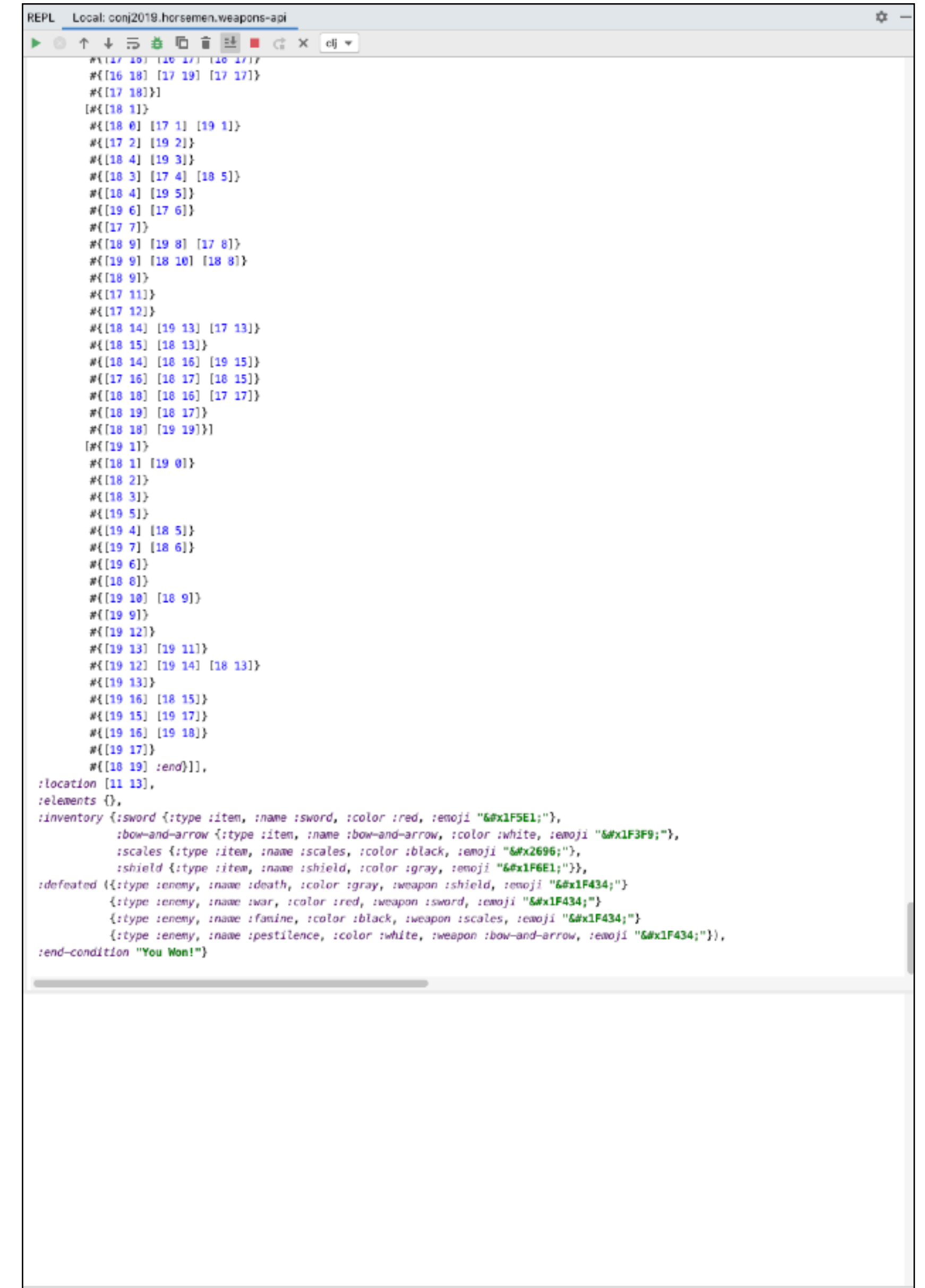


Tooling Challenges

- You are on the outside looking in
- You may not be able to use the tool
- You only get what the tool provides

The Ultimate Tool

- The REPL
 - Data is perfectly transparent
 - You are in the program
- Also consider REBL



```
REPL Local: conj2019.horsemen.weapons-api
#([17 10] [16 17] [16 17])
#([16 18] [17 19] [17 17])
#([17 18])
#([18 11])
#([18 0] [17 1] [19 1])
#([17 2] [19 2])
#([18 4] [19 3])
#([18 3] [17 4] [18 5])
#([18 4] [19 5])
#([19 6] [17 6])
#([17 7])
#([18 9] [19 8] [17 8])
#([19 9] [18 10] [18 8])
#([18 9])
#([17 11])
#([17 12])
#([18 14] [19 13] [17 13])
#([18 15] [18 13])
#([18 14] [18 16] [19 15])
#([17 16] [18 17] [18 15])
#([18 10] [18 16] [17 17])
#([18 19] [18 17])
#([18 18] [19 19])
#([19 11])
#([18 11] [19 0])
#([18 2])
#([18 3])
#([19 5])
#([19 4] [18 5])
#([19 7] [18 6])
#([19 6])
#([18 8])
#([19 10] [18 9])
#([19 9])
#([19 12])
#([19 13] [19 11])
#([19 12] [19 14] [18 13])
#([19 13])
#([19 16] [18 15])
#([19 15] [19 17])
#([19 16] [19 18])
#([19 17])
#([18 19] :end)],
:location [11 13],
:elements {},
:inventory {:sword {:type :item, :name :sword, :color :red, :emoji "&#x1F5E1;"},
             :bow-and-arrow {:type :item, :name :bow-and-arrow, :color :white, :emoji "&#x1F3F9;"},
             :scales {:type :item, :name :scales, :color :black, :emoji "&#x2696;"},
             :shield {:type :item, :name :shield, :color :gray, :emoji "&#x1F6E1;"}},
:defeated [{:type :enemy, :name :death, :color :gray, :weapon :shield, :emoji "&#x1F434;"}
           {:type :enemy, :name :war, :color :red, :weapon :sword, :emoji "&#x1F434;"}
           {:type :enemy, :name :famine, :color :black, :weapon :scales, :emoji "&#x1F434;"}
           {:type :enemy, :name :pestilence, :color :white, :weapon :bow-and-arrow, :emoji "&#x1F434;"}],
:end-condition "You Won!"
```