#include<stdio.h>

int main()

{

int n;

scanf("%d",&n);

int rowmin=0;

int colmin=0;

int index=(2\*n)-1;

int rowmax=index-1;

int colmax=index-1;

int a[index][index];

while(rowmin<=rowmax)

{

for(int j=colmin;j<=colmax;j++)

{

a[rowmin][j]=n;

}

//rowmin=rowmin+1;

for(int i=rowmin;i<=rowmax;i++)

{

a[i][colmax]=n;

}

//colmax=colmax-1;

for(int j=colmax;j>=colmin;j--)

{

a[rowmax][j]=n;

}

//rowmax=rowmax-1;

for(int i=rowmax;i>=rowmin;i--)

{

a[i][colmin]=n;

}

colmin=colmin+1;

rowmin=rowmin+1;

rowmax=rowmax-1;

colmax=colmax-1;

n--;

}

for(int i=0;i<index;i++)

{

for(int j=0;j<index;j++)

{

printf("%d",a[i][j]);

}

printf("\n");

}

}