https://www.hackerrank.com/challenges/more-than-75-marks/problem

Query the *Name* of any student in **STUDENTS** who scored higher than *Marks*. Order your output by the *last three characters* of each name. If two or more students both have names ending in the same last three characters (i.e.: Bobby, Robby, etc.), secondary sort them by ascending *ID*.

Input Format

The **STUDENTS** table is described as follows:

Column	Type
ID	Integer
Name	String
Marks	Integer

The *Name* column only contains uppercase (A-Z) and lowercase (a-z) letters.

Sample Input

ID	Name	Marks
1	Ashley	81
2	Samantha	75
4	Julia	76
3	Belvet	84

Sample Output

Ashley
Julia
Belvet

Explanation

Only Ashley, Julia, and Belvet have *Marks* > . If you look at the last three characters of each of their names, there are no duplicates and 'ley' < 'lia' < 'vet'.

https://www.hackerrank.com/challenges/salary-of-employees/problem

Write a query that prints a list of employee names (i.e.: the *name* attribute) for employees in **Employee** having a salary greater than per month who have been employees for less than months. Sort your result by ascending *employee_id*.

Input Format

The **Employee** table containing employee data for a company is described as follows:

Column	Type
employee_id	Integer
name	String
months	Integer
salary	Integer

where *employee_id* is an employee's ID number, *name* is their name, *months* is the total number of months they've been working for the company, and *salary* is the their monthly salary.

Sample Input

employee_id	name	months	salary
12228	Rose	15	1968
33645	Angela	1	3443
45692	Frank	17	1608
56118	Patrick	7	1345
59725	Lisa	11	2330
74197	Kimberly	16	4372
78454	Bonnie	8	1771
83565	Michael	6	2017
98607	Todd	5	3396
99989	Joe	9	3573

Sample Output

Angela
Michael
Todd

Joe

Explanation

Angela has been an employee for month and earns per month.

Michael has been an employee for months and earns per month.

Todd has been an employee for months and earns per month.

Joe has been an employee for months and earns per month.

We order our output by ascending *employee_id*.

https://www.hackerrank.com/challenges/what-type-of-triangle/problem

Write a query identifying the *type* of each record in the **TRIANGLES** table using its three side lengths. Output one of the following statements for each record in the table:

- **Equilateral**: It's a triangle with sides of equal length.
- **Isosceles**: It's a triangle with sides of equal length.
- **Scalene**: It's a triangle with sides of differing lengths.
- **Not A Triangle**: The given values of *A*, *B*, and *C* don't form a triangle.

Input Format

The **TRIANGLES** table is described as follows:

Column	Type
A	Integer
B	Integer
C	Integer

Each row in the table denotes the lengths of each of a triangle's three sides.

Sample Input

A	B	C
20	20	23
20	20	20
20	21	22
13	14	30

Sample Output

Isosceles
Equilateral
Scalene
Not A Triangle

Explanation

Values in the tuple form an Isosceles triangle, because .

Values in the tuple form an Equilateral triangle, because . Values in the tuple form a Scalene triangle, because .

Values in the tuple cannot form a triangle because the combined value of sides and is not larger than that of side .

https://www.hackerrank.com/challenges/occupations/problem

Pivot the *Occupation* column in **OCCUPATIONS** so that each *Name* is sorted alphabetically and displayed underneath its corresponding *Occupation*. The output column headers should be *Doctor*, *Professor*, *Singer*, and *Actor*, respectively.

Note: Print **NULL** when there are no more names corresponding to an occupation.

Input Format

The **OCCUPATIONS** table is described as follows:

Column	Type
Name	String
Occupation	String

Occupation will only contain one of the following values: **Doctor**, **Professor**, **Singer** or **Actor**.

Sample Input

Name	Occupation
Samantha	Doctor
Julia	Actor
Maria	Actor
Meera	Singer
Ashely	Professor
Ketty	Professor
Christeen	Professor
Jane	Actor
Jenny	Doctor
Priya	Singer

Sample Output

```
Jenny    Ashley    Meera  Jane
Samantha Christeen  Priya  Julia
NULL     Ketty     NULL   Maria
```

Explanation

The first column is an alphabetically ordered list of Doctor names.

The second column is an alphabetically ordered list of Professor names.

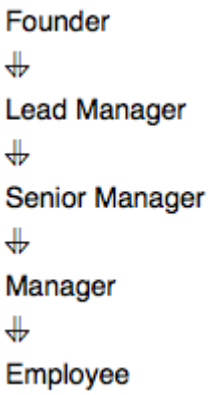
The third column is an alphabetically ordered list of Singer names.

The fourth column is an alphabetically ordered list of Actor names.

The empty cell data for columns with less than the maximum number of names per occupation (in this case, the Professor and Actor columns) are filled with **NULL** values.

https://www.hackerrank.com/challenges/the-company/problem

Amber's conglomerate corporation just acquired some new companies. Each of the companies follows this hierarchy:



Given the table schemas below, write a query to print the *company_code*, *founder* name, total number of *lead* managers, total number of *senior* managers, total number of *managers*, and total number of *employees*. Order your output by ascending *company_code*.

Note:

- The tables may contain duplicate records.
- The *company_code* is string, so the sorting should not be **numeric**. For example, if the *company_codes* are *C_1*, *C_2*, and *C_10*, then the ascending *company_codes* will be *C_1*, *C_10*, and *C_2*.

Input Format

The following tables contain company data:

- *Company:* The *company_code* is the code of the company and *founder* is the founder of the company.

Column	Type
company_code	String
founder	String

- *Lead_Manager:* The *lead_manager_code* is the code of the lead manager, and the *company_code* is the code of the working company.

Column	Type
lead_manager_code	String
company_code	String

- *Senior_Manager:* The *senior_manager_code* is the code of the senior manager, the *lead_manager_code* is the code of its lead manager, and the *company_code* is the code of the working company.

Column	Type
senior_manager_code	String
lead_manager_code	String
company_code	String

- *Manager:* The *manager_code* is the code of the manager, the *senior_manager_code* is the code of its senior manager, the *lead_manager_code* is the code of its lead manager, and the *company_code* is the code of the working company.

Column	Type
manager_code	String
senior_manager_code	String
lead_manager_code	String
company_code	String

- *Employee:* The *employee_code* is the code of the employee, the *manager_code* is the code of its manager, the *senior_manager_code* is the code of its senior manager, the *lead_manager_code* is the code of its lead manager, and the *company_code* is the code of the working company.

Column	Type
employee_code	String
manager_code	String
senior_manager_code	String
lead_manager_code	String
company_code	String

Sample Input

Company Table:

company_code	founder
C1	Monika
C2	Samantha

Lead_Manager Table:

lead_manager_code	company_code
LM1	C1
LM2	C2

Senior_Manager Table:

senior_manager_code	lead_manager_code	company_code
SM1	LM1	C1
SM2	LM1	C1
SM3	LM2	C2

Manager Table:

manager_code	senior_manager_code	lead_manager_code	company_code
M1	SM1	LM1	C1
M2	SM3	LM2	C2
M3	SM3	LM2	C2

Employee Table:

employee_code	manager_code	senior_manager_code	lead_manager_code	company_code
E1	M1	SM1	LM1	C1
E2	M1	SM1	LM1	C1
E3	M2	SM3	LM2	C2
E4	M3	SM3	LM2	C2

Sample Output

C1 Monika 1 2 1 2
C2 Samantha 1 1 2 2

Explanation

In company *C1*, the only lead manager is *LM1*. There are two senior managers, *SM1* and *SM2*, under *LM1*. There is one manager, *M1*, under senior manager *SM1*. There are two employees, *E1* and *E2*, under manager *M1*.

In company *C2*, the only lead manager is *LM2*. There is one senior manager, *SM3*, under *LM2*. There are two managers, *M2* and *M3*, under senior manager *SM3*. There is one employee, *E3*, under manager *M2*, and another employee, *E4*, under manager, *M3*.

https://www.hackerrank.com/challenges/name-of-employees/problem

Write a query that prints a list of employee names (i.e.: the *name* attribute) from the **Employee** table in alphabetical order.

Input Format

The **Employee** table containing employee data for a company is described as follows:

Column	Type
employee_id	Integer
name	String
months	Integer
salary	Integer

where *employee_id* is an employee's ID number, *name* is their name, *months* is the total number of months they've been working for the company, and *salary* is their monthly salary.

Sample Input

employee_id	name	months	salary
12228	Rose	15	1968
33645	Angela	1	3443
45692	Frank	17	1608
56118	Patrick	7	1345
59725	Lisa	11	2330
74197	Kimberly	16	4372
78454	Bonnie	8	1771
83565	Michael	6	2017
98607	Todd	5	3396
99989	Joe	9	3573

Sample Output

Angela
Bonnie
Frank
Joe

Kimberly
Lisa
Michael
Patrick
Rose
Todd

https://www.hackerrank.com/challenges/the-blunder/problem

Samantha was tasked with calculating the average monthly salaries for all employees in the **EMPLOYEES** table, but did not realize her keyboard's key was broken until after completing the calculation. She wants your help finding the difference between her miscalculation (using salaries with any zeros removed), and the actual average salary.

Write a query calculating the amount of error (i.e.: average monthly salaries), and round it up to the next integer.

Input Format

The **EMPLOYEES** table is described as follows:

Column	Type
ID	Integer
Name	String
Salary	Integer

Note: *Salary* is per month.

Constraints

.

Sample Input

ID	Name	Salary
1	Kristeen	1420
2	Ashley	2006
3	Julia	2210
4	Maria	3000

Sample Output

2061

Explanation

The table below shows the salaries *without zeros* as they were entered by Samantha:

ID	Name	Salary
1	Kristeen	142
2	Ashley	26
3	Julia	221
4	Maria	3

Samantha computes an average salary of . The *actual* average salary is .

The resulting error between the two calculations is . Since it is equal to the integer , it does not get rounded up.

https://www.hackerrank.com/challenges/earnings-of-employees/problem

We define an employee's *total earnings* to be their monthly worked, and the *maximum total earnings* to be the maximum total earnings for any employee in the **Employee** table. Write a query to find the *maximum total earnings* for all employees as well as the total number of employees who have maximum total earnings. Then print these values as space-separated integers.

Input Format

The **Employee** table containing employee data for a company is described as follows:

Column	Type
employee_id	Integer
name	String
months	Integer
salary	Integer

where *employee_id* is an employee's ID number, *name* is their name, *months* is the total number of months they've been working for the company, and *salary* is the their monthly salary.

Sample Input

employee_id	name	months	salary
12228	Rose	15	1968
33645	Angela	1	3443
45692	Frank	17	1608
56118	Patrick	7	1345
59725	Lisa	11	2330
74197	Kimberly	16	4372
78454	Bonnie	8	1771
83565	Michael	6	2017
98607	Todd	5	3396
99989	Joe	9	3573

Sample Output

69952 1

Explanation

The table and earnings data is depicted in the following

employee_id	name	months	salary	earnings
12228	Rose	15	1968	29520
33645	Angela	1	3443	3443
45692	Frank	17	1608	27336
56118	Patrick	7	1345	9415
59725	Lisa	11	2330	25630
74197	Kimberly	16	4372	69952
78454	Bonnie	8	1771	14168
83565	Michael	6	2017	12102
98607	Todd	5	3396	16980
99989	Joe	9	3573	32157

diagram:

The maximum *earnings* value is . The only employee with *earnings* is *Kimberly*, so we print the maximum *earnings* value () and a count of the number of employees who have earned (which is) as two space-separated values.

https://www.hackerrank.com/challenges/symmetric-pairs/problem

You are given a table, *Functions*, containing two columns: X and Y.

Column	Type
X	Integer
Y	Integer

Two pairs (X_1, Y_1) and (X_2, Y_2) are said to be *symmetric pairs* if $X_1 = Y_2$ and $X_2 = Y_1$.

Write a query to output all such *symmetric pairs* in ascending order by the value of X. List the rows such that $X_1 \leq Y_1$.

Sample Input

X	Y
20	20
20	20
20	21
23	22
22	23
21	20

Sample Output

20 20
20 21
22 23

https://www.hackerrank.com/challenges/placements/problem

You are given three tables: *Students*, *Friends* and *Packages*. *Students* contains two columns: *ID* and *Name*. *Friends* contains two columns: *ID* and *Friend_ID* (*ID* of the ONLY best friend). *Packages* contains two columns: *ID* and *Salary* (offered salary in $ thousands per month).

Column	Type
ID	Integer
Name	String

Students

Column	Type
ID	Integer
Friend_ID	Integer

Friends

Column	Type
ID	Integer
Salary	Float

Packages

Write a query to output the names of those students whose best friends got offered a higher salary than them. Names must be ordered by the salary amount offered to the best friends. It is guaranteed that no two students got same salary offer.

Sample Input

ID	Friend_ID
1	2
2	3
3	4
4	1

Friends

ID	Name
1	Ashley
2	Samantha
3	Julia
4	Scarlet

Students

ID	Salary
1	15.20
2	10.06
3	11.55
4	12.12

Packages

Sample Output

Samantha
Julia
Scarlet

Explanation

See the following table:

ID	1	2	3	4
Name	Ashley	Samantha	Julia	Scarlet
Salary	15.20	10.06	11.55	12.12
Friend ID	2	3	4	1
Friend Salary	10.06	11.55	12.12	15.20

Now,

- *Samantha's* best friend got offered a higher salary than her at 11.55

- *Julia's* best friend got offered a higher salary than her at 12.12
- *Scarlet's* best friend got offered a higher salary than her at 15.2
- *Ashley's* best friend did NOT get offered a higher salary than her

The name output, when ordered by the salary offered to their friends, will be:

- *Samantha*
- *Julia*
- *Scarlet*

https://www.hackerrank.com/challenges/the-report/problem

You are given two tables: *Students* and *Grades*. *Students* contains three columns *ID*, *Name* and *Marks*.

Column	Type
ID	Integer
Name	String
Marks	Integer

Grades contains the following data:

Grade	Min_Mark	Max_Mark
1	0	9
2	10	19
3	20	29
4	30	39
5	40	49
6	50	59
7	60	69
8	70	79
9	80	89
10	90	100

Ketty gives *Eve* a task to generate a report containing three columns: *Name*, *Grade* and *Mark*. *Ketty* doesn't want the NAMES of those students who received a grade lower than *8*. The report must be in descending order by grade -- i.e. higher grades are entered first. If there is more than one student with the same grade (8-10) assigned to them, order those particular students by their name alphabetically. Finally, if the grade is lower than 8, use "NULL" as their name and list them by their grades in descending order. If there is more than one student with the same grade (1-7) assigned to them, order those particular students by their marks in ascending order.

Write a query to help Eve.

Sample Input

ID	Name	Marks
1	Julia	88
2	Samantha	68
3	Maria	99
4	Scarlet	78
5	Ashley	63
6	Jane	81

Sample Output

Maria 10 99
Jane 9 81
Julia 9 88
Scarlet 8 78
NULL 7 63
NULL 7 68

Note

Print "NULL" as the name if the grade is less than 8.

Explanation

Consider the following table with the grades assigned to the students:

ID	Name	Marks	Grade
1	Julia	88	9
2	Samantha	68	7
3	Maria	99	10
4	Scarlet	78	8
5	Ashley	63	7
6	Jane	81	9

So, the following students got *8*, *9* or *10* grades:

- *Maria (grade 10)*
- *Jane (grade 9)*
- *Julia (grade 9)*
- *Scarlet (grade 8)*

https://www.hackerrank.com/challenges/binary-search-tree-1/problem

You are given a table, *BST*, containing two columns: *N* and *P*, where *N* represents the value of a node in *Binary Tree*, and *P* is the parent of *N*.

Column	Type
N	Integer
P	Integer

Write a query to find the node type of *Binary Tree* ordered by the value of the node. Output one of the following for each node:

- *Root*: If node is root node.
- *Leaf*: If node is leaf node.
- *Inner*: If node is neither root nor leaf node.

Sample Input

N	P
1	2
3	2
6	8
9	8
2	5
8	5
5	null

Sample Output

1 Leaf
2 Inner
3 Leaf
5 Root
6 Leaf
8 Inner
9 Leaf

Explanation

The *Binary Tree* below illustrates the sample: