

6. Implement the algorithm for the Knapsack Problem in either C, C++, C#, Java, or Python. Be efficient and implement it in $O(nW)$ time, where n is the number of items and W is the capacity.

The input will start with a positive integer, giving the number of instances that follow. For each instance, there will be two positive integers, representing the number of items and the capacity, followed by a list describing the items. For each item, there will be two nonnegative integers, representing the weight and value, respectively.

A sample input is the following:

```
2
1 3
4 100
3 4
1 2
3 3
2 4
```

The sample input has two instances. The first instance has one item and a capacity of 3. The item has weight 4 and value 100. The second instance has three items and a capacity of 4.

For each instance, your program should output the maximum possible value. The correct output to the sample input would be:

```
0
6
```