

```

1 #include<stdio.h>
2
3 #define num_obj 7
4
5
6 void init_arrays(float* p_by_w,int n,float* profit,float* weight,float*
solutions){
7     for(int i=0;i<n;i++){
8         p_by_w[i]=profit[i]/weight[i];
9         solutions[i]=0;
10    }
11 }
12
13 int main(){
14     float profits[]={10,5,15,7,6,18,3};
15     float weights[]={2,3,5,7,1,4,1};
16     float profit_by_weight[num_obj];
17     float solution[num_obj];
18
19     init_arrays(profit_by_weight,num_obj,profits,weights,solution);
20
21
22     int available_capacity=15;
23
24
25
26     for(int i=0;i<num_obj && available_capacity>0 ;i++){
27
28         int greatest=0;
29         int index = 0;
30
31         for(int j=0 ;j<num_obj;j++)
32         {
33             if(profit_by_weight[j]>greatest && solution[j]==0){
34                 index = j;
35                 greatest = profit_by_weight[j];
36             }
37         }
38
39         if(available_capacity >= weights[index]){
40             solution[index]=1;
41             available_capacity = available_capacity - weights[index];
42         }
43
44         /* Handle Fractionals */
45
46         else if(available_capacity < weights[index]){
47             float temp = available_capacity/weights[index];
48             solution[index]=temp;
49             available_capacity -= weights[index];
50         }
51     }
52
53     for(int i=0;i<num_obj;i++){
54         printf(" %f ",solution[i]);
55     }
56
57 }

```