def readMtx(file, sparse = True):

with open(file) as f:

next(ln for ln in f if ln.strip() != "" and ln[0] != '%')

return DiGraph([[(float if i == 2 else int)(x) for i, x in enumerate(ln.split())]

for ln in f if ln.strip() != "" and ln[0] != '%'],

sparse = sparse, loops = False, multiedges = False)

G = readMtx('jpwh\_991.mtx')

pr = G.plot(edge\_labels = True, edge\_color = 'green')

def minimum(p, A):

v = None

razdalja = float('inf')

for u in A:

if p[u] <= razdalja:

v = u

razdalja = p[u]

return v

def Dijkstra(G,s):

inf = float('inf')

d = {u:inf for u in G}

Pi = {u:None for u in G}

d[s] = 0

Q = set(G.vertices())

while len(Q)> 0:

u = minimum(d, Q)

Q.remove(u)

for \_, v, t in G.edges\_incident(u):

if v in Q and d[v] > d[u] + t:

d[v] = d[u] + t

Pi[v] = u

return d, Pi

t = timeit("Dijkstra(G,5)", seconds = True)

Dijkstra(G,1)

t