# PROBLEM STATEMENT: Fill two instances of all numbers from 1 to n in a specific way

#include <stdio.h>

#include <stdbool.h>

bool fillUtil(int res[], int curr, int n)

{

if (curr == 0) return true;

int i;

for (i=0; i<2\*n-curr-1; i++)

{

if (res[i] == 0 && res[i + curr + 1] == 0)

{

res[i] = res[i + curr + 1] = curr;

if (fillUtil(res, curr-1, n))

return true;

res[i] = res[i + curr + 1] = 0;

}

}

return false;

}

void fill(int n)

{

int res[2\*n], i;

for (i=0; i<2\*n; i++)

res[i] = 0;

if (fillUtil(res, n, n))

{

for (i=0; i<2\*n; i++)

printf("%d ", res[i]);

}

else

printf("Not Possible");

}

int main()

{

fill(11);

return 0;

}

OUTPUT:

11 6 10 2 9 3 2 8 6 3 7 5 11 10 9 4 8 5 7 1 4 1