GRIDS

1. for snake order traversal L-R then R-L ans so on...

FOR(i=1 to n)

FOR(j=1 to m)

process(i, j + (m+1-2\*j) \* ((i+1)%2) );

2. diagonal order (1,1)(2,1)(1,2)(3,1)(2,2)(1,3)(4,1)(3,2)(2,3)(4,2)(3,3)(4,3)

FOR(d=1 to m+n-1)

height=1+max(0,d-m);

pcount=min(d,n-height+1);

FOR(j=0 to pcount)

process(min(m,d)-j, height+j);

Pg 276 for packing of HEXAGONAL GRIDS.... PACKING...

**Generating all subsets of a subset.**

Consider a number 10110

The following numbers are subsets of this number

00000

00010

00100

00110

10000

10010

10100

10110

Now there's a nice and short way of generating them as shown below:

|  |
| --- |
| **start**  N; //an integer  X = N **while** true  print X **if**( X == 0 ) **break**;  X = (X-1) & N; **end while end** |

Here the number X is a subset of number N.

### Common bitwise tricks

x&(x-1) Returns number x with the lowest bit set off

x ^ ( x & (x-1 ) Returns the lowest bit of a number x

x & 1<<n Returns 1<<n if the n-th bit is set in x

x | 1<<n Returns the number x with the n-th bit set

x ^ 1<<n Toggles the state of the n-th bit in the number x