```c
#include <stdio.h>

void generateZigZag(char* num, int k, int n, int left, int max){
    // Completed a zig-zag number - print it!
    if(left == 0){
        printf("%s\n", num);
        return;
    }
    // Assign the next digit, values in increasing order to satisfy
    // lexicographic ordering specified in the question. Make sure that
    // the digit does not exceed max value specified
    for(int i = 1; i <= max; i++){
        num[k - left] = '0' + i;
        // Okay, the very next digit must be strictly smaller than the
        // digit we just assigned in the previous line. However, assign
        // this next digit various values in ascending order to satisfy
        // the lexicographic ordering specified in the question.
        for(int j = i + 1; j <= n; j++){
            num[k - left + 1] = '0' + j;
            // 2 digits were assigned and next digit must be smaller
            // than the second digit we just assigned
            generateZigZag(num, k, n, left - 2, j - 1);
        }
    }
}
int main(){
    int n, k;
    scanf("%d %d", &n, &k);
    char num[k+1];
    num[k] = '\0'; // All numbers have k digits
    // Generate k-digit zig-zag numbers with k digits left to decide
    // The first digit can be upto n since no restrictions in beginning
    generateZigZag(num, k, n, k, n);
    return 0;
}
```