Test Cases

Grid (Original Array) :

```
Original
[0, 0, 1, 0, 0]
[0, 1, 0, 0, 1]
[1, 0, 0, 1, 0]
[0, 1, 0, 1, 1]
```

Case	Function	Expected	Output	Passed?

1	**group_connections()**
	
	grid: Original Grid
		[2, 2, 1, 3, 3]
		
		[2, 1, 3, 3, 1]
		
		[1, 3, 3, 1, 4]
		
		[5, 1, 3, 1, 1]
			```Group Connection```
			```[2, 2, 1, 3, 3]```
			```[2, 1, 3, 3, 1]```
			```[1, 3, 3, 1, 4]```
			```[5, 1, 3, 1, 1]```
				Yes

2	**Merge_groups()**
	
	grid: Merged Grid
	group1: 2
	group2: 4
		[2, 2, 1, 3, 3]
		
		[2, 1, 3, 3, 1]
		
		[1, 3, 3, 1, 4]
		
		[5, 1, 3, 1, 1]
		
		Return the same grid since 2 and 4 don't share a border.
			```Merge Grouped Connection```
			```2,4```
			```[2, 2, 1, 3, 3]```
			```[2, 1, 3, 3, 1]```
			```[1, 3, 3, 1, 4]```
			```[5, 1, 3, 1, 1]```
				Yes

3	**merge_groups()**
	
	grid: Merged Grid
	group1: 3
	group2: 5
		[2, 2, 1, 6, 6]
		
		[2, 1, 6, 6, 1]
		
		[1, 6, 6, 1, 4]
		
		[6, 6, 6, 1, 1]
			```Merge Grouped Connection```
			```3,5```
			```[2, 2, 1, 6, 6]```
			```[2, 1, 6, 6, 1]```
			```[1, 6, 6, 1, 4]```
			```[6, 6, 6, 1, 1]```
				Yes

4	**merge_groups()** grid: Merged Grid group1: 2 group2: 5	[6, 6, 1, 3, 3] [6, 1, 3, 3, 1] [6, 3, 3, 1, 4] [6, 1, 3, 1, 1]	Merge Grouped Connection 2,5 [6, 6, 1, 3, 3] [6, 1, 3, 3, 1] [6, 3, 3, 1, 4] [6, 1, 3, 1, 1]	Yes
5	**merge_groups()** grid: Merged Grid(2,5) group1: 2 group2: 6	[7, 7, 7, 7, 7] [7, 7, 7, 7, 1] [7, 7, 7, 7, 4] [7, 7, 7, 1, 1]	Merge Grouped Connection 3,6 from 2,5 merged grid [7, 7, 7, 7, 7] [7, 7, 7, 7, 1] [7, 7, 7, 1, 4] [7, 7, 7, 1, 1]	Yes
6	**merge_groups()** grid: Merged Grid(2,5) group1: 2 group2: 6	[6, 6, 1, 3, 3] [6, 1, 3, 3, 1] [6, 3, 3, 1, 4] [6, 1, 3, 1, 1] Return the same array since 2 should have been changed to 6 from the Merged Grid(2,5)	Merge Grouped Connection 2,6 from 2,5 merged grid 2 not in grid [6, 6, 1, 3, 3] [6, 1, 3, 3, 1] [6, 3, 3, 1, 4] [6, 1, 3, 1, 1]	Yes