

HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

C. Kefa and Company

time limit per test: 2 seconds² memory limit per test: 256 megabytes

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

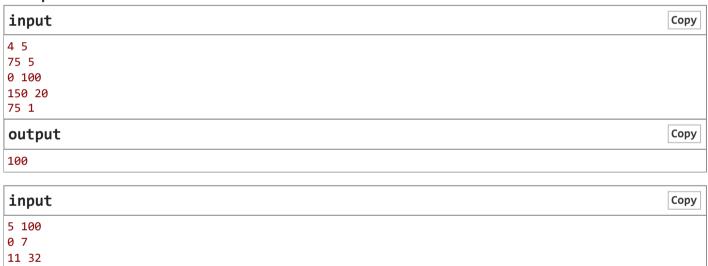
The first line of the input contains two space-separated integers, n and d ($1 \le n \le 10^5$, $1 \le d \le 10^9$) — the number of Kefa's friends and the minimum difference between the amount of money in order to feel poor, respectively.

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



Note

111

99 10

46 887 54

output

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.

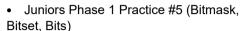
<u>ICPC Assiut University Training -</u> <u>Juniors Phase 1 Sheets-2022</u>

Public

Participant



→ Group Contests



- Juniors Phase 1 Practice #4 (Binary search , Two pointers)
- Juniors Phase 1 Practice #3 (STL 2)
- Juniors Phase 1 Practice #2 (STL 1)
- Juniors Phase 1 Practice #1 (Prefix sum , Frequency Array)

Juniors Phase 1 Practice #4 (Binary search, Two pointers)

Finished

Practice



→ About Time Scaling

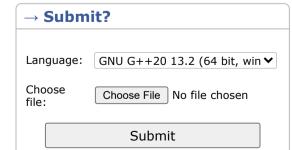
This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.

ightarrow Virtual participation

Сору

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you -solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you -solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest



→ Last submissions		
Submission	Time	Verdict
<u>312317601</u>	Mar/25/2025 15:25	Accepted