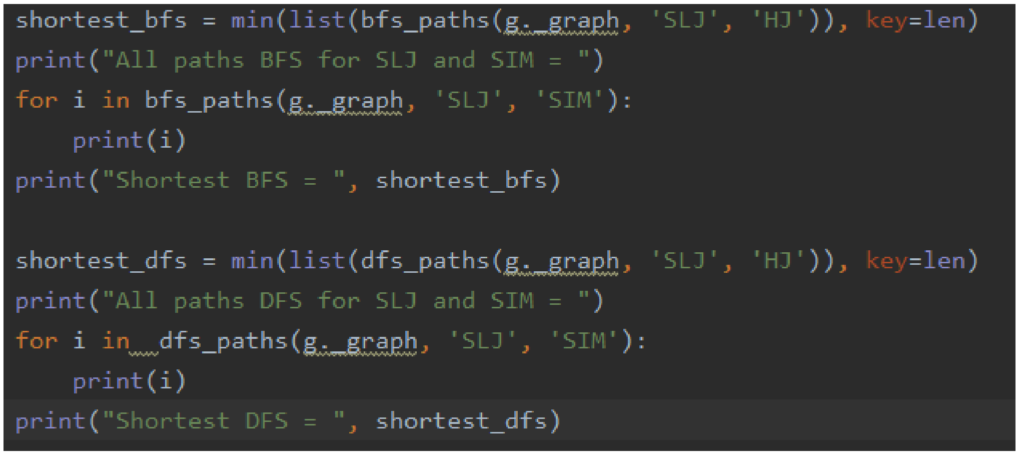
Andrew Breslauer, Shortest Path with DFS and BFS:

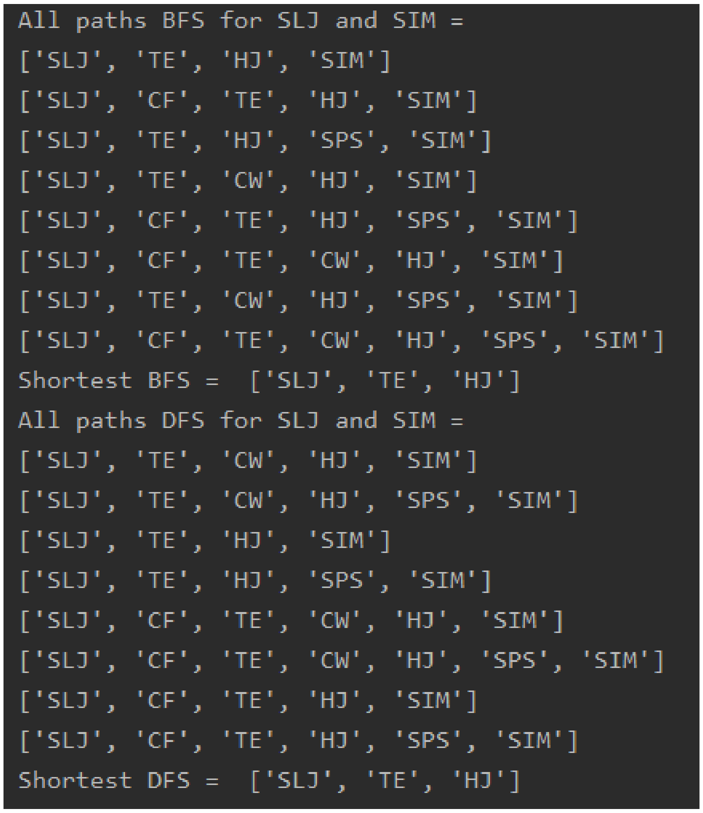
Code:



```
shortest_bfs = min(list(bfs_paths(g._graph, 'SLJ', 'HJ')), key=len)
print("All paths BFS for SLJ and SIM = ")
for i in bfs_paths(g._graph, 'SLJ', 'SIM'):
    print(i)
print("Shortest BFS = ", shortest_bfs)

shortest_dfs = min(list(dfs_paths(g._graph, 'SLJ', 'HJ')), key=len)
print("All paths DFS for SLJ and SIM = ")
for i in  dfs_paths(g._graph, 'SLJ', 'SIM'):
    print(i)
print("Shortest DFS = ", shortest_dfs)
```

Solutions:



```
All paths BFS for SLJ and SIM =
['SLJ', 'TE', 'HJ', 'SIM']
['SLJ', 'CF', 'TE', 'HJ', 'SIM']
['SLJ', 'TE', 'HJ', 'SPS', 'SIM']
['SLJ', 'TE', 'CW', 'HJ', 'SIM']
['SLJ', 'CF', 'TE', 'HJ', 'SPS', 'SIM']
['SLJ', 'CF', 'TE', 'CW', 'HJ', 'SIM']
['SLJ', 'TE', 'CW', 'HJ', 'SPS', 'SIM']
['SLJ', 'CF', 'TE', 'CW', 'HJ', 'SPS', 'SIM']
Shortest BFS =  ['SLJ', 'TE', 'HJ']
All paths DFS for SLJ and SIM =
['SLJ', 'TE', 'CW', 'HJ', 'SIM']
['SLJ', 'TE', 'CW', 'HJ', 'SPS', 'SIM']
['SLJ', 'TE', 'HJ', 'SIM']
['SLJ', 'TE', 'HJ', 'SPS', 'SIM']
['SLJ', 'CF', 'TE', 'CW', 'HJ', 'SIM']
['SLJ', 'CF', 'TE', 'CW', 'HJ', 'SPS', 'SIM']
['SLJ', 'CF', 'TE', 'HJ', 'SIM']
['SLJ', 'CF', 'TE', 'HJ', 'SPS', 'SIM']
Shortest DFS =  ['SLJ', 'TE', 'HJ']
```