

Problem Statement: 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):

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

    finalvalue = 0.0

    for item in arr:

        if item.weight <= W:

            W -= item.weight

            finalvalue += item.value

        else:

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

            break

    return finalvalue

if __name__ == "__main__":

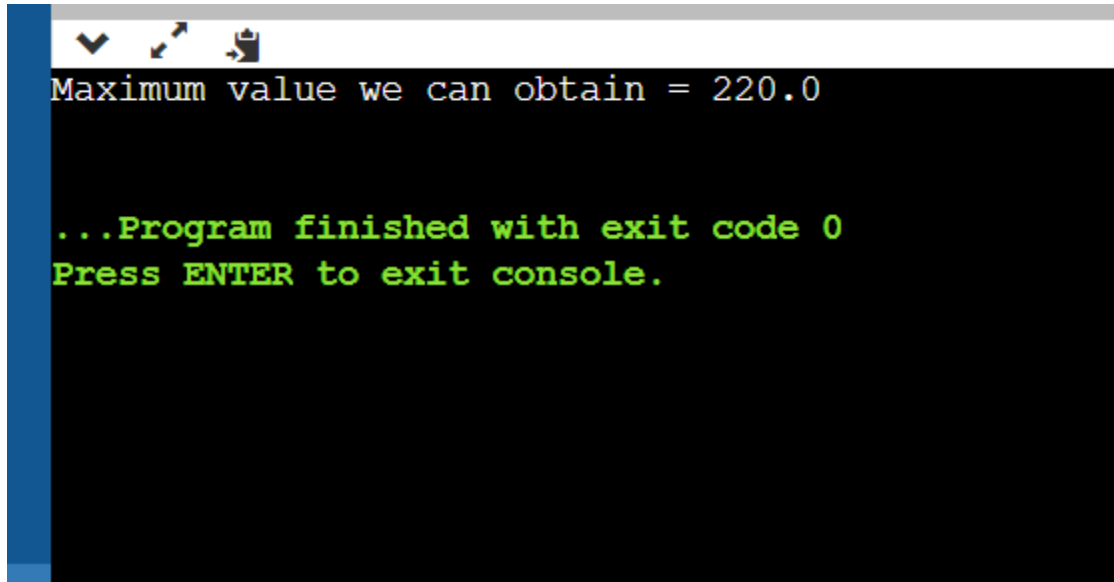
    W = 70

    arr = [Item(80, 30), Item(100, 30), Item(120, 40)]

    max_val = fractionalKnapsack(W, arr)
```

```
print ('Maximum value we can obtain = {}'.format(max_val))
```

OUTPUT:

A screenshot of a console window with a black background and a blue title bar. The title bar contains three icons: a checkmark, a magnifying glass, and a document. The console displays the text "Maximum value we can obtain = 220.0" in white. Below this, the text "...Program finished with exit code 0" and "Press ENTER to exit console." is displayed in green.

```
Maximum value we can obtain = 220.0

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