#include <iostream>

void Spiral(int arr[][4], int rows, int cols) {

int top = 0, bottom = rows - 1, left = 0, right = cols - 1;

int d = 0;

while (top <= bottom && left <= right) {

if (d == 0) {

for (int i = left; i <= right; i++)

std::cout << arr[top][i] << " ";

top++;

} else if (d == 1) {

for (int i = top; i <= bottom; ++i)

std::cout << arr[i][right] << " ";

right--;

} else if (d == 2) {

for (int i = right; i >= left; i--)

std::cout << arr[bottom][i] << " ";

bottom--;

} else if (d == 3) {

for (int i = bottom; i >= top; --i)

std::cout << arr[i][left] << " ";

left++;

}

d = (d + 1) % 4;

}

}

int main() {

int arr[4][4] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16};

const int n=4;

const int m=4;

Spiral(arr, n, m);

return 0;

}