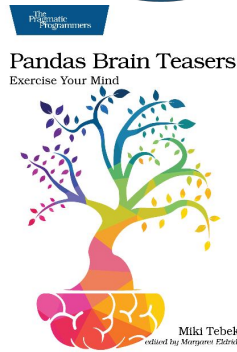
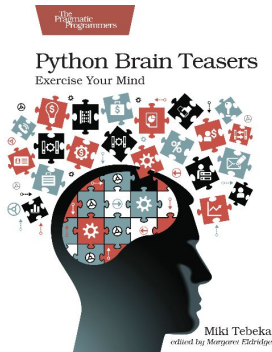
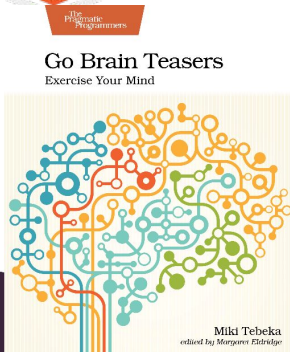
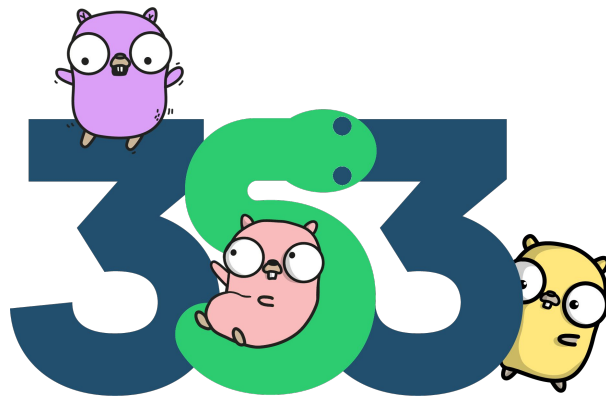


One Does Not  
Simply Iterate  
over Mordor

# miki @tebeka



CEO,  
CTO,  
UFO



# Range Over Function

Go 1.23, August 2024

# Generators

Python 2.3, July 2003

# CODE

`tick/tick.go`

# Range-Over Functions in Go ArdanLab Blog



Load logs from  
compressed  
JSON file.

```
$ zcat logs.json.gz | wc
```

```
5350200 16045852 770589508
```

```
$ zcat logs.json.gz | head -1
```

```
{"host": "199.72.81.55", "time":  
"1995-07-01T00:00:01Z", "request": "GET /history/apollo/  
HTTP/1.0", "status": 200, "bytes": 6245}
```



# CODE

`log/log.go`

# CODE

`slice/slice.go`

# CODE

load

# Map

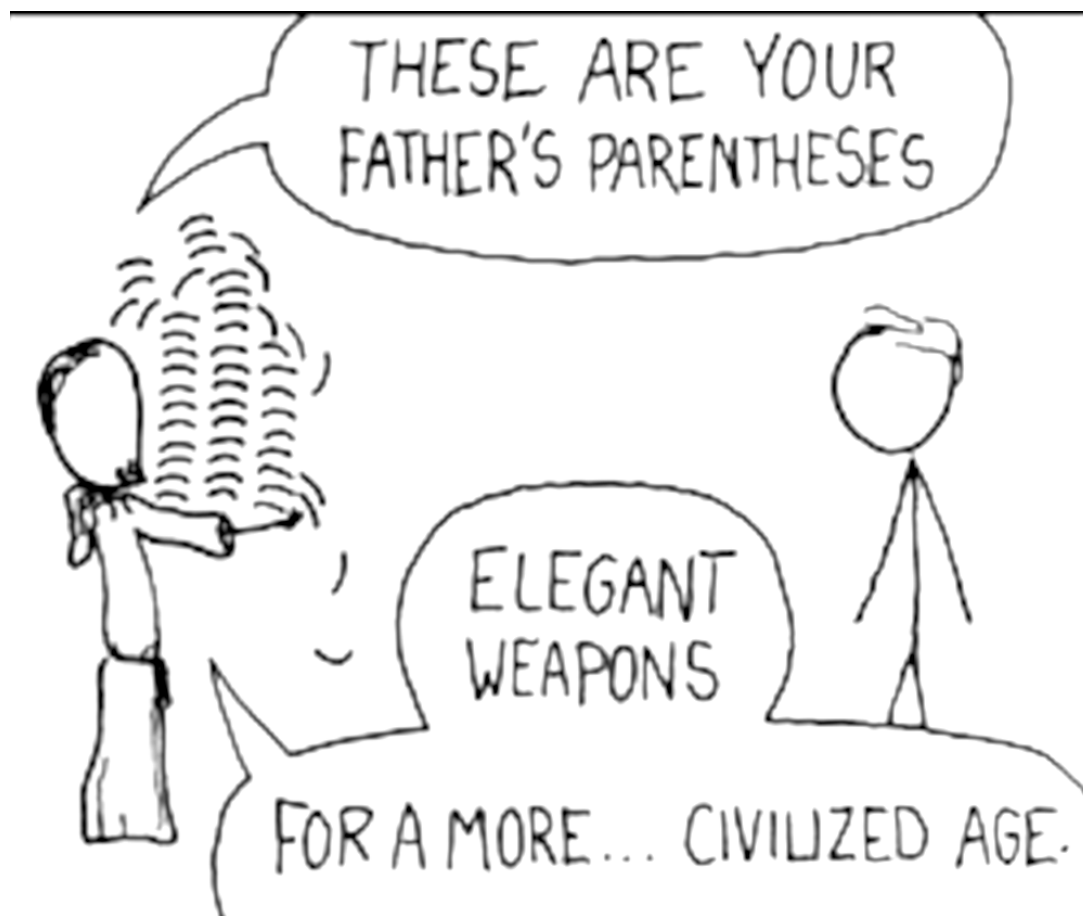
lower: ["Suite", "Up"] -> ["suite", "up"]

# Filter

$\geq 0$ : [2, -1, 3, 4] -> [2, 3, 4]

# Reduce

sum: [1, 2, 3, 4]  $\Rightarrow$  10



<https://xkcd.com/297/>

reduce



map



```
SELECT SUM(amount * price)
FROM sales
WHERE date = '2025-05-25';
```



filter

# CODE

`lazy/lazy.go`

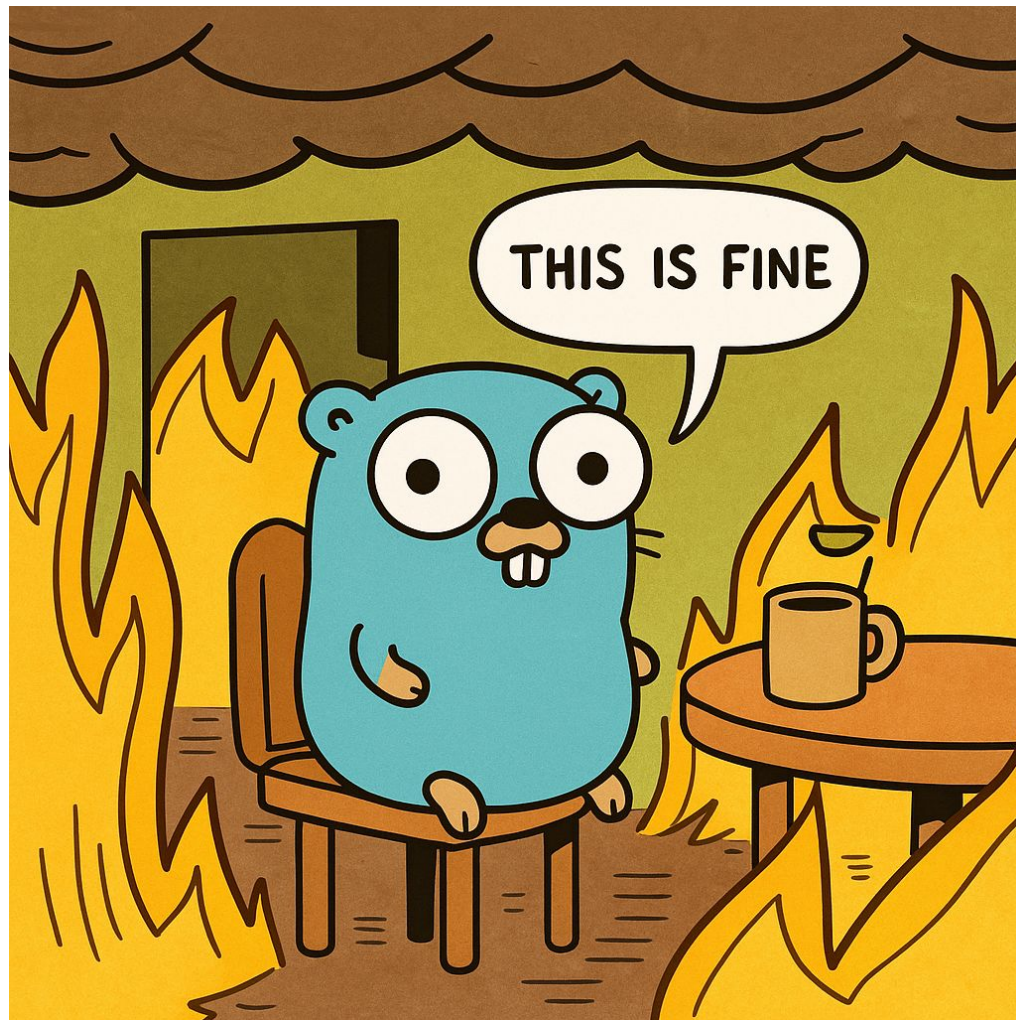
# CODE

push / push . go



# CODE

`pull/pull.go`



# CODE

`fibs/fibs.go`

# CODE

`order/order.go`

# CODE

`leak/leak.go`

# CODE

`range/range.go`



# Questions?



[github.com/tebeka/talks/tree/main/gcil-2025](https://github.com/tebeka/talks/tree/main/gcil-2025)