* Nonograms :-

Nonograms also known as Paint by Numbers or Griddlers are logic puzzles in which cells in a grid have to be colored or left blank according to numbers to nu numbers measures given at the side of the grid to reveal a hidden Picture.

Algorithm :-

The simplest algorithm for solving puzzles is back tracking, which traverses the search graph in depth-first manner. It is often assumed that the variables are examined in fixed ordering.

Back tracking

Input: A constraint network R and an ordering of the variables. $d = \{x_1, .., x_n\}$

Output :- Either a solution if one exists or a decision that the network is inconsistent.

1. (Initialize) cur = 0
2. (Step forward) if x_{cur} is the last variable the all variables have value assignments - exist with the solution;

   Otherwise cur = cur + 1, set $D_{cur} = D_{cur}$.

3. (choose a value) ~~Ste~~ select a value $a \in D_{cur}$ that is consistent with all previously instantiated variables:
4. (Back track step) if Xcur is the first variable. exit with inconsistent.

Other wise set.

cur = cur - 1

Go to step 2.

Backtracking usually suffers from thrashing, namely, rediscovering the same inconsistencies and same partial sucesses during search.