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PROBLEMS SUBMIT STATUS STANDINGS CUSTOM TEST

B. Kefa and Company

time limit per test: 2 seconds memory limit per test: 256 megabytes input: standard input output: standard output

Kefa wants to celebrate his first big salary by going to restaurant. However, he needs company.

Kefa has *n* friends, each friend will agree to go to the restaurant if Kefa asks. Each friend is characterized by the amount of money he has and the friendship factor in respect to Kefa. The parrot doesn't want any friend to feel poor compared to somebody else in the company (Kefa doesn't count). A friend feels poor if in the company there is someone who has at least *d* units of money more than he does. Also, Kefa wants the total friendship factor of the members of the company to be maximum. Help him invite an optimal company!

Input

The first line of the input contains two space-separated integers, n and d ($1 \le n \le 10^5$, $1 \le d \le 10^9$) — the number of Kefa's friends and the minimum difference between the amount of money in order to feel poor, respectively.

Next n lines contain the descriptions of Kefa's friends, the (i+1)-th line contains the description of the i-th friend of type m_i , s_i $(0 \le m_i, s_i \le 10^9)$ — the amount of money and the friendship factor, respectively.

Output

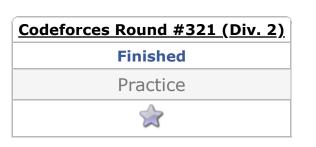
Print the maximum total friendship factir that can be reached.

Examples	
input	Сору
4 5 75 5	
75 5	
0 100 150 20	
75 1	
output	Сору
100	
input	Сору
5 100	
0 7 11 32	
99 10	
46 8	
87 54	
output	Сору
111	

Note

In the first sample test the most profitable strategy is to form a company from only the second friend. At all other variants the total degree of friendship will be worse.

In the second sample test we can take all the friends.



→ Virtual participation

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Start virtual contest

→ Clone Contest to Mashup			
You can clone this contest to a mashup.			
Clone Contest			

→ Submit?			
Language:	Java 17 64bit		
Choose file:	Choose File no file selected		
	Submit		

→ Problem tags		
binary search sorting	gs two pointers	
*1500		
	No tag edit access	

→ Contest materials	
Announcement	×
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