# Optimal Storage on Tapes using Greedy Method

def optimalstorage(n,new\_dict):

sorted\_dict = {}

temp = []

totalsum = t\_sum = 0

print("Sorted Lengths for the programs ....")

s\_v = sorted(new\_dict.values())

for i in s\_v:

for k in new\_dict.keys():

if new\_dict[k] == i:

sorted\_dict[k] = new\_dict[k]

break

print(sorted\_dict)

for i in sorted\_dict:

#print(sorted\_dict[i])

v = sorted\_dict[i]

t\_sum += v

temp.append(t\_sum)

totalsum = sum(temp)

print("Minimum value of sum of lengths",totalsum)

print("Mean Retrieval time is",totalsum/n)

n = int(input("Enter Number of Programs :"))

new\_dict = {}

prgm = list()

length = list()

for i in range(n):

p = int(input("Enter the Program number :"))

l = int(input("Enter the Program length :"))

prgm.append(p)

length.append(l)

new\_dict = dict( zip(prgm,length))

print("Entered Lengths for the programs ....")

print(new\_dict)

optimalstorage(n,new\_dict)