

Adjacency matrix

	A	B	C	D
A	0	1	1	0
B	1	0	1	0
C	1	1	0	1
D	0	0	1	0

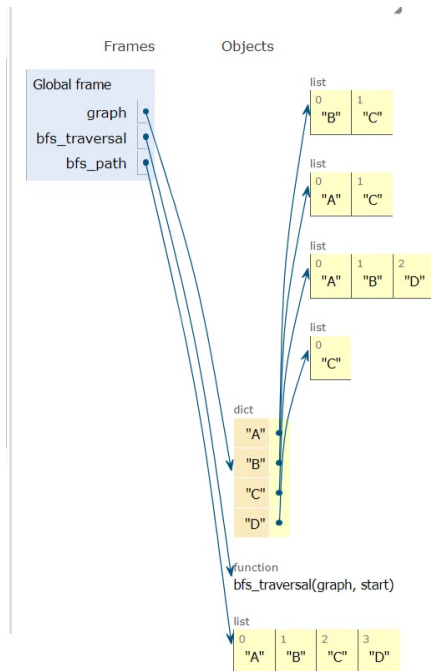
Adjacency list

A	B	C
B	A	C
C	A	B
D	C	

Edge list

0	A	B	A/B
1	A	C	A/C
2	B	C	B/C
3	C	D	C/D

code: <https://onlinegdb.com/eKx3cVUimA>



Adjacency matrix

	A	B	C	D	E	F
A	0	1	1	0	0	1
B	1	0	0	0	0	0
C	1	0	0	1	0	0
D	0	0	1	0	1	0
E	0	0	0	1	0	0
F	1	0	0	0	1	0

Adjacency list

A	B	C	F
B	A		
C	A	D	
D	C	E	
E	D		
F	A	E	

Edge list

0	A	B	A/B
1	A	C	A/C
2	A	F	A/F
3	C	D	C/D
4	D	E	D/E
5	F	E	F/E

```

10 def bfs_traversal(graph, start):
11     explored = []
12     queue = [start]
13     while queue:
14         node = queue.pop(0)
15         if node not in explored:
16
17             explored.append(node)
18             neighbours = graph[node]
19             for neighbour in neighbours:
20                 queue.append(neighbour)
21             return explored
22
23     bfs_path = bfs_traversal(graph, 'A')
24     print(bfs_path)

```

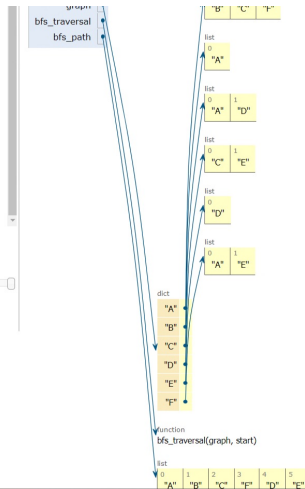
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Done running (91 steps)

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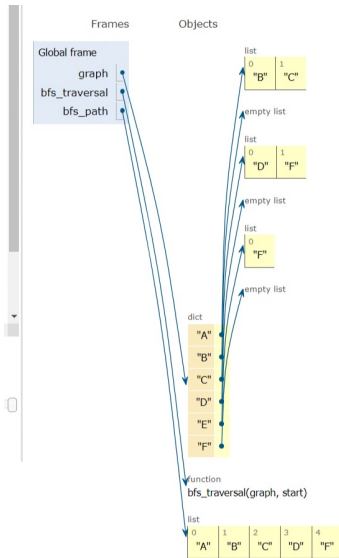


code:

<https://onlinegdb.com/-ap3l56sb8>

Ex 3.

Create edge A,B,C,D,E,F and connect A,B,A,C,C,D,C,F,E,F



Code:

```
1 graph = {'A': ['B', 'C'],
2          'B': [],
3          'C': ['D', 'F'],
4          'D': [],
5          'E': ['F'],
6          'F': []}
7
8
9
10 def bfs_traversal(graph, start):
11     explored = []
12     queue = [start]
13     while queue:
14         node = queue.pop(0)
15         if node not in explored:
16             explored.append(node)
17             neighbours = graph[node]
18             for neighbour in neighbours:
19                 queue.append(neighbour)
20     return explored
21
22
23 bfs_path = bfs_traversal(graph, 'A')
24 print(bfs_path)
```

Disconnect C,F,A,B,C,D

```
4 U: ['B', 'C']
5 E: ['F'],
6 F: []
7 }
8
9
10 def bfs_traversal(graph, start):
11     explored = []
12     queue = [start]
13     while queue:
14         node = queue.pop(0)
15         if node not in explored:
16             explored.append(node)
17             neighbours = graph[node]
18             for neighbour in neighbours:
19                 queue.append(neighbour)
20     return explored
21
22
23 bfs_path = bfs_traversal(graph, 'A')
24 print(bfs_path)
```

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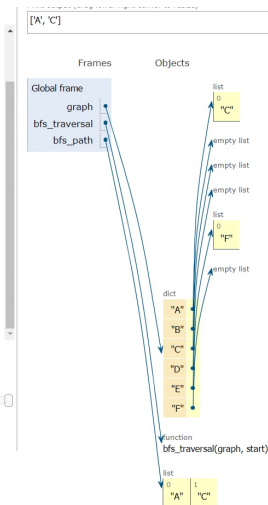
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Done running (29 steps)



connect AE, BC, DF

```
5 'E': [],
6 'F': []
7 }
8
9
10 def bfs_traversal(graph, start):
11     explored = []
12     queue = [start]
13     while queue:
14         node = queue.pop(0)
15         if node not in explored:
16
17             explored.append(node)
18             neighbours = graph[node]
19             for neighbour in neighbours:
20                 queue.append(neighbour)
21     return explored
22
23 bfs_path = bfs_traversal(graph, 'A')
24 print(bfs_path)
```

[Edit this code](#)

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Done running (29 steps)

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