

```

1 func main(Graph G):
2
3     create arr lowest_fluc_cycles //array of lowest fluctuation cycles for each vertex v
4
5     for vertex v in V: // O(n) iterations
6
7         // find paths to all vertices from v, s.t. paths have lowest fluctuation
8
9         fluc[], prev[] = mod_Dijkstra(G, v) //O(m + nlogn) call
10
11         create arr candidates // 'shortest' cycles containing v
12
13         for vertex u where there exists e(u,v): //for all back edges to v
14             candidates[u] = (fluc[u] + |e(u,v) - e(u,prev[u])|) //calculate fluctuation of that cycle
15
16         smallest_fluc_u = minimum(candidates) //find candidate with smallest fluctuation O(n), quickselect
17
18         lowest_fluc_cycles[v] = (prev[smallest_fluc_u], candidates[smallest_fluc_u]) //store path and fluctuation in function-level array
19
20     solution = minimum(lowest_fluc_cycles) //select path with lowest fluctuation O(n), quickselect
21
22     return solution[0] //return path of lowest fluctuation
23

```