```
>>>
        ----- RESTART: E:/ansuai/hillclimbing.py ------
Input initial node: a
Input a's heuristic value: 10
How many successor nodes in node 'a': 3
Enter 1'th successor of a: b
Enter b's heuristic value: 10
Enter 2'th successor of a: i
Enter j's heuristic value: 8
Enter 3'th successor of a: f
Enter f's heuristic value: 7
How many successor nodes in node b?: 2
Enter 1'th successor of b: d
Enter d's heuristic value: 4
Enter 2'th successor of b: c
Enter c's heuristic value: 2
How many successor nodes in node j?: 1
Enter 1'th successor of j: k
Enter k's heuristic value: 0
How many successor nodes in node f?: 2
Enter 1'th successor of f: e
Enter e's heuristic value: 5
Enter 2'th successor of f: g
Enter g's heuristic value: 3
How many successor nodes in node d?: 0
How many successor nodes in node c?: 1
Enter 1'th successor of c: h
Enter h's heuristic value: 0
How many successor nodes in node k?: 0
How many successor nodes in node e?: 1
Enter 1'th successor of e: i
Enter i's heuristic value: 6
How many successor nodes in node g?: 0
How many successor nodes in node h?: 0
How many successor nodes in node i?: 1
Enter 1'th successor of i: k
Enter k's heuristic value: 0
How many successor nodes in node k?: 0
The user input is as follows:
{'a': [['b', 10], ['j', 8], ['f', 7]], 'b': [['d', 4], ['c', 2]], 'j': [['k', 0]], 'f': [['e', 5],
['g', 3]], 'c': [['h', 0]], 'e': [['i', 6]], 'i': [['k', 0]]}
ANSWER:
For given Data, the local maxima is at node 'g' with heuristic value 3
>>>
```

```
======== RESTART: E:/ansuai/board.py ==================
enter the queen number =5
1 0 0 0 0
0 0 0 1 0
0 1 0 0 0
0 0 0 0 1
0 0 1 0 0
>>>
  Python 3.6.3 Shell
                                                               _ _
  File Edit Shell Debug Options Window Help
 Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 17:26:49) [MSC v.1900 32 bit (Inte
  on win32
 Type "copyright", "credits" or "license()" for more information.
 Enter the capacity of jug 1: 4
 Enter the capacity of jug 2: 3
 Enter the goal state for jug 1: 2
 Enter the goal state for jug 2: 0
 Initial state = (0,0)
 Capacities = (4, 3)
 Goal state = (2, 0)
 Enter the rule: 2
 Current state: (0, 3)
 Enter the rule: 8
 Current state: (3, 2)
 Enter the rule: 2
 Current state: (3, 3)
 Enter the rule: 6
 Current state: (4, 2)
 Enter the rule: 3
 Current state: (0, 2)
 Enter the rule: 8
 Current state: (2, 0)
 Goal state reached: (2, 0)
 >>>
```