Generate | create a dataframe with 2 columns and 10 rows | Close

```
def is_safe(graph, color, v, c):
    for i in range(len(graph)):
        if graph[v][i] == 1 and color[i] == c:
            return False
    return True

def graph_coloring(graph, m, color, v):
    if v == len(graph):
        return True
    for c in range(1, m + 1):
        if is_safe(graph, color, v, c):
            color[v] = c
            if graph_coloring(graph, m, color, v + 1):
                return True
            color[v] = 0
    return False

def solve_graph_coloring(graph, m):
    color = [0] * len(graph)
    if graph_coloring(graph, m, color, 0):
        print("Solution found:")
        print(color)
    else:
        print("No solution exists")

graph = [
    [0, 1, 1, 1],
    [1, 0, 1, 0],
    [1, 1, 0, 1],
    [1, 0, 1, 0]
]

m = 3
solve_graph_coloring(graph, m)
```

```
Solution found:
[1, 2, 3, 2]
```

Start coding or generate with AI.