Knapsack-greedy_method

Implement in Java, the 0/1 Knapsack problem using Greedy method

Input Format

7 15 6 10 18 15 3 5 7 1 2 4 5 1 3 7

Constraints

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Output Format

Net Profit: 55.333333333333336 The objects picked up into knapsack are: 1.0 1.0 1.0 1.0 1.0 0.6666666666666666 0.0

Sample Input 0

```
7
15
6
10
18
15
3
5
7
1
2
4
5
1
3
7
```

Sample Output 0

```
Net Profit: 55.333333333333336
The objects picked up into knapsack are:
1.0
1.0
1.0
1.0
1.0
0.6666666666666666
0.0
```

Submissions: 86
Max Score: 10
Difficulty: Medium

Rate This Challenge:

More

Java 7

```
//224G1A0553
import java.util.Scanner;
class GKnapsack
{
 int n;
 double c;
 double p[];
 double w[];
 public GKnapsack(int n,double c,double[] p,double[] w)
 {
 super();
 this.n=n;
 this.c=c;
 this.p=p;
 this.w=w;
 }
 void compute()
 {
 int i;
 double[] x=new double[n+1];
 for(i=0;i<n;i++)
 {
 x[i]=0.0;
 }
 double rc=c;
 for(i=0;i<n;i++)
 {
 if(w[i]>rc)break;
 x[i]=1;
 rc=rc-w[i];
 }
 if(i<=n)
 {
 x[i]=rc/w[i];
 }
 double netProfit=0.0;
 for(i=0;i<n;i++)
 {
 if(x[i]>0.0)
 {
 netProfit=netProfit+x[i]*p[i];
 }}
 System.out.println("Net Profit: "+netProfit);
 System.out.println("The objects picked up into knapsack are:");
 for(i=0;i<n;i++)
 {
 System.out.println(x[i]+" ");
 }}}
public class KpGreedy
{
 public static void main(String[] args)
 {
 int n;
 double c;
```

```
55  Scanner input=new Scanner(System.in);
56  //System.out.println("Enter number of objects");
57  n=input.nextInt();
58  double[] p=new double[n+1];
59  double[] w=new double[n+1];
60  int i;
61  //System.out.println("Enter capacity of Knapsack");
62  c=input.nextDouble();
63  //System.out.println("Enter profit for each "+n+" objects");
64  for(i=0;i<n;i++)
65  p[i]=input.nextDouble();
66  //System.out.println("Enter weight for each "+n+" objects");
67  for(i=0;i<n;i++)
68  w[i]=input.nextDouble();
69  GKnapsack gk=new GKnapsack(n,c,p,w);
70  gk.compute();
71  }}
```

Line: 71 Col: 3

Upload Code as File Test against custom input Run Code Submit Code

Testcase 0 ✔

Congratulations, you passed the sample test case.

Click the **Submit Code** button to run your code against all the test cases.

Input (stdin)

```
7
15
6
10
18
15
3
5
7
1
2
4
5
1
3
7
```

Your Output (stdout)

```
Net Profit: 55.333333333333336
The objects picked up into knapsack are:
1.0
1.0
1.0
1.0
1.0
0.6666666666666666
0.0
```

Expected Output

```
Net Profit: 55.333333333333336
The objects picked up into knapsack are:
1.0
1.0
1.0
1.0
```

```
1.0
0.6666666666666666
0.0
```