Dendrology

A puzzle game for Zx Spectrum in one kilobyte
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Dendrology is a science dealing with trees. There are many factors that determine a tree health. One of them is a proximity of other plants. When trees grow too close to each other, they compete for resources like water or sun access and it influences their growth badly.

In this game you'll have to plant trees on the board so they don't touch each other and grow healthy. When playing you may spot some similarities to the famous game Minesweeper but you'll see the difference too :)

The rules

The gameplay takes place on a board 10x10 fields big. At the beginning most of the fields are empty. It's your task to decide which fields will be used to plant a tree on them. There is only one possible global solution which is initially unknown to the player but can be learnt by logical reasoning and elimination of the impossible. Unlike in Minesweeper guessing is actually never required.

There are 2 rules of tree placement:

1) Some of the fields contain numbers. You can't put trees onto them. The number on a field says exactly how many neigbour fields must contain trees. Fields are neigbours when they touch each other vertically, horizontally or diagonally.
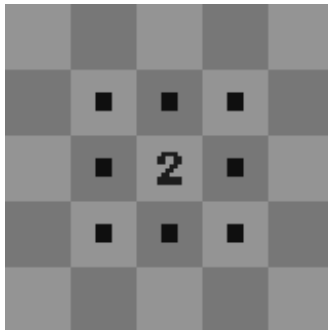
2) Trees cannot touch each other, neither vertically, horizontally or diagonally.

Game control

During the gameplay the player controls a cursor. The cursor is always pointing to some field. It can be moved over the board with Sinclair joystick or keyboard (6 – left, 7 – right, 8 – down, 9 – up, 0 – fire).

The fire button is used to change the field's content. There are 3 possible states that we can cycle through by pressing fire repeatedly:

* unknown / not checked yet – we DON'T KNOW if there is a tree on this field. Graphically represented as an empty field
* field without tree – we know that there ISN'T a tree on this field. Represented as red minus sign.
* field with tree – we know that there IS a tree on this field. Represented as tree symbol

At the each level's beginning location of one of the trees is revealed.

In order to finish a level a player needs to mark all the trees correctly – put trees into all fields where there should be a tree and don't put any tree into any field where there shouldn't be a tree.

Marking all the empty fields isn't technically required to win but still when you know for sure that the field is empty, you should mark it as it'll help your further reasoning a lot.

It is possible to make an illegal move like planting two trees next to each other but you won't get closer to the solution this way. You won't be punished for such a move - trees are not mines, they don't explode :)

The game consists of three levels with varied graphics. At any moment you may restart a level by pressing „R" key.

The strategies

Here are some examples to let you better understand how to play

Case 1
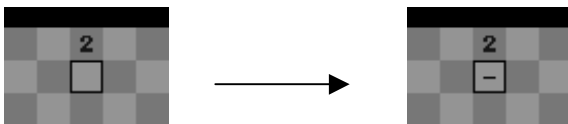
Have a look at the selected field. Can we place a tree there? The answer is NO. The field with number „two" must have 2 neighbour trees but at the same time trees can't touch each other. If we put a tree into the selected field then there's no place to put the second tree legally. So we can mark this field as empty.

Case 2
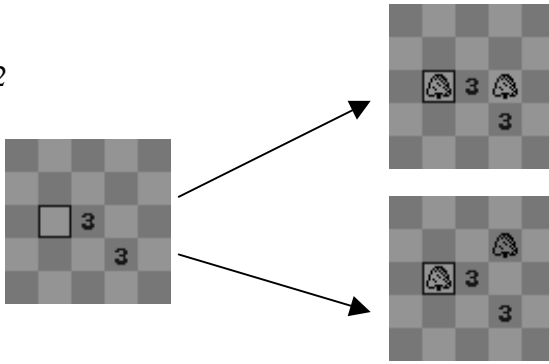
Have a look at the picture. What would happen if we placed a tree at the cursor's place? Well, it leaves us with two possible fields for a 2nd tree and no place for the 3rd. So the field must be empty.

The same case is with the field up and right from it. It also has to be empty as in any case there won't be a place to put the 3rd tree.
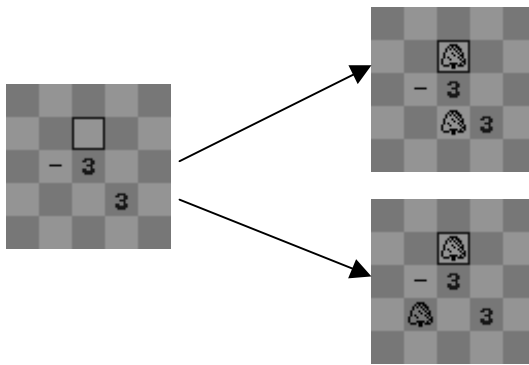
Eliminating these two fields leaves us with three possible cases of placing 3 trees around the field with the number:

We don't know which one is true yet but they all have a common element – a tree in the left upper corner. So there must be a tree for sure.

Finally we can mark the found tree and mark all the fields around it as empty as trees cannot touch each other.

That's the way how it works. Start playing and you'll get the hang of it :)