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```
1   #include<stdio.h>
2   #include<conio.h>
3
4   int max(int a, int b)
5   {
6     if(a>b)
7       return a;
8     else return b;
9   }
10
11  void knapsack(int w[],int v[], int s,int n)
12  {
13    int k[n+1][s+1];
14    int i,j,res=0;
15    int count=0,weight=0;
16
17    for(i=0;i<=n;i++)
18       for(j=0;j<=s;j++)
19          {
20            if(i==0  || j==0)
21              k[i][j]=0;
22            else if(w[i - 1] <= j)
23              k[i][j] = max(v[i-1]+k[i-1][j-w[i-1]],k[i-1][j]);
24            else
25              k[i][j] = k[i-1][j];
26          }
27
28    res=k[n][s];
29    printf("\n\nMaximum Value that can be obtained is : %d",res);
30    j=s;
31    printf("\nAnd the objects with there respective Weights selected are : ");
32    for(i=n;i>0 && res>0; i--)
33       {
34         if (res == k[i - 1][j])
35            continue;
36         else
37            {
38              printf("%d ", w[i-1]);
39              res =res-v[i-1];
40              j = j-w[i-1];
41              count++;
```

```
24              else
25                k[i][j] = k[i-1][j];
26            }
27
28      res=k[n][s];
29      printf("\n\nMaximum Value that can be obtained is : %d",res);
30      j=s;
31      printf("\nAnd the objects with there respective Weights selected are : ");
32      for(i=n;i>0 && res>0; i--)
33         {
34           if (res == k[i - 1][j])
35              continue;
36           else
37              {
38                printf("%d ", w[i-1]);
39                res =res-v[i-1];
40                j = j-w[i-1];
41                count++;
42                weight=weight+w[i-1];
43              }
44         }
45         printf("\nThe Count of the items selected is : %d",count);
46         printf("\nThe Total Weight of the items selected : %d",weight);
47   }
48
49    int main()
50   {
51      int w[10],v[10],s,n,i;
52      printf("\nEnter the Number of objects : ");
53      scanf("%d",&n);
54      printf("\nEnter the Weights of the objects : ");
55      for(i=0;i<n;i++)
56         scanf("%d",&w[i]);
57      printf("\nEnter the Values of the objects : ");
58      for(i=0;i<n;i++)
59         scanf("%d",&v[i]);
60      printf("\nEnter the Size of the KnapSack : ");
61      scanf("%d",&s);
62      knapsack(w,v,s,n);
63    }
64
```