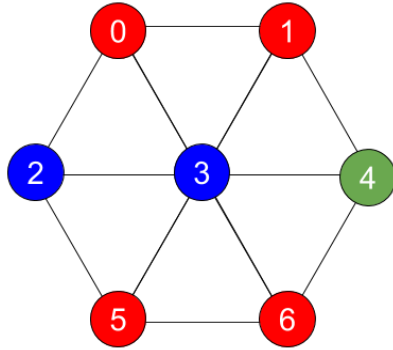


Requirement for identically-colored connected components

Find connected components by color in triangle mesh with Open3D.

Implement a function to return a list of identically-colored connected components. An identically-colored connected component is a connected component where each vertex in the component has the same color. In this question, a connected component is represented by a list of vertex indices.

Example triangle mesh



A triangle mesh is represented by vertices and triangles.

In this example, there are 7 vertices:

[0, 1, 2, 3, 4, 5, 6]

There are 6 triangles:

[(0, 2, 3), (0, 3, 1), (1, 3, 4), (2, 5, 3), (3, 5, 6), (3, 6, 4)]

Each vertex has a color:

[red, red, blue, blue, green, red, red]

Given this mesh, the expected output is:

[[0, 1], [2, 3], [4], [5, 6]]

where the order of the lists are sorted ascendingly by the smallest element in each list; and within each list, the vertices are sorted ascendingly by their indices.

We then write the results into "**results.txt**", where each line in the text file represents one connected component. In each line, vertex indices are separated by space:

```
0 1
2 3
4
5 6
```