

#fractional Knapsack problem

class Item:

def __init__(self, value, weight):

self.value = value

self.weight = weight

def fractionalKnapsack(W, arr):

arr.sort(key=lambda x: x.value / x.weight, reverse=True)

final_value = 0.0

for item in arr:

if item.weight <= W:

W -= item.weight

final_value += item.value

else:

final_value += item.value * W / item.weight

break

return final_value

if __name__ == "__main__":

W = 50

arr = [Item(60, 10), Item(100, 20), Item(120, 30)]

max_val = fractionalKnapsack(W, arr)

print("Maximum value we can obtain =", int(max_val))