

```
package edu.caltech.cs2.coloring;

import edu.caltech.cs2.datastructures.ChainingHashSet;
import edu.caltech.cs2.datastructures.MinFourHeap;
import edu.caltech.cs2.interfaces.IPriorityQueue;
import edu.caltech.cs2.interfaces.ISet;

public class DSatur {
    public static void color(NodeGraph g) {
        MinFourHeap<Integer> vertices = new MinFourHeap<>();
        while (vertices.peek().priority == 0){
            double maxColor = 0.0;
            int maxData = 0;
            for (IPriorityQueue.PQElement<Integer> vertex : vertices){
                if (vertex.priority > maxColor) {
                    maxColor = vertex.priority;
                    maxData = vertex.data;
                }
                else if (vertex.priority == maxColor){
                }
            }
            vertices.increaseKey(vertices.peek());
        }
    }
}
```