

# Trip to Amsterdam

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**Time Limit:** 2.0s    **Memory Limit:** 256M

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Gülşah has an exciting work trip coming up to Amsterdam with her co-worker Berkay, for attending a programming conference. However, Gülşah has made the mistake to book a flight from an airline where the offers include limited amounts of baggage.

Gülşah wants to take a lot of stuff with her, but she knows that she can't take everything. To help her out, we need to find a scenario where she doesn't worry about planning her outfits for too long.

Given the list of items she wants to take, with weights and values; and the total baggage weight she could take; find the scenario where she's the happiest with the list of items she'd take with her.

## Input

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The first line contains two numbers,  $n$  and  $k$  — the number of items and the total baggage weight she could take.

The next  $n$  lines contain two numbers each,  $w_i$  and  $v_i$  — the weight and value of the  $i$ th item.

- $1 \leq n, k \leq 10^3$
- $1 \leq w_i, v_i \leq 10^9$

It's guaranteed that all the test cases are set up such that at least one item can be taken.

## Output

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Print the indices of the items she should pack **in ascending order**. There may be more than one valid answer, feel free to print any of them.

## Example

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Input 1:

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3 50
10 60
20 100
30 120
```

Output 1:

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2 3
```

Input 2:

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5 10  
1 5  
2 3  
4 5  
2 3  
5 2
```

Output 2:

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1 2 3 4
```

## Explanation

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**Input 1:** Gülşah wants to take three items with her, but she has a weight limit of 50 units. There are several options, she can take each item separately, or make a pair out of them. She can not take all three with her because the sum of their weights is 60 units. Out of all options, one of the pair is the best, choosing the 2nd and 3rd items results in 50 units of weight and 220 units of value. This is the highest value of items that she can carry.