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/*
Given a matrix of size n X n, where every row and every column
is sorted in increasing order.
Write an algorithm and a program to find whether the given key
element is present in the matrix
or not.

TIME COMPLEXITY -> O(N)

INPUT FORMAT
  - first line contains n (the size of matrix).
  - for next n input lines, each line contains space-separated
n integers describing each row of the
     matrix.
  - last line of input will contain key integer to be searched

OUTPUT FORMAT:
  - Output will be "Present" if the key element is found in
the array, otherwise print "Not Present".
*/


// LIBS
#include <stdio.h>

// MACROS
#define NL printf("\n")

// MAIN FUNCTION
int main() {
  int N;
  scanf("%d", &N);

  int matrix[N][N];

  for (int r_index = 0; r_index < N; r_index++) {
     for (int c_index = 0; c_index < N; c_index++) {
     scanf("%d", &matrix[r_index][c_index]);
     }
  }

  int num;
  scanf("%d", &num);
```

```
  int i = 0, j = N - 1;

  while (i < N && j >= 0) {
     if (matrix[i][j] == num) {
     printf("Present.");
     NL;
     return 0;
     }
     else if (matrix[i][j] > num) {
     j--;
     }
     else {
     i++;
     }
  }

  printf("Not Present.");
  NL;

  return 0;
}
```