

Gathering herbs

Problem description

Chenchen is a gifted child; his dream is to become the greatest physician in the world. Therefore, he wanted to be taught by the most respected physician in the neighborhood. The physician set a difficult problem for him in order to judge his qualifications. The physician took him to a cave full of herbs and said to him: “My son, there are several different herbs in this cave. It takes some time to gather each plant, and each plant has its own value. I will give you a period of time during which you can gather some herbs. If you are a clever child, you should be able to maximize the total value of the herbs you gather.”

If you were Chenchen, could you finish the task?

Input

The first line of the input file has two integers, T ($1 \leq T \leq 1000$) and M ($1 \leq M \leq 100$), separated by a space. T represents the total amount of time available for picking herbs, and M represents the number of herbs in the cave.

The next M lines each contain two integers between 1 and 100 (including 1 and 100), representing the time it takes to pick a herb and the value of that herb.

Output

Output the maximum total value of herbs that can be collected in the given time.

Sample Input

```
70 3
71 100
69 1
1 2
```

Sample Output

```
3
```

Data Size

For 30% of the data, $M \leq 10$;

For all the data, $M \leq 100$.