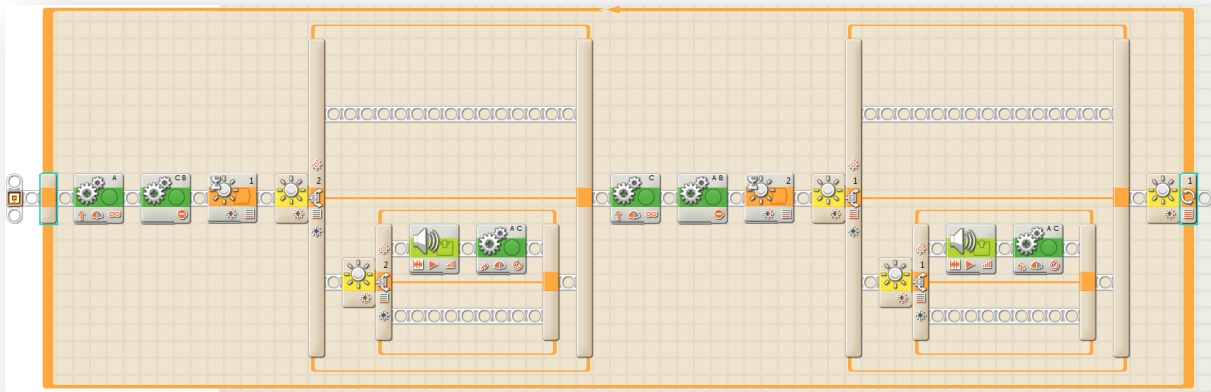

A COMPLETE RESCUE PROGRAM

A COMPLETE RESCUE PROGRAM

In this lesson we will combine all the programs we have created into one program so that the robot can complete the RoboCup Rescue course autonomously.

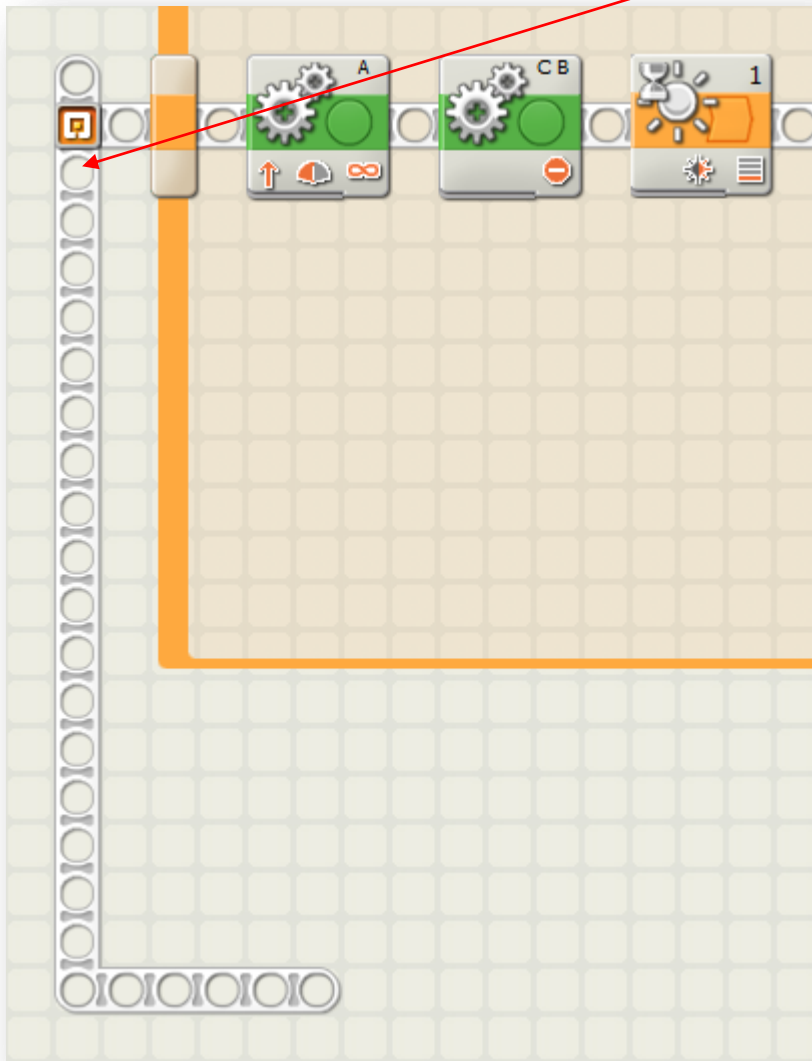
1. Open up the Detect Chemical Spill program you created. It should contain a working Line Follower that can negotiate the green intersection.



2. To this program we will add the Find the Victim program. As the robot does not know when the Chemical Spill will be found it needs to have a task running all the time that is waiting for Light Sensor 1 to detect the silver foil strip indicating the start of the Chemical Spill. When this happens the Line Follower task will finish. The Find the Victim task will then take over.

A COMPLETE RESCUE PROGRAM (CONT...)

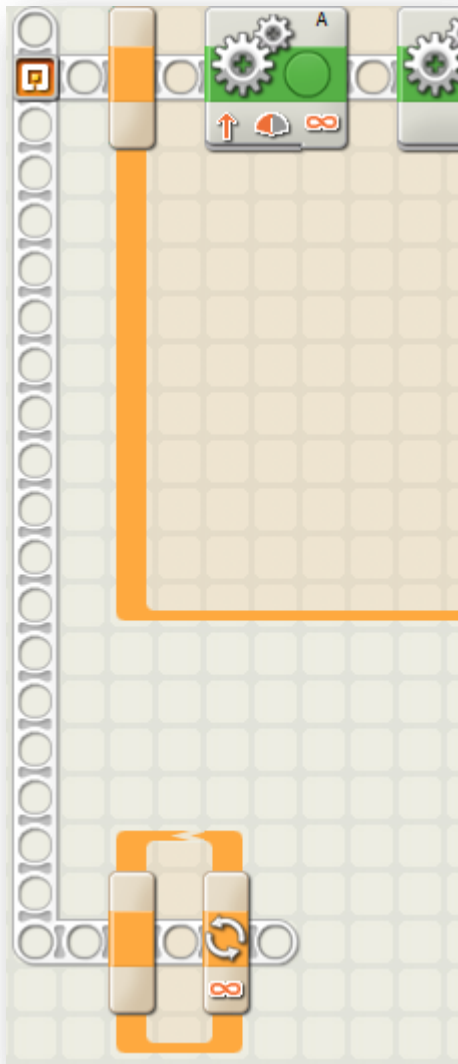
3. To add a task that runs at the same time as the main task we need to extend the Sequence Bar out from the starting point. To do this hover the mouse over the bottom of the Sequence Bar Tee.



Now hold down the Shift key and the left mouse button and drag down and then right, mimicking the extended sequence bar above. Double click to finish the job.

A COMPLETE RESCUE PROGRAM (CONT...)

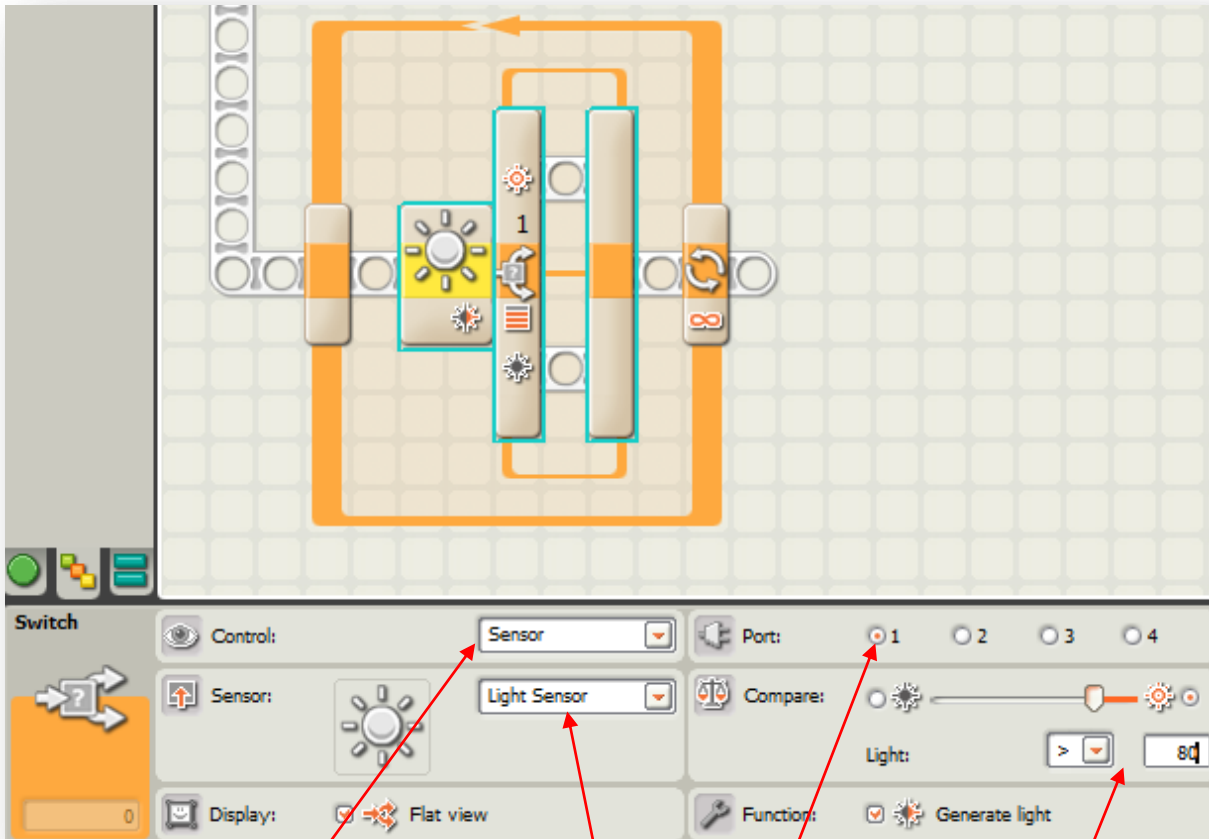
4. So that the task is constantly monitoring the stat of Sensor 1 and the presence of the foil tape we need to place a Loop Block in the Sequence Bar task.



- 4a. Change the Control property to Forever.

A COMPLETE RESCUE PROGRAM (CONT...)

- Next place a Switch Block into the Loop Block as shown below.

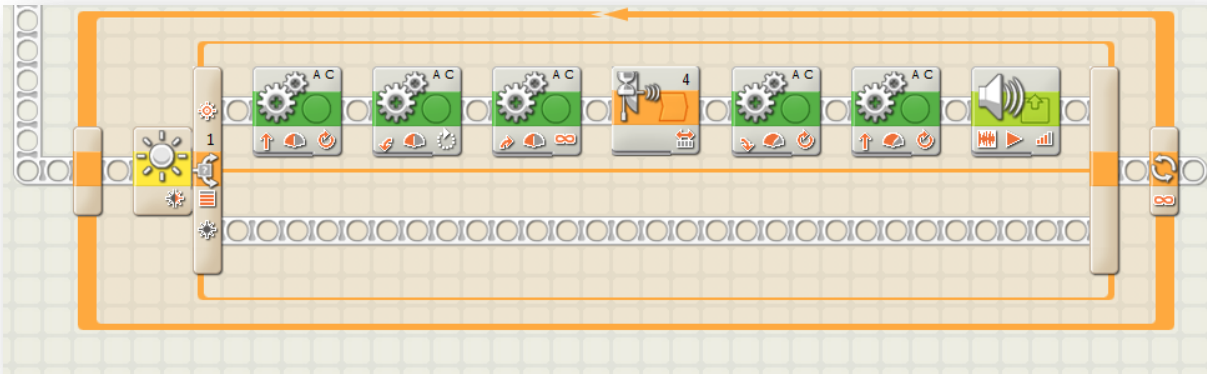


5a. Set the Control to Sensor, Sensor to Light Sensor, the Port to Port 1 and the Compare to > 80.

- Now go back to the Find the Victim program and select the program by lassoing all the Blocks. Select Edit and Copy. Navigate back to this All Together program and paste it onto the program screen.

A COMPLETE RESCUE PROGRAM (CONT...)

7. Drag the Find the Victim program onto the top bar of the Switch Block as shown below.



8. The Rescue program should now be complete.
- The top Loop Block contains the Line Follower and Turn of Green components.
 - The Loop Block is constantly looking for the foil strip that will indicate the beginning of the Chemical Spill.
 - The bottom task contains the Loop Block that contains the Find the Victim task. If the victim is found and removed successfully then the Rescue is a success.

