from queue import PriorityQueue

graph={

'arad':{'zerind':75,'sibiu':140,'timisoara':118},

'zerind':{'arad':75,'oradea':71},

'oradea':{'zerind':71,'sibiu':151},

'timisoara':{'arad':118,'lugoj':111},

'sibiu':{'arad':140,'oradea':151,'fagaras':99,'rimnicu vilcea':80},

'lugoj':{'timisoara':111,'mehadia':70},

'fagaras':{'sibiu':99,'bucharest':211},

'rimnicu vilcea':{'sibiu':80,'pitesti':97,'craiova':146},

'mehadia':{'lugoj':70,'dobreta':75},

'dobreta':{'mehadia':75,'craiova':120},

'bucharest':{'fagaras':211,'pitesti':101,'urziceni':85,'giurglu':90},

'giurglu':{'bucharest':90},

'pitesti':{'bucharest':101,'craiova':138,'rimnicu vilcea':97},

'craiova':{'dobreta':120,'rimnicu vilcea':146,'pitesti':138},

'urziceni':{'hirsova':98,'vaslui':142,'bucharest':85},

'hirsova':{'urziceni':98,'eforie':86},

'vaslui':{'urziceni':142,'lasi':92},

'lasi':{'vaslui':92,'neamt':87},

'eforie':{'hirsova':86},

'neamt':{'lasi':87}

}

def search(graph,start,end):

queue = PriorityQueue()

queue.put((0,[start]))

while not queue.empty():

node=queue.get()

current=node[1][len(node[1])-1]

if end in node[1]:

print("Path found" ,str(node[1]))

print("cost =" ,str(node[0]))

break

cost = node[0]

for neigh in graph[current]:

temp=node[1][:]

temp.append(neigh)

queue.put((cost+graph[current][neigh],temp))

search(graph,'arad','bucharest')