C program to implement transpose of matrix

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Algorithm

Step1 : Start

Step 2 : Input r, c , elements

Step 3: for (i=0; i<r; i++)

Step 4: for (j=0; j<c; j++)

Step 5: Entered matrix a[i][j]

Step 6: for (i=0; i<r; i++)

Step 7: for (j=0; j<c; j++)

Step 8: if (j == -1)

Step 9: for (i=0; i<r; i++)

Step 10: for (j=0; j<c; j++)

Step 11: transpose[j][i] = a[i][j]

Step 12: Output transpose of the matrix

Step 13: if (j == r-1)

Step 14: Output matrix

Step 15: Stop

Flowchart :-

```
                    ( Start )
                       |
                       v
   / Input  r, c, elements /
                       |
                       v
  < for (i=0; i<r; i++) >───────┐
         |          F           |  T
         v                      |
  < for (j=0; j<c; j++) >       |
         |                      |
         v                      |
   / Entered matrix ───────────┘
      a[i][j]  /
         |
         v
  < for (i=0; i<r; i++) >
         |
         v
  < for (j=0; j<c; j++) >
         |
         v
       / if \         F
       \ (j==-1) /─────────┐
         |                 |
         v T               |
   / Print \n /            |
         |                 |
         v                 |
  < for (i=0; i<r; i++) > 
         |
         v
  < for (j=0; j<c; j++) >
         |
         v
  | transpose[j][i] = a[i][j] |
         |
         v
       / if \        F
       \ (j==r-1) /───────┐
         |                |
         v T              |
  / Output transpose matrix /
         |
         v
      ( Stop )
```