Codemania 3.0: Nunquam Soli Sumus

Mar 25, 2020, 04:00 PM IST - Mar 25, 2020, 10:00 PM IST

Keskar's Contest

Max. Marks: 100

This problem is no longer available for practice. Apology for any inconvenience!

Keskar sir is a Principal of Higher secondary school. His school has "n" sections and each section has "m" candidates. Each jth student of ith section has a coding IQ given by "A_{ij}". Keskar Sir wants to conduct coding contest in his school.For that purpose, he selects one student from each section to compete. Now, Keskar sir loves tough contest. So he decides to select students such that difference between student with maximum coding IQ and minimum coding IQ is as minimum as possible. Can you help Keskar sir in finding this difference?

For example, if n= 3 and m = 4, and each class has students with following coding IQ:

Section 1: {12,16,67,43}

Section 2: {7,17,68,48}

Section 3: {14,15,77,54}

it is best to choose the student with IQ 16 from section 1, 17 from section 2, and 15 from section 3. Thus, the difference in this case would be 17-15 = 2.

Input

- The first line of the input consists of two integers, n and m. (1<=N<=1000, 1<=M<=1000).
- The next n lines will have m integers. The jth element of ith line is the coding IQ of the jth student in ith class. The number is between 0 and 10^9, inclusive.

Output

Output the minimal difference possible.

SAMPLE INPUT

```
3 4
12 16 67 43
7 17 68 48
14 15 77 54
```

SAMPLE OUTPUT

2

Time Limit:	1.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded if any testcase passes.
Allowed Languages:	Bash, C, C++, C++14, Clojure, C#, D, Erlang, F#, Go, Groovy, Haskell, Java, Java 8, JavaScript(Rhino), JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua, Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python, Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift, Swift-4.1, TypeScript, Visual Basic

CODE EDITOR

Save C (gcc 5.4.0)

```c
/*
// Sample code to perform I/O:
#include <stdio.h>

int main(){
    int num;
    scanf("%d", &num);                          // Reading input from STDIN
    printf("Input number is %d.\n", num);       // Writing output to STDOUT
}

// Warning: Printing unwanted or ill-formatted data to output will cause the test cases to fail
*/

// Write your code here

```

9:1 vscode

Provide custom input

COMPILE & TEST SUBMIT

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