

Title of the Assignment: Write a program to solve a fractional Knapsack problem using a greedy method.

Code :

```
class Item:
    def init (self, value, weight):
        self.value = value
        self.weight = weight
def fractionalKnapsack(W, arr):
    # Sorting Item on basis of ratio
    arr.sort(key=lambda x: (x.value/x.weight), reverse=True)
    # Result(value in Knapsack)
    finalvalue = 0.0
    #Looping through all Items
    for item in arr:
        # If adding Item won't overflow,
        # add it completely
        if item.weight <= W:
            W -= item.weight
            finalvalue += item.value
        # If we can't add current Item,
        # add fractional part of it
        else:
            finalvalue += item.value * W / item.weight
            break
    # Returning final value
    return finalvalue
# Driver Code
if name == " main ":
    W = 50
    arr = [Item(60, 10), Item(100, 20), Item(120, 30)]
    # Function call
    max_val = fractionalKnapsack(W, arr)
    print(max_val)
```

Output :

Maximum value we can obtain = 24