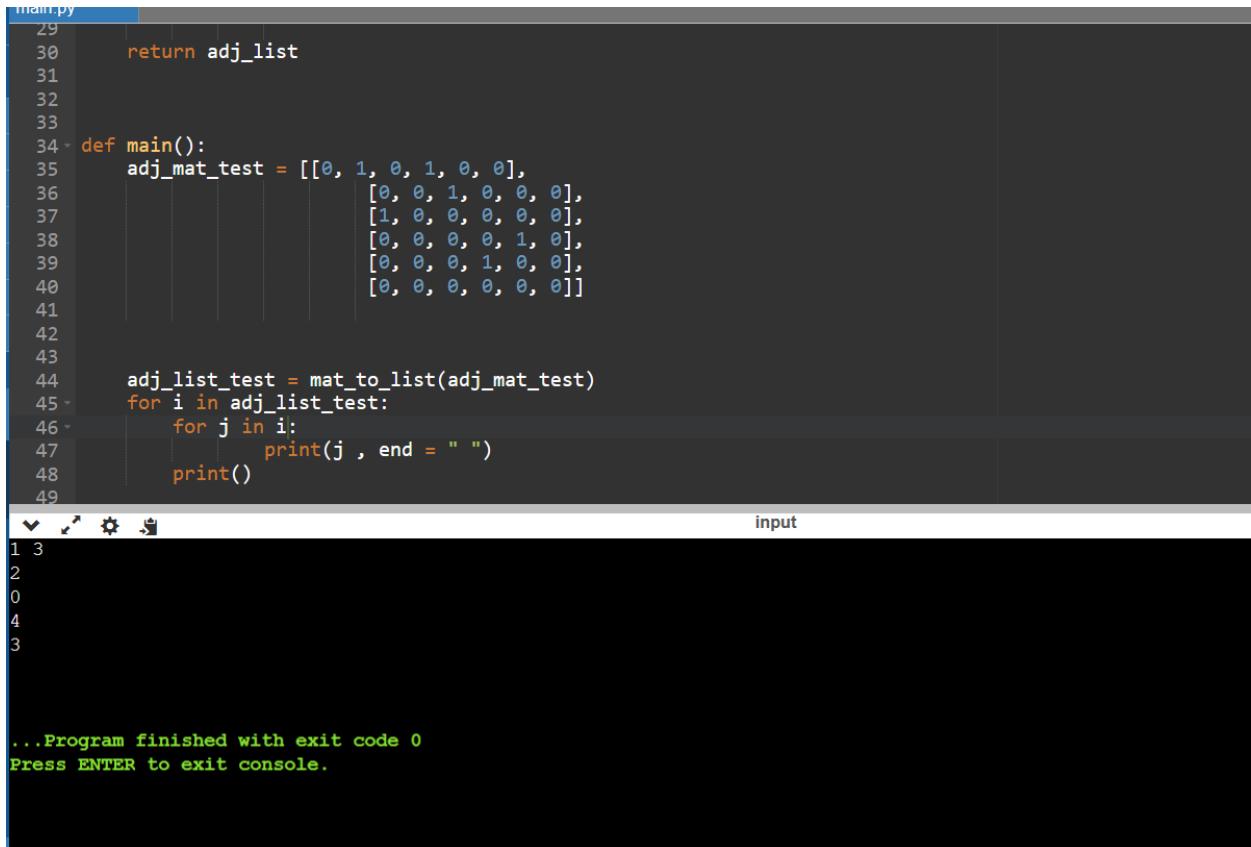


# Unit tests of the python codes

## Adjacency matrix to Adjacency list test:



The screenshot shows a terminal window with two panes. The top pane displays a Python script named `main.py` with the following code:

```
main.py
29
30     return adj_list
31
32
33
34 def main():
35     adj_mat_test = [[0, 1, 0, 1, 0, 0],
36                     [0, 0, 1, 0, 0, 0],
37                     [1, 0, 0, 0, 0, 0],
38                     [0, 0, 0, 0, 1, 0],
39                     [0, 0, 0, 1, 0, 0],
40                     [0, 0, 0, 0, 0, 0]]
41
42
43
44     adj_list_test = mat_to_list(adj_mat_test)
45     for i in adj_list_test:
46         for j in i:
47             print(j, end = " ")
48     print()
```

The bottom pane shows the output of the script:

```
1 3
2
0
4
3

... Program finished with exit code 0
Press ENTER to exit console.
```

Test the reachable function:

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main.py

```
35 adj_mat_test = [[0, 1, 0, 1, 0, 0],  
36 [0, 0, 1, 0, 0, 0],  
37 [1, 0, 0, 0, 0, 0],  
38 [0, 0, 0, 0, 1, 0],  
39 [0, 0, 0, 1, 0, 0],  
40 [0, 0, 0, 0, 0, 0]]  
41  
42  
43 adj_list_test = mat_to_list(adj_mat_test)  
44 for i in adj_list_test:  
45     for j in i:  
46         print(j, end = " ")  
47     print()  
48  
49  
50 adj_list_test = [[1, 3], [2], [0], [4], [3], []]  
51  
52 reachable_set = reachable(adj_list_test, 0)  
53 print("now for a start node of 0")  
54 for i in reachable_set:  
55     print(i, end = " ")  
56  
57  
58
```

input

```
1 3  
2  
0  
4  
3  
  
now for a start node of 0  
0 1 2 3 4
```

Program finished with exit code 0  
Press ENTER to exit console.

```
35 adj_mat_test = [[0, 1, 0, 1, 0, 0],  
36 [0, 0, 1, 0, 0, 0],  
37 [1, 0, 0, 0, 0, 0],  
38 [0, 0, 0, 0, 1, 0],  
39 [0, 0, 0, 1, 0, 0],  
40 [0, 0, 0, 0, 0, 0]]  
41  
42  
43 adj_list_test = mat_to_list(adj_mat_test)  
44 for i in adj_list_test:  
45     for j in i:  
46         print(j, end = " ")  
47     print()  
48  
49  
50 adj_list_test = [[1, 3], [2], [0], [4], [3], []]  
51  
52 reachable_set = reachable(adj_list_test, 3)  
53 print("now for a start node of 3")  
54 for i in reachable_set:  
55     print(i, end = " ")  
56  
57  
58
```

input

```
1 3  
2  
0  
4  
3  
  
now for a start node of 3  
3 4
```

...Program finished with exit code 0  
Press ENTER to exit console.