

```

In [5]: graph={
    'a':[("c",4), ("d",1)],
    'b':[("e",3), ("f",1)],
    'c':[],
    'd':[],
    'e':[("h",5)],
    'f':[("i",2), ("g",3)],
    'g':[],
    'h':[],
    'i':[],
    's': [("a", 3), ("b", 2)]
}

heuristic = {
    "a": 12,
    "b": 4,
    "c": 7,
    "d": 3,
    "e": 8,
    "f": 2,
    "h": 4,
    "i": 9,
    "s": 13,
    "g": 0
}

start_node = "s"
goal_node = "g"
print("Path")
print(start_node)
path = [start_node]

def search_goal(curr_node):
    if(curr_node == goal_node):
        return
    max_heuristic = 1000000
    for i in graph[curr_node]:
        if(heuristic[i[0]]<=max_heuristic):
            next_node = i[0]
            max_heuristic = heuristic[i[0]]
    print(next_node)
    path.append(next_node)
    search_goal(next_node)

search_goal(start_node)

cost = 0
for i in range(len(path)-1):
    c=-1
    for j in graph[path[i]]:
        if(j[0]==path[i+1]):
            c=j[1]
    cost += c
print("Cost:",cost)

```

Path

s

b

f

g

Cost: 6

In []: