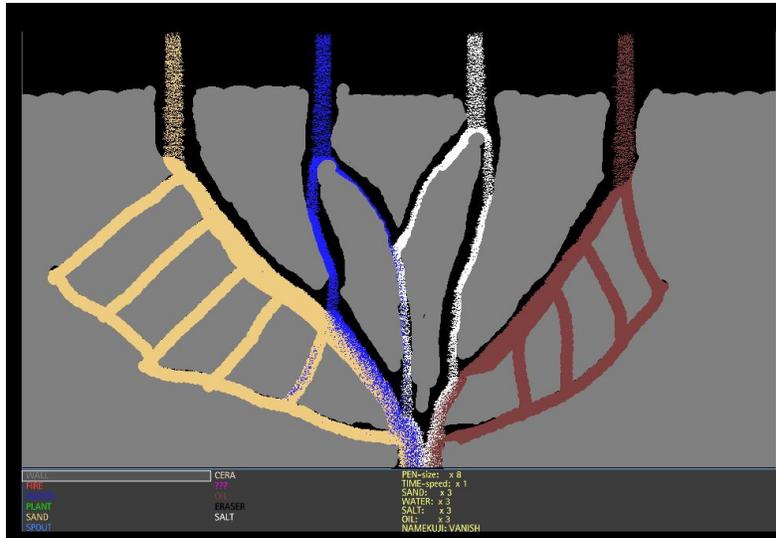


Project Proposal - Falling Sand Game

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Overview:

For our project we want to implement the falling sand particle simulation game in Verilog. This game will allow a user to place particles on a point on the screen from a variety of types. We hope to implement only a few types to begin with: sand, water, fire, oil, and plant. Once placed on the screen, the particles interact with the scene and with each other.

Algorithms

This project will require the implementation of a physics engine that will govern the behavior of several different types of particles as well as their interactions. A few features that will be implemented:

- Gravity
- Particle flow / mixing
- Flammability / explosions and the resulting forces

Peripherals

The game will output to VGA and take input from a mouse.

First Milestone

Implementing VGA and gravity physics to demonstrate the starting particle streams falling correctly (typically games in this genre begin with streams of sand, water, and oil falling from the top of the screen)