import java.util.Scanner;

public class bine{

public static void main(String[] args){

Scanner read= new Scanner (System.in);

Int a=read.nextInt ();

read.close();

Nr1(a);

Nr2(a);

}

public static void Nr1 (int a){

for (int i = 1; i < n + 1; i++) {

for (int j = 1; j< n+1; j++) {

System.out.printf("%3d ", Math.min (i, j));

}

System.out.println();

}

System.out.println();

}

public static void Nr2 (int a){

for (int i = 0; i < n; i++) {

for (int j = 1; j < n + 1; j++) {

System.out.printf("%3d ", n\*i + j);

}

System.out.println();

}

System.out.println();

}