DynamicApproach

from datetime import datetime  
start\_time=datetime.now()  
def NumberOfCoins(TypesOfCoins, sum):  
 dp = [0] \* (sum+1)  
 for i in range(1,sum+1):  
 dp[i]=max(TypesOfCoins)  
 for coin in range(len(TypesOfCoins)):  
 if i-TypesOfCoins[coin]>= 0:  
 *# print("coin",coin)  
 # print("i-types of coin[coin]",i-TypesOfCoins[coin])* result=dp[i-TypesOfCoins[coin]]  
 *# print('----result',result)* if result!=max(TypesOfCoins):  
 *# print(dp[i])* dp[i]=min(dp[i],result + 1)  
  
 *# print("dp",dp)* return dp[sum]  
TypesOfCoins=list(map(int,input("Enter the types of coins: ").split(',')))  
sum=int(input('Enter the sum value= '))  
print('The total number of coins required are = ',NumberOfCoins(TypesOfCoins,sum))

end\_time=datetime.now()  
print('Starting-time= ',start\_time)  
print('Ending-time= ',end\_time)  
print('Excution-Taken-Time= ',end\_time-start\_time)

Graphical user interface, text, application

Description automatically generated