

columnar transposition cipher:**code:**

```
#include <iostream>

#include <string>

using namespace std;

string cipher(string s);

int main()

{

string s = "";

getline(cin, s);

cout << cipher(s);

return 0;

}

string cipher(string s)

{

int row, col, p, q, a, b, k = 0, o = 0;

string cipher = "";

int key_order[] = {3, 5, 4, 2, 1};

cout << "Length of String:" << s.length() << endl;

cout << "Enter the number of columns" << endl;

cin >> col;

// cout<<col<<endl;

row = s.length() / col;
```

```
if (s.length() % col)
{
    row += 1;
}
cout << "Row:" << row << endl;

char arr[row][col];

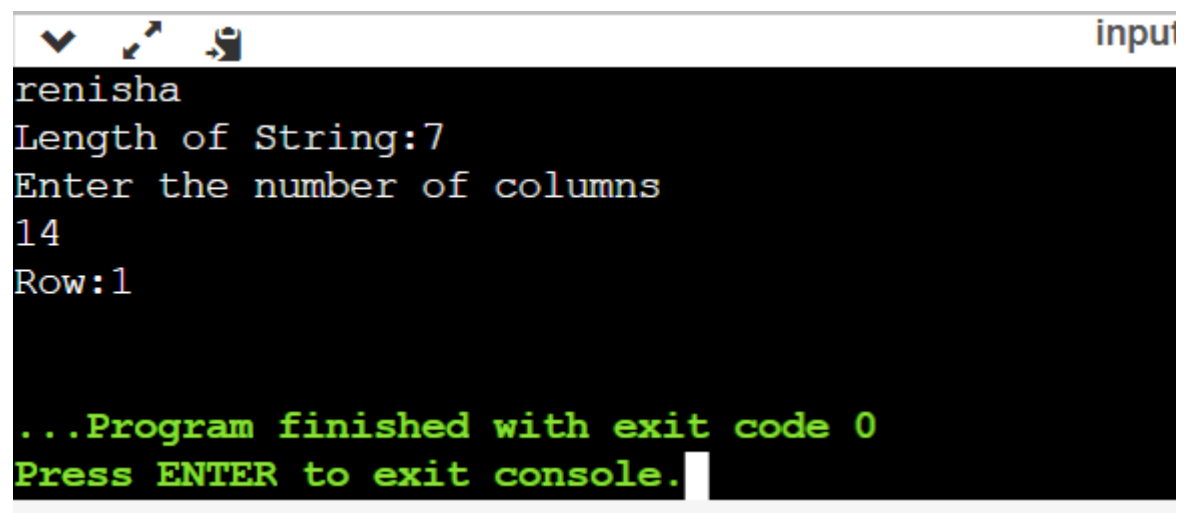
// storing string values in a 2d array
for (p = 0; p < row; p++)
{
    for (q = 0; q < col; q++)
    {
        arr[p][q] = s[k];
        k++;
    }
}

// Encrypting the message
for (a = 0; a < col; a++)
{
    for (b = 0; b < row; b++)
    {
        cipher = arr[b][(arr[b][a] + (key_order[o] - 1))];
    }
    o++;
}
```

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```
}  
  
cout << cipher;  
  
return cipher;  
// char arr[][col];  
}
```

OUTPUT:

A screenshot of a console window with a black background and white text. The window has a title bar with standard Windows icons and the text 'input'. The output of the program is as follows:

```
renisha  
Length of String:7  
Enter the number of columns  
14  
Row:1  
  
...Program finished with exit code 0  
Press ENTER to exit console.
```