

## Python: Read line-based JSON records

```
import json

class JsonLineReader(object):
    def read_file(self, path):
        stream = open(path, "r")
        # FIXME: error handling
        for line in stream:
            cleaned = self.clean_line(line)
            parsed = json.loads(cleaned)
            yield parsed

    def clean_line(self, line):
        return line.rstrip("\n,")
```

## Shell: Build and run

```
cd ~/prog101
```

```
ls
```

```
make
```

```
./prog
```

**SQL: Create intermediate tables for multi-stage calculation.**

```
drop table if exists frequencies;

-- Make a histogram of the target table, counting how many times each label occurs.
create table frequencies
  -- The new table will have whatever columns we select here.
  select
    -- Pass label into the temporary table.
    label,
    -- Count how many rows have this label.
    count(*) as frequency
  from targets
  group by
    label;

-- Show top ten items by frequency.
select
  label,
  frequency
from frequencies
order by
  -- Order descending, so that highest frequency comes first.
  frequency desc
-- Only show the top ten items.
limit 10;
```

## JavaScript: Active slider widget

```
$.({  
    // Run this block after the browser has loaded everything.  
  
    // Depends on the jQuery UI "slider" library.  
    $("#hours").slider({  
        step: 0.1,  
        start:function() {  
            // Turn off any animation that might be running.  
            // TODO: define above.  
            anim = false;  
        },  
        slide:function() {  
            hour = $(this).slider("value");  
            update_sun();  
            draw_sun();  
        },  
        stop:function() {  
            renderframe();  
        },  
    });  
});
```