Valentine

The Valentine's Day is coming, Mr. Beo wants to buy gifts for his girlfriend. Beo loves her so much that he wants to buy a special gift. However, Beo only has K VND in his pocket. He wants to use K Dong to buy gifts at the store. Help him choose the most expensive item he can afford

Input

The first line gives integers N and K. N is the number of items in the store and K is the amount Beo has

The ith line in the following N lines contains an integer who is the value of the ith item

$(0<N<10^5, 0<K<10^{18}, v<10^4)$

Output

Output the number v as the price of the selected gift. If Beo can't buy any gift, output -1.

Example

Input:
5 100
10
20
30
40
50
Output:

50