Problem statement

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You are given a 2D matrix ***'MATRIX'*** of ***'N'*'M'*** dimension. You must check whether a given number ***'target'*** is present in the matrix.

The following properties apply to the given matrix:

1. In each row, integers are sorted from left to right.
2. Each row's first integer is greater than the previous row's last integer.

Example:

```
Input:
'MATRIX' = [ [1, 3, 5, 7], [10, 11, 16, 20], [23, 30, 34, 60] ], 'TARGET' = 3
Output:1
Explanation: Since the given number ‘TARGET’ is present in the matrix, we return true.
```

Detailed explanation (Input/output format, Notes, Images)

Sample Input 1:

```
3 3
1 3 7
10 12 15
19 20 21
12
```

Sample Output 1:

```
1
```

Explanation Of Sample Input 1:

```
Input:
'MATRIX' = [ [1, 3, 7], [10, 12, 15], [19, 20, 21] ], 'TARGET' = 12
Output: 1

Explanation: Since the given number ‘TARGET’ is present in the matrix, we return true.
```

Sample Input 2:

```
4 4
1 5 9 13
14 15 16 17
19 20 21 50
59 60 71 80
80
```

Sample Output 2:

```
1
```

Constraints:

```
1 <= 'N', 'M' <=10^5
1 <= 'MATRIX [ i ] [ j ]', 'TARGET' <= 10^9
```

The sum of N*M over all test cases is less than 2*10^5.

Time Limit: 1 sec