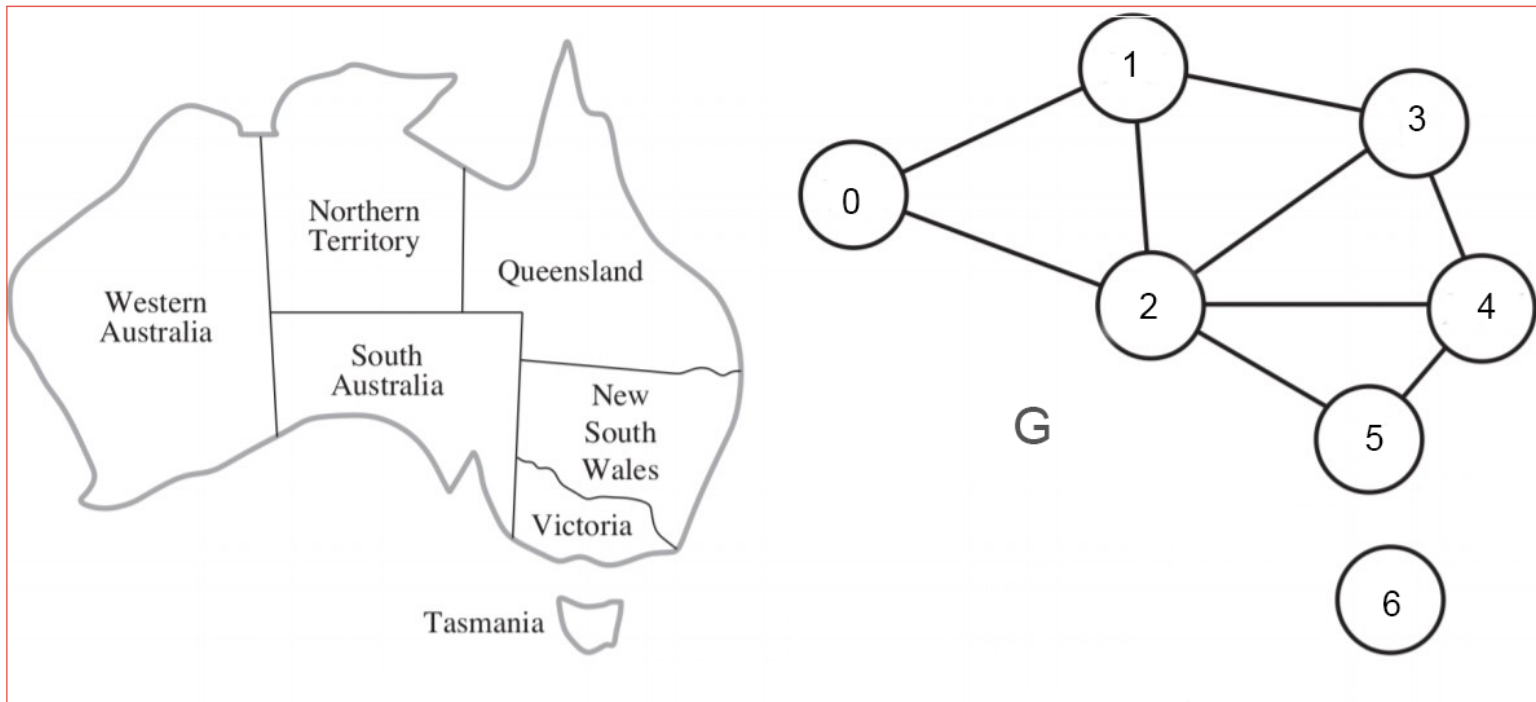


Problem: assign a color to each state of the graph G. You cannot assign the same color to neighboring states. You can use only three colors.

Input: a graph G where each node represents a state and each edge represent a border between 2 states

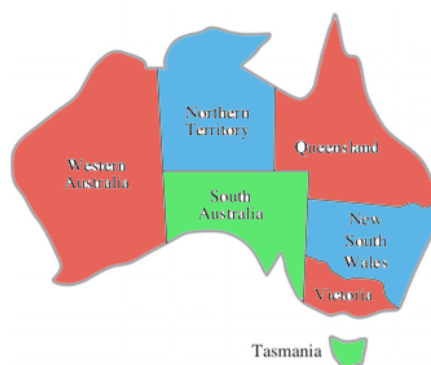
Output: a valid coloration of each node



example

input

```
G = {  
  0: {1,2},  
  1: {0,2,3},  
  2: {0,1,3,4,5},  
  3: {1,2,4},  
  4: {3,2,5},  
  5: {2,4},  
  6: {},  
}
```



output

```
solution = {  
  0: 'red' ,  
  1: 'blue' ,  
  2: 'green' ,  
  3: 'red' ,  
  4: 'blue' ,  
  5: 'red' ,  
  6: 'green' ,  
}
```