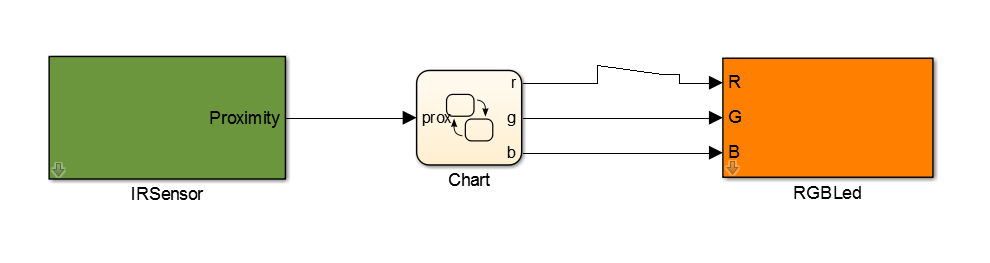
Goals: Introduce Stateflow charts through experimenting with variables

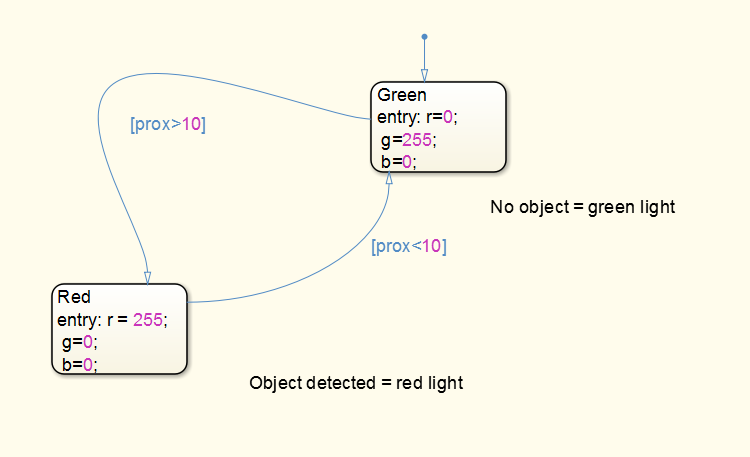
Standards Covered: (f), (g), (h), (i), (j)

Sequence:

The objective is to experiment with the proximity sensor. Different colored lights are to turn on at a variety of distances from the robot. These distances must be tested and recorded in external mode by creating the following code. Note: be sure to check that everyone’s external mode configuration is setup correctly.

1. With students create the following model in the Simulink workplane. You can also open up the completed model, reference: StateFlowRGBlentWithProximity.slx:



1. Have students experiment with changing the prox and r,g and b values in the charts. Show them where to find an RGB color table online.
2. Discuss the Stateflow model and how it flows. Check for student understanding by proposing additions to the model *(30 min)*

Evaluation:

1. All students have created their version of StateFlowRGBlentWithProximity.slx “Color Machine.” And can explain the colors they have added to each node.

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