CODE Master DSA, Python and C with step-by-step code visualization. VISUALIZER See it in action

Python Online Compiler

Programiz PRO

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

Run