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#include<stdio.h>
#include<conio.h>
#define N 5
void print(int w[],int v[])
{
    int i;

    printf("Item  =\t\t");
    for(i=0;i<N;i++)
        printf(" %d  \t",i+1);
    printf("\n\t\t_____");

    printf("\n\nWeight =\t ");
    for(i=0;i<N;i++)
        printf("%d \t",w[i]);

    printf("\n\nProfit =\t");
    for(i=0;i<N;i++)
        printf("%d \t",v[i]);
    printf("\n\t\t_____");

    printf("\n\nV / W =\t\t");
    for(i=0;i<N;i++)
        printf("%d \t",v[i]/w[i]);
    printf("\n\n");
}
void knapsack(int weight[],int v[],int capacity,int index[])
{
    float u=0.0,x;
    int i=0,ind;
    printf("In knapsack..");
    while(capacity!=0 && i<N)
    {
        ind=index[i];
        if(weight[ind]<=capacity)
        {
            printf("item%d, ",ind);
            capacity-=weight[ind];
            u+=v[ind];
        }
        else
        {
            printf("item%d, ",ind);
            x=capacity*1.0/weight[ind];
            u+=x*v[ind];
            capacity=0;
        }
        i++;
    }
    printf("\n\nMaximum profit is...: %.2f",u);
}
int main()
{
    int w[N]={2,2,1,1,6};
    int v[N]={100,100,30,200,240};
    int capacity=10,i,j;
    int item[N],temp,index[N];

    print(w,v);

    for (i=0; i<N; i++)
    {
        item[i]=v[i]/w[i];
        index[i]=i;
    }
}

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for(i=0;i<N;i++)
{
    for(j=i+1;j<N;j++)
    {
        if(item[i]<item[j])
        {

            temp=item[j];
            item[j]=item[i];
            item[i]=temp;

            temp=index[i];
            index[i]=index[j];
            index[j]=temp;
        }
    }
}
printf("\n\n");
printf("Sort according to decreasing order...\n\n");
print(w,v);
knapsack(w,v,capacity,index);

printf("\n\n");
for(i=0;i<N;i++)
    printf("item(%d) ,",index[i]);

return 0;
}

```