

Kattis

PROBLEMS CONTESTS RANKLISTS JOBS(1) HELP

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ID	DATE	PROBLEM	STATUS	CPU	LANG
TEST CASES					
5407639	02:11:25	Grid	✔ Accepted	0.75 s	Python 3

Submission contains 1 file:

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FILENAME	FILESIZE	SHA-1 SUM	
grid.py	1356 bytes	05281f371557b9e16cbe32a7a228a98292a282cd	<div>download</div>

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grid.py

```
1 import sys
2 
3 def grid(g):
4     n, m = len(g), len(g[0])
5 
6     # DP table: steps[i][j] = minimum number of steps to cell ij
7     steps = [[-1]*m for _ in range(n)]
8     steps[0][0] = 0
9 
10    # Hashmap/dictionary {row: [col1, col2, ...] storing visited cells
11    visited = {}
12 
13    # Function to check if cell ij is visited
14    def is_visited(i, j):
15        return steps[i][j] > -1
16 
17    # Function returning generator of valid moves from cell i,j
```

Question 2: Restaurant Orders

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Submission

ID	DATE	PROBLEM	STATUS	CPU	LANG
TEST CASES					
5407996	03:50:59	Restaurant Orders	✓ Accepted	0.10 s	Python 3
					

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FILENAME	FILESIZE	SHA-1 SUM	
orders.py	1588 bytes	37382e06892710a87e341c475bdaac6af4e56234	download

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orders.py

```
1 import sys
2
3 def orders(costs, orders):
4     # DP table: v[i] = -2 if no combination of items sums up to cost i ('Impossible')
5     #               -1 if more than one combination of items sums up to cost i ('Ambiguous')
6     #               k >= 0, if there's one unique combination, and item k led to cost i
7     v = [-2]*(max(orders) + 1)
8
9     # Initialize first cell, doesn't follow above rules
10    v[0] = 0
11
12    # Fill DP table according to above rules
13    for i, cost in enumerate(costs):
14        for j in range(len(v)):
15            if v[j] >= 0 and j + cost < len(v):
16                # Set cell to item index if first time reaching cell,
17                # else set -1 for 'Ambiguous'
18                v[j + cost] = i if v[j + cost] == -2 else -1
19
20    # if v[-1] == -1 and i + cost < len(v):
```