Program 11: Map Coloring Problem

Aim

To write a Python program to solve the Map Coloring problem using the backtracking algorithm, ensuring that no two adjacent regions (nodes) have the same color.

Algorithm

1. Represent the map as a graph where:
   * Each region is a node.
   * An edge exists between nodes if the regions share a boundary.
2. Define a list of available colors.
3. Assign a color to each node one by one.
4. Before assigning, check if the color is valid (i.e., no adjacent node has the same color).
5. If valid, assign and move to the next node.
6. If no valid color exists, backtrack and try a different color.
7. Continue until all nodes are colored.

PYTHON CODE



OUTPUT

