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Title: Color Hide and Seek

Problem Statement (1 line) -- *What is the problem/challenge you are addressing?*
The challenge is to give the robot a specific color within a designated area and make it find it.

Goal (1-3 lines) -- *What are the aims of your project? What will you demonstrate*
I will demonstrate color detection and autonomous object avoidance within a given space. The robot will be able to do this within at least 50mm. It will then take a picture from a specified distance way to show the location and return to its original position.

Approach (short paragraph) -- *what is your strategy for solving the problem or achieving the goal?*

To solve this problem I will have to create an algorithm that will efficiently scan an entire space. I have to find the most efficient way to make the robot move in a given space without returning to a position that was already visited and make it do this quickly.. This will be the hardest part. I am considering giving it an option of how far the color is. This way instead of wasting time going through an entire area, it will have an idea of how far to go. I will then begin object avoidance and add the color detection. The given space would have to lack the input color or else it would not find it. To make it easier I will use colors that are not typically found in our classroom.

Tentative timeline
(FORMAT: task, # of days)

1. Brainstorm each part of the code, 1 day
2. Create the algorithm for making the robot scan an entire area, 2 days
3. Incorporate object avoidance and make sure the robot scans around objects, 2 days
4. Incorporate the color detection, 2 days
5. Add the photo taking capability and returning robot to its original position, 1 day