

main.py

Output

```
1  colors = ['Red', 'Green', 'Blue']
2  regions = ['WA', 'NT', 'SA', 'Q', 'NSW', 'V', 'T']
3  neighbors = {
4      'WA': ['NT', 'SA'],
5      'NT': ['WA', 'SA', 'Q'],
6      'SA': ['WA', 'NT', 'Q', 'NSW', 'V'],
7      'Q': ['NT', 'SA', 'NSW'],
8      'NSW': ['Q', 'SA', 'V'],
9      'V': ['SA', 'NSW'],
10     'T': []
11 }
12
13 def is_valid(r, c, a): return all(a.get(n) != c for n in neighbors[r])
14 def solve(a={}):
15     if len(a) == len(regions): return a
16     r = next(x for x in regions if x not in a)
17     for c in colors:
18         if is_valid(r, c, a):
19             a[r] = c
20             res = solve(a)
21             if res: return res
22             del a[r]
23     return None
24
25 print(solve())
26
```

Run

