

Program to implement transpose of matrix

Algorithm

Step 1: Start

Step 2: Display "Enter the no. of rows and column"

Step 3: Read m and n

Step 4: Display "Enter elements of the matrix"

Step 5: for ($c=0$; $c < m$; $c++$)

for ($d=0$; $d < n$; $d++$)

Read c & d

Step 6: for ($c=0$; $c < m$; $c++$)

for ($d=0$; $d < n$; $d++$)

transpose [d][c] = matrix [c][d];

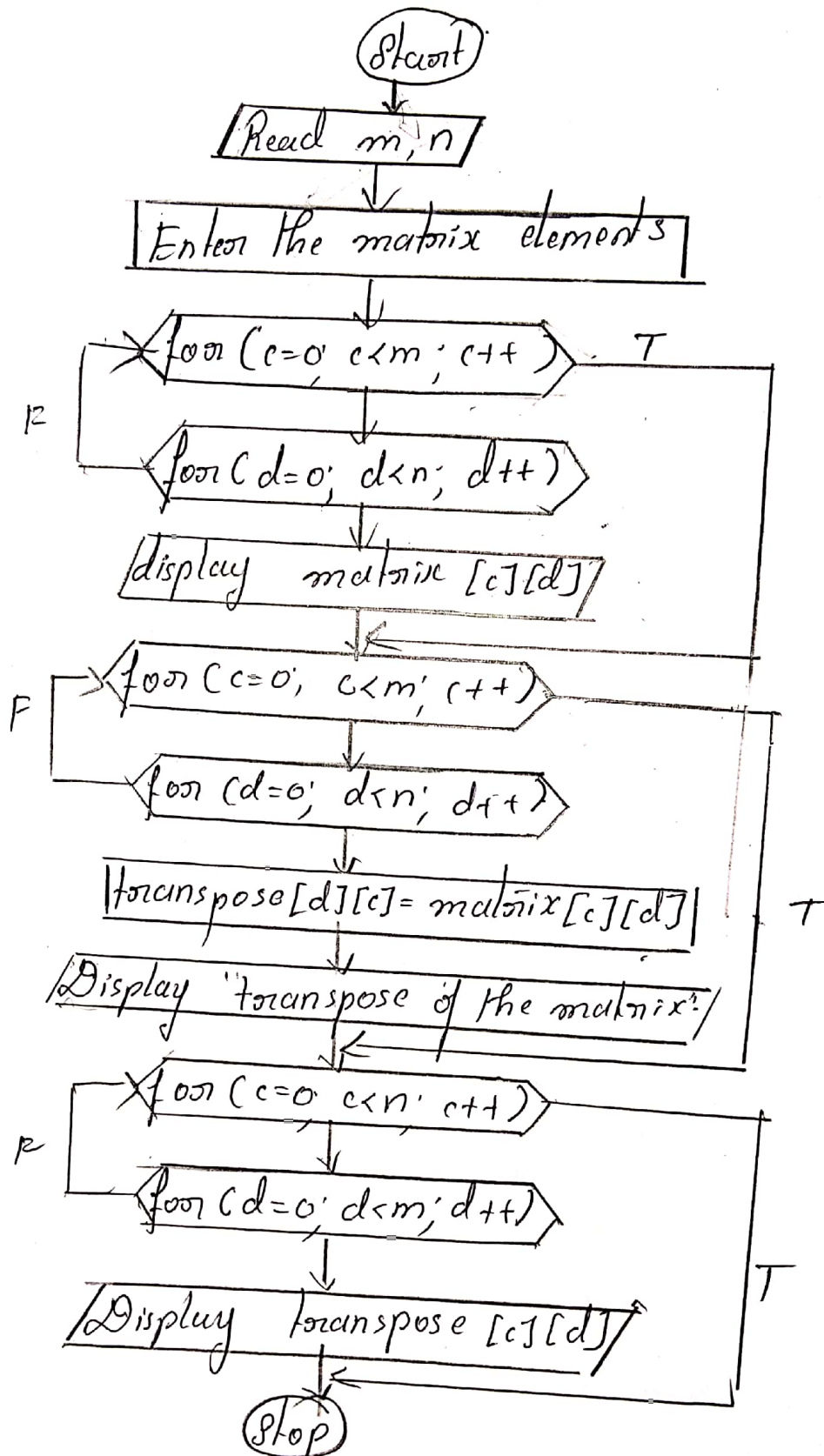
Step 7: Display "Transpose of the matrix"

Step 8: for ($c=0$; $c < n$; $c++$)

for ($d=0$; $d < m$; $d++$)

Display output transpose [c][d]

Step 9: Stop

Flowchart



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Code, Compile & Run

ide

Ganavi

Problem Code/Name (e.g. TEST)

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PRACTICE - Practice Section

C (gcc 6.3)

Code gets auto-saved every second

```
1 #include <stdio.h>
2
3 int main()
4 {
5     int m, n, c, d, matrix[10][10], transpose[10][10];
6
7     printf("Enter the number of rows and columns of a matrix\n");
8     scanf("%d%d", &m, &n);
9     printf("Enter elements of the matrix\n");
10
11     for (c = 0; c < m; c++)
12         for (d = 0; d < n; d++)
13             scanf("%d", &matrix[c][d]);
14
15     for (c = 0; c < m; c++)
16         for (d = 0; d < n; d++)
17             transpose[d][c] = matrix[c][d];
18
19     printf("Transpose of the matrix:\n");
20
21     for (c = 0; c < n; c++) {
22         for (d = 0; d < m; d++)
23             printf("%d\t", transpose[c][d]);
24         printf("\n");
25     }
26
27     return 0;
28 }
```

27:1

Open File

✓ Custom Input

Run

Custom Input

```
2 2
1 2 3 4
```

Status: Successfully executed Date: 2020-06-13 12:36:34 Time: 0 sec Mem: 9,424 kB

Input

```
2 2
1 2 3 4
```

Output

```
Enter the number of rows and columns of a matrix
Enter elements of the matrix
Transpose of the matrix:
1 3
2 4
```