



Learn how your code will be evaluated (https://helpcenter.mymapit.in/?ht_kb=things-to-know-before-attempting-the-test)

Utility codes for quick start (https://helpcenter.mymapit.in/?page_id=871)

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Profit in confectionary

Shekhar opened a confectionary and had 5 items in his shop- Cookies, Cupcakes, Cake, Chocolate, and Muffins. Saturday and Sunday his shop remains closed. He observed that during first week, profit earned on Cookies on Monday is same as profit earned on Cupcakes on Tuesday, profit earned on Cake on Wednesday, profit earned on Chocolate on Thursday and profit earned on Muffins on Friday. Same thing happened with profit earned on Cupcakes on Monday was same as profit earned on Cake on Tuesday, profit earned on Chocolate on Wednesday and profit earned on Chocolate on Thursday. It kind of forms **Toeplitz Matrix** if we put **Weekday as rows** and **Items in the same order as mentioned above as columns**. Being a techie, help Shekhar write a C program to check **if his profits on those items form a Toeplitz matrix or not** if order of items is not changed.

Note: A Toeplitz (or diagonal-constant) matrix is a matrix in which each descending diagonal from left to right is constant, i.e., all elements in a diagonal are same.

Sample Input 1

C (gcc 4.8.3) ▼

🔄 ⓘ ▶ Compile & Run O/P »

```

1  #include<stdio.h>
2  #include<stdbool.h>
3
4  bool isItToeplitzMatrix(){
5      // matrix input
6      int matrix[5][5];
7      int i,j;
8      for(i=0; i < 5; i++)
9          for(j=0; j < 5; j++)
10             scanf("%d",&matrix[i][j]);
11
12     // algo
13     int orgRow = 0,orgCol = 4;
14     while(1){
15         int row = orgRow, col = orgCol;
16         while(row < 4 && col < 4){
17             if(matrix[row][col] != matrix[row+1][col+1]) // not a toeplitz
18                 return false;
19
20             row++;
21             col++;
22         }
23
24         orgCol--;
25         if(orgCol-- == -1) break; // yes a toeplitz
26         orgRow = 0;
27     }
28
29     return true;
30 }
31 // main function
32 int main(){
33
34
35

```

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