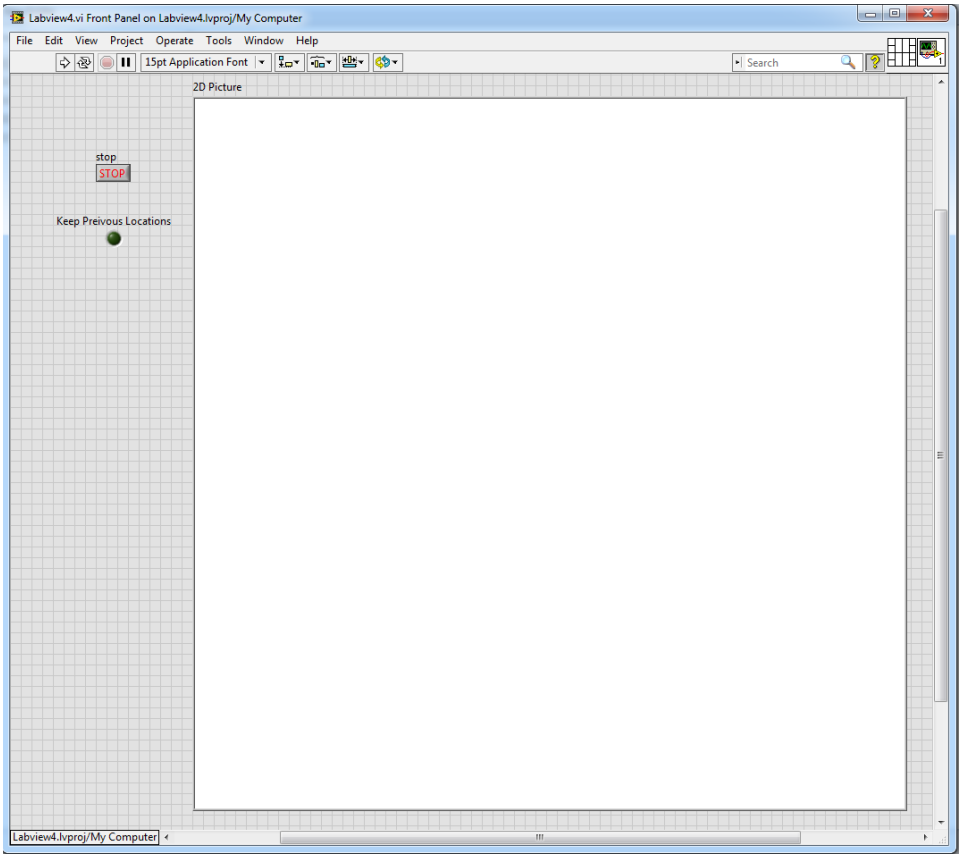
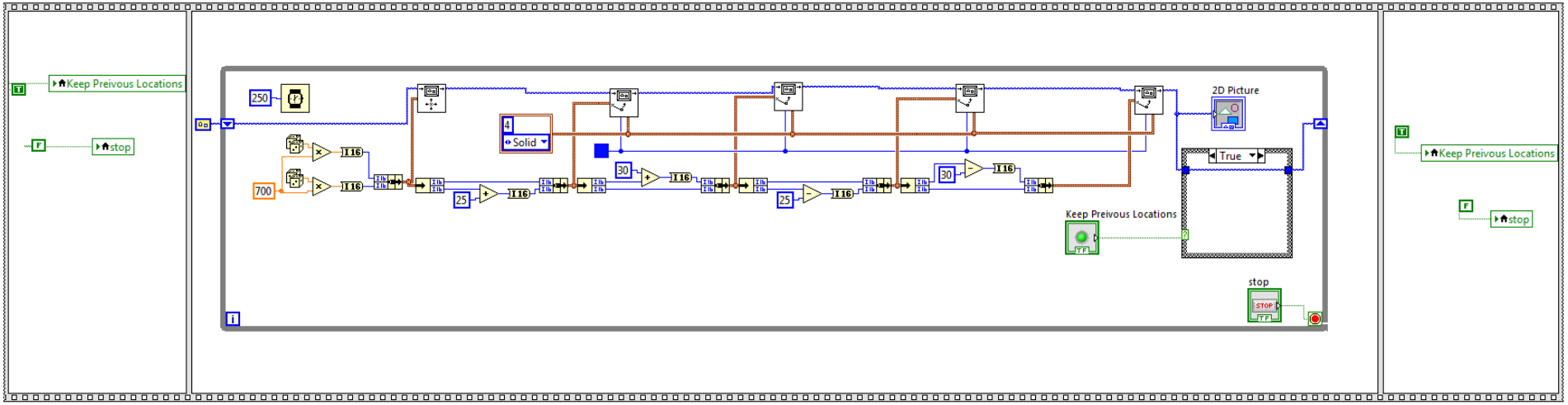
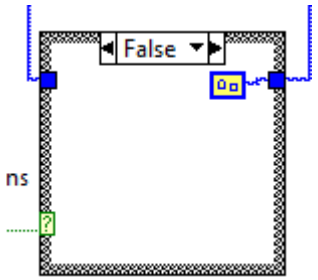
Labview Assignment #4, due before February 27th at 6:00pm. Simply demonstrate your program working. Grading for this assignment is full credit if you did the assignment and no credit if you did not complete the assignment. Make sure to ask questions if you get stuck.
First read through this tutorial http://www.ni.com/tutorial/7592/en/ and watch these two youtube videos about shift registers (or find other tutorials online).
https://www.youtube.com/watch?v=wRvpb9jtRlE
https://www.youtube.com/watch?v=4ivYARn2fy8
For this assignment we are going to start working with the 2D Picture block in Labview. In lab you will be using Labview to draw the robot course and update the position of the robot in a 2D Picture animation. Below is the Labview program I would like you to reproduce for this assignment. It shows you how to draw lines in the 2D Picture. Each time through the while loop it takes a random number between 0 and 1 and draws a 25 pixel by 30 pixel rectangle. (Of course this could have been done easier by using the Draw Rectangle block but I wanted to show how to combine multiple draw commands.) Then a shift register is used to keep track of all the lines printed in the 2D Picture as long as the Boolean LED is true. If you click on the Boolean LED making it false, the lines drawn in the previous loops should not be printed to the 2D Picture.
If your screen is big enough make the 2D Picture 800X800 pixels.
Location of the blocks that may be new to you for this assignment:
From the Front Panel:
Modern->Graph->Controls->2D Picture
Modern->Boolean->Round LED
From the block diagram:
Programming->Graphics & Sound->Picture Functions->Move Pen
Programming->Graphics & Sound->Picture Functions->Draw Line
Programming->Graphics & Sound->Picture Functions->Empty Picture
Programming->Numeric->Random Number (0-1)
Programming->Numeric->Conversion->I16
Programming->Cluster, Class & Variant->Unbundle and Bundle




Keep Preivous Locations
stop
250
700
I16
4
Solid
25
30
2D Picture
True
Keep Preivous Locations
stop
Keep Preivous Locations
stop


False
ns

False Case