CIS263 Assignment 10

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Write a program that provides a dynamic programming solution to the 0/1 knapsack problem.

Provide a solution for each of the two problems below:

Knapsack size = 11

Items (first column is value, second column is weight):

1 1
6 2
18 5
22 6
28 7

Knapsack size = 10,000

Items (first column is value, second column is weight):

16808 250
50074 659
8931 273
27545 879
77924 710
64441 166
84493 43
7988 504
82328 730
78841 613
44304 170
17710 158
29561 934
93100 279
51817 336
99098 827
13513 268
23811 634
80980 150
36580 822
11968 673
1394 337
25486 746
25229 92
40195 358
35002 154
16709 945

15669 491
88125 197
9531 904
27723 667
28550 25

Approved programming languages: C, C++, C#, Python, Java.

Hand-in:

1. The code used to complete the task (no zip files).
2. The solution to each of the two cases listed above.

Grading Rubric

	0%	50%	100%
Code written from scratch and doesn't use a standard library to implement the Knapsack Problem (50%)	Code uses a standard library	Code does not use a standard library but is hard to read	Code does not use a stand library and is easy to follow
Output demonstrating correct functionality for each of the use cases (50%)	Output not clear or non-existent	Output not clearly demonstrating functionality	Output clearly demonstrating functionality

See blackboard for point breakdown.