Problem 4: The weight of **N** items and their corresponding values aregiven. We have to put these items in a knapsack of weight **W** such that

the **total value** obtained is **maximized.**

```python
class Item:
    def __init__(self, value, weight):
        self.value = value
        self.weight = weight

def fractionalKnapsack( W, arr, n):
    arr.sort(key=lambda x: x.value / x.weight, reverse=True)
    curWeight = 0
    finalvalue = 0.0
    for i in range(n):
        if curWeight + arr[i].weight <= W:
            curWeight += arr[i].weight
            finalvalue += arr[i].value
        else:
            remain = W - curWeight
            finalvalue += arr[i].value / arr[i].weight * remain
            break
    return finalvalue


n = 3
W = 50
arr = [Item(60, 10), Item(100, 20), Item(120, 30)]

ans = fractionalKnapsack(W, arr, n)
print("The maximum value is", ans)
```

```
32    ans = fractionalKnapsack(W, arr, n)
33    print("The maximum value is", ans)
```

input

The maximum value is 240.0

...Program finished with exit code 0
Press ENTER to exit console.