POP Engine Explanation

This document explains and describes POP's engine in order to make it easier to recreate the algorithms in other platforms or even languages.

POP is very simple to play, it's a bit hard to know how to play the first time if you are not explained, but after that it's pretty much straightforward.

In POP the main character is a spike which goal is to destroy blocks that appear at random locations on the bottom of the screen. The player has to use all 4 arrows (up, down, left, right) in order to pop blocks. When the spike/player hits a block from above (from the sides it doesn't count) the pop should disappear and a new block appears at a random position on the bottom of the screen.

However, there's also a line in the game that moves up with time (I used a random function to make it go up):

```
If randInt(0,5) = 2
Y-5→Y                #Y is the height of the line in this sample
End
```

Basically, it goes up with time and every time the player pops a block, he has to go up (using the Up Arrow Key) and pass the line (its Y position has to be smaller than the line's just for a millisecond and only then it can go down and pop another block.

When the player hits a block, the line goes down a bit.

It's a bit repetitive, but the player needs to try and be as fast as he can. In fact, this is how the score is given:

```
Being A the number of blocks popped
Being L the highest level reached

Being H the number of blocks popped in high-score
Being J the number of levels reached in high-score

If L>J
#Set High-score, more levels is always better, no matter what the
time was
End

If L=J and A<H
#Set high-score, because if the level is the same but less pops were
hit to get there, it means the player was faster
End
```

When the line hits the top of the screen, the player loses, “GAME OVER”. When the line hits the bottom of the screen, the player moves to the next level.

There are three variables that define a level:

```
A variable that defines the initial height of the line
A variable to define how fast the line goes up (randInt(0,VAR)=1)
A variable to define how much the line goes down when a block is
“popped”
```

Conclusion
POP is not the hardest game to make, but I hope this documentation helps you recreating POP.

I also have to thank you a lot if you're recreating POP, it's a pleasure.