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1: #include<stdio.h>
2:
3: int max(int a, int b) { return (a > b)? a : b; }
4:
5: int knapSack(int W, int wt[], int val[], int n) {
6:     int i, w;
7:     int K[n+1][W+1];
8:     for (i = 0; i <= n; i++){
9:         for (w = 0; w <= W; w++){
10:             if (i==0 || w==0)
11:                 K[i][w] = 0;
12:             else if (wt[i-1] <= w)
13:                 K[i][w] = max(val[i-1] + K[i-1][w-wt[i-1]], K[i-1][w]);
14:             else
15:                 K[i][w] = K[i-1][w];
16:         }
17:     }
18:     return K[n][W];
19: }
20:
21: int main()
22: { printf("::::::::::::: KNAPSACK PROBLEM:::::::::::::\n");
23:   int val[] = {60, 10, 12,28,11,30,15};
24:   int wt[] = {10, 20, 30,34,28,87,10};
25:   printf("\t _____\n");
26:   printf("\t|S.No.| Value | Weight|\n");
27:   printf("\t|_____|_____|_____| \n");
28:   for(int i=0;i<7;++i){
29:
30:       printf("\t| %d | %d | %d | \n",i+1,val[i],wt[i]);
31:       printf("\t|_____|_____|_____| \n");
32:   }
33:
34:   int W = 56;
35:   printf("\n\tALLOWED WEIGHT TO PICK : %d\n",W);
36:
37:   int n = sizeof(val)/sizeof(val[0]);
38:   printf("\n THE MAXIMUM VALUE THAT WE CAN ACHIEVE IS :: %d", knapSack(W,
wt, val, n));
39:   return 0;
40: }
41:

```