Source Code :

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


def fractional_knapsack(capacity, items):
    items.sort(key=lambda x: x.ratio, reverse=True)

    total_value = 0
    remaining_capacity = capacity

    for item in items:
        if item.weight <= remaining_capacity:
            remaining_capacity -= item.weight
            total_value += item.value
        else:
            fraction = remaining_capacity / item.weight
            total_value += item.value * fraction
            break

    return total_value


def main():
    n = int(input("Enter the number of items: "))
    items = []

    for i in range(n):
        value = float(input(f"Enter the value of item {i + 1}: "))
        weight = float(input(f"Enter the weight of item {i + 1}: "))
        items.append(Item(value, weight))

    capacity = float(input("Enter the capacity of the knapsack: "))
```

```
        max_value = fractional_knapsack(capacity, items)


        print(f"Maximum value that can be put in the knapsack: {max_value:.2f}")


if __name__ == "__main__":
    main()
```

OUTPUT :

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PS D:\Data science> python -u "d:\Data science\daa3.py"
Enter the number of items: 3
Enter the value of item 1: 60
Enter the weight of item 1: 10
Enter the value of item 2: 100
Enter the weight of item 2: 20
Enter the value of item 3: 120
Enter the weight of item 3: 30
Enter the capacity of the knapsack: 50
Maximum value that can be put in the knapsack: 240.00
PS D:\Data science>
```