

CISC499
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Hi Dr. Ma,

This zip file contains the domain file, style file, and an example.substance file for the Penrose array.

I tried to make each declaration in the example.substance file suitable for procedural generation in a Python script. For example, each element label will be easily created by outputting the string "Label e_" + index + "\$" + array[index] + "\$". The predicates, indices, and elements will be created similarly in Python.

Each element is contained within a cell that is the size of the widest element text. I tried to fit each element to a width of their own text, but that makes centering each element very difficult. I will keep looking for a way to make each cell their own width though.

Separate style files will be created to highlight certain indices to display algorithms like binary search and stack implementations. This is easily done by specifying an index = n in the following section of the style file and adding a fill colour or a highlighting shape.

```
forall Element e; Index i; Number n; Array a  
where IndexOf(e, i, n)
```

Separate style files will be created for these options instead of modifying the style file from within Python.

Thanks for your time and I look forward to receiving your feedback.