

### Task:

1. Identify/Extract information from the cubes like positions and colors.
2. Find the cube location in 3d
3. Create a group of bottom and top cubes accordingly
3. Create a dictionary/map and store the above information.

### Input Data format:

1. Under the folder input data you can find three test images.
2. Along with the three test images, an additional file is provided called laser\_scan\_data.txt

This file provides laser scan data for each of the images in case you want to use it.(Think!! [some random youtube series uses this]). Eg, test\_1.png correlates to scan\_bottom\_1 and scan\_top\_1 in the laser\_scan\_data file. Similarly for the other two as well.

3. Projection matrix is provided. (Why ?? Who knows)

### Output Data format:

1. Pretty print Bottom cube color, position(in 3d) and project this data on image as well
2. Pretty print Top cube color, position(in 3d) and project this data on image as well

### Words of Wisdom:

-> *First, solve the problem. Then, write the code.*

– John Johnson

-> *Nobody should start to undertake a large project. You start with a small trivial project, and you should never expect it to get large. If you do, you'll just overdesign and generally think it is more important than it likely is at that stage. Or worse, you might be scared away by the sheer size of the work you envision. So start small, and think about the details. Don't think about some big picture and fancy design. If it doesn't solve some fairly immediate need, it's almost certainly over-designed. And don't expect people to jump in and help you. That's not how these things work. You need to get something half-way useful first, and then others will say "hey, that almost works for me", and they'll get involved in the project.*

– Linus Torvalds

-> *The proper use of comments is to compensate for our failure to express ourself in code.*

– Robert C. Martin(Clean Code)

-> *Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius – and a lot of courage – to move in the opposite direction.*

– Albert Einstein

Finally,

-> *When in doubt, use brute force.*

– Ken Thompson