AI - Lab

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```
def addEdge ( u,v, dis):
    graph[u].append(v,dis);

def dfs(src, target, maxdepth, graph)

    if src == target :
        return 0

    if maxdepth <=0:
        return
    sum = print(src)      sum = INT_MAX
    for i in graph[src]:
        if ( dfs( i[0] target, maxdepth, graph != -1)
            sum = min(sum, dfs( i[0], target, maxdepth, graph) + i[1])


    return sum

def Idsearch ( src, target, maxDepth):

    for ans =
    graph = defaultdict(list)
    for i in range( maxDepth):
        if ans = min (ans, dfs( src, target, i)

    return ans.
```

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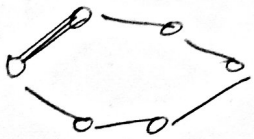
```
addEdge(S,A,3)
addEdge(A,D,6)
addEdge(D,F,1)
addEdge(F,G,1)
addEdge(S,B,2)
addEdge(C,G,20)

target = G  src = S

a=IdaStarSearch(src, target, maxdepth)
# print(a)
```



```
if(a==-1)
    print("Not possible to reach G")
else
    print("Optimal Path")
    print(a)
```