def fun(s,dc,memo):

if(s in memo):

return memo[s]

ans=[]

if(dc[s]==1):

ans=[s]

for i in range(1,len(s)):

if(dc[s[:i]]==1):

a=fun(s[i:],dc,memo)

for x in a:

ans.append(s[:i]+" "+x)

memo[s]=ans

return ans

class Solution:

def wordBreak(self, s: str, wordDict: List[str]) -> List[str]:

dc=defaultdict(lambda:0)

for a in wordDict:

dc[a]=1

return(fun(s,dc,{}))