Artificial Intelligence Methods
Assignment 9
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Tasks

1. Find the utilities for this described environment by using the value iteration algorithm and provided functions and constants. Afterward, display utilities similar to how it is done in Figure 16.3 of the textbook. You can do it either by printing the utilities as a table to the console, or visualize it with a library such as Matplotlib by following this guide (Creating annotated heatmaps) or use Seaborn's heatmap function.

1.1339590707602807	0.47579924207581564	1.4574163529902193	0.1640393234421698
1.512612254242351	-9.999999990322253	2.0830984478429353	-9.999999990322253
3.3006627096466525	5.784066120120589	5.5320811758137705	-9.999999990322253
-9.999999990322253	7.06822107115873	8.349326701085435	9.999999990322253

2. Based on the utilities you found, find the corresponding greedy policy and visualize it. You can do it either by printing the (state, action) pairs to the console, or by visualizing it with a library such as Matplotlib.

```
Greedy Policy:
State 0: Action down
State 1: Action up
State 2: Action down
State 3: Action up
State 4: Action down
State 5: Action left
State 6: Action down
State 7: Action left
State 8: Action right
State 9: Action down
State 10: Action down
State 11: Action left
State 12: Action left
State 13: Action right
State 14: Action right
State 15: Action left
```