Code, Compile & Run

Ide

Contest Code/Name (e.g. JULY15/PRACTICE)

Problem Code/Name (e.g. TEST)

Select

C (gcc 6.3)

Code gets autosaved every second

```
#include <stdio.h>
 int main()
{
int a[10][10], transpose[10][10], r, c, i, j;
 printf("Enter rows and columns: ");
 scanf("%d %d", &r, &c);
 // Assigning elements to the matrix
printf("\nEnter matrix elements:\n");
 for (i = 0; i < r; ++i)
for (j = 0; j < c; ++j)
 {
printf("Enter element a%d%d: ", i + 1, j + 1);
 scanf("%d", &a[i][j]);
}
// Displaying the matrix a[][]
printf("\nEntered matrix: \n");
 for (i = 0; i < r; ++i)
for (j = 0; j < c; ++j)
{
printf("%d ", a[i][j]);
 if (j == c - 1)
printf("\n");
 }
// Finding the transpose of matrix a
for (i = 0; i < r; ++i)
 for (j = 0; j < c; ++j)
```

0:0

Open File

Custom Input

Run

Custom Input

```
2 2
2 2
10 20
30 40
```

Status Successfully executed **Date** 2020-06-13 05:54:23 **Time** 0 sec **Mem** 9.424 kB

Input

```
2 2
2 2
10 20
30 40
```

Output

```
Enter rows and columns:
Enter matrix elements:
Enter element a11: Enter element a12: Enter element a21: Enter element a22:
Entered matrix:
2 2
10 20
```

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Code, Compile & Run

Ide ✖ +

Contest Code/Name (e.g. JULY15/PRACTICE) | Problem Code/Name (e.g. TEST) | Select

C (gcc 6.3) | Code gets autosaved every second

```
19   for (i = 0; i < r; ++i)
20  for (j = 0; j < c; ++j)
21  {
22  printf("%d ", a[i][j]);
23   if (j == c - 1)
24  printf("\n");
25   }
26  // Finding the transpose of matrix a
27  for (i = 0; i < r; ++i)
28   for (j = 0; j < c; ++j)
29  {
30  transpose[j][i] = a[i][j];
31  }
32  // Displaying the transpose of matrix a
33   printf("\nTranspose of the matrix:\n");
34   for (i = 0; i < c; ++i)
35   for (j = 0; j < r; ++j)
36  {
37   printf("%d ", transpose[i][j]);
38   if (j == r - 1)
39  printf("\n");
40   }
41   return 0;
42  }
43
44
45
46
```

0:0

Open File | ✓Custom Input | Run

Custom Input

```
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2 2
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30 40
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Status Successfully executed **Date** 2020-06-13 05:54:23 **Time** 0 sec **Mem** 9.424 kB ✖

Input

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Output

```
Enter rows and columns:
Enter matrix elements:
Enter element a11: Enter element a12: Enter element a21: Enter element a22:
Entered matrix:
2 2
10 20
```

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(i) Algorithm

Step 1 : Start
Step 2 : Declare all the necessary variables
Step 3 : Enter the order of matrix
Step 4 : Enter the elements of matrix row-wise using loop.
Step 5 : Display the entered matrix in standard format
Step 6 : Assign number of rows with number of column
Step 7 : Swap $(i, j)^{th}$ element with (j, i)
Step 8 : Stop.

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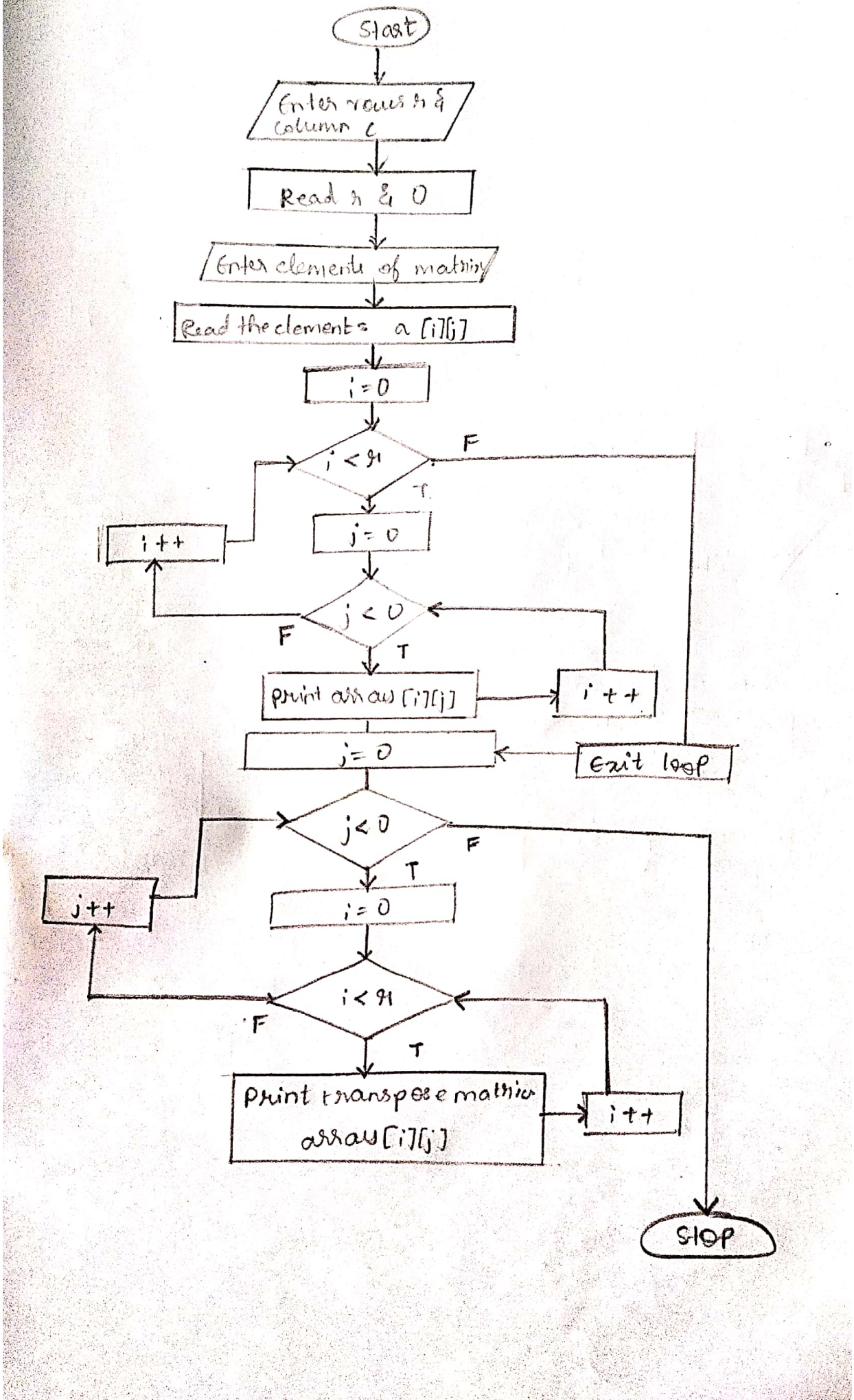
(ii) Flowchart :



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