in the XL6e.**

  Select the **Controller** menu and click **Datawatch**. Click Add button on the Data Watch window. Add the output %Q1. Minimise the window and access it when required during the process execution.



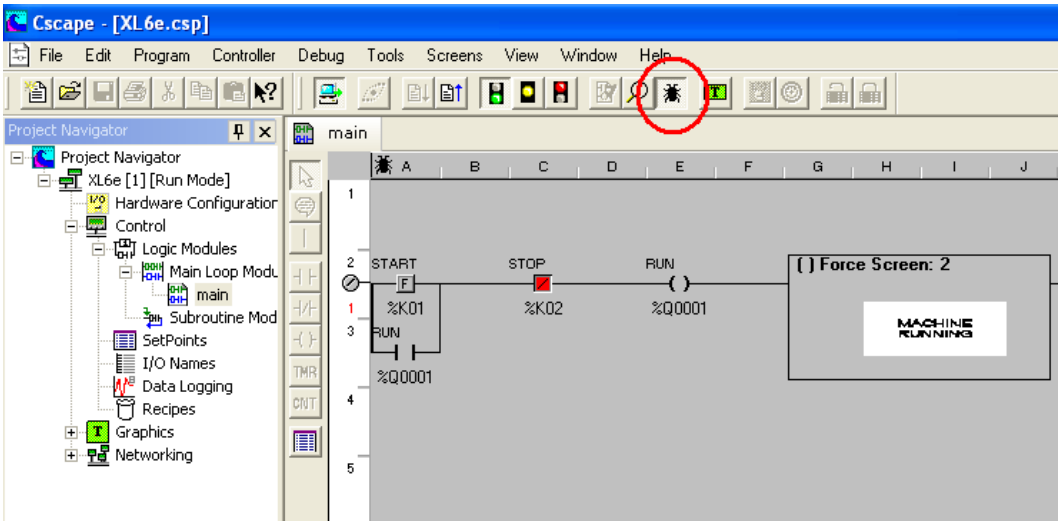
The Data type of a registers can be changed upon right click / Format on the register in the Data Watch.

Lab 2: Download, Monitor, Debug and Forcing

Step 3

- **Debug your program**

Click on the **Debug** and select **Debug/Monitor.** The STOP contact in the Ladder program should appear red since the contact is closed.



The screen should show MACHINE STOPPED.

Push the F1 key.
START should turn red until you release the F1 key.
The RUN coil and contact should both turn red.
The screen should change to MACHINE RUNNING.
Output 1 (%Q1) should turn ON
Push F2 key.
The output should turn OFF
The screen should show MACHINE STOPPED.

Lab 2: Download, Monitor, Debug and Forcing

Step 4

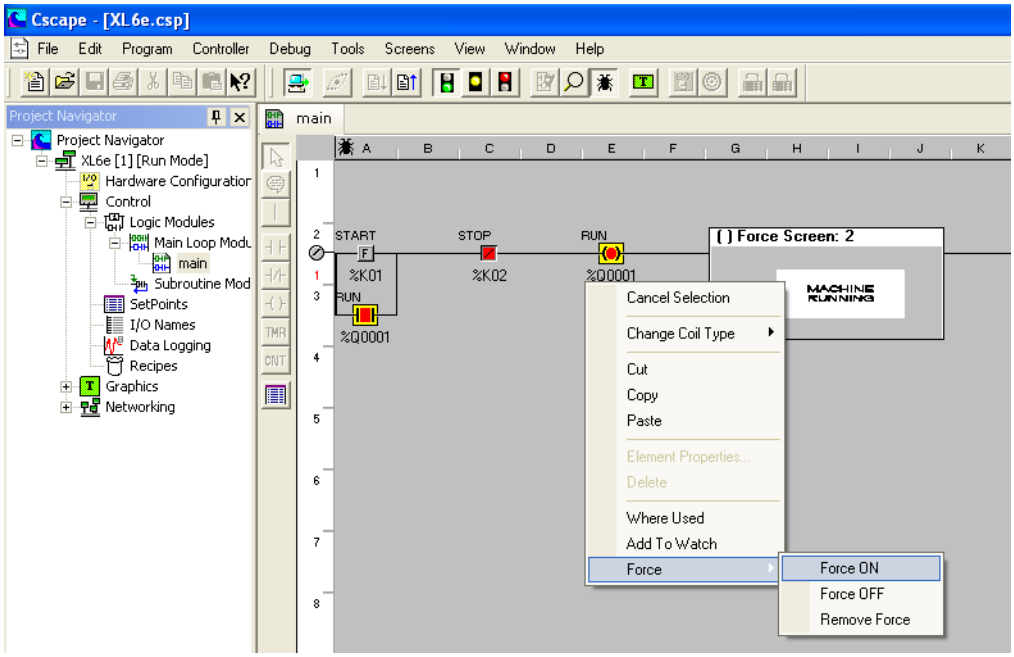
- **Forcing I/O's in your program:**

  Click **Debug** and select **Forcing(Overrides)/Forcing Enabled.** A warning is displayed and on accepting it forcing is enabled.

  Right Click on output coil %Q1 in ladder editor.
  Click **Force** and select **Force ON**.
  A message asks for the ladder to be placed in Debug mode, click OK.

  This places the Ladder in Debug mode and switches the output ON.

  Forcing can be disabled using Remove force. Force OFF will keep the coil in OFF mode, until Forcing is ON.



This completes the Lab for Download, Monitor, Debug and Forcing functions in Cscape. You have learnt to write an application program using Cscape and run it on an OCS.