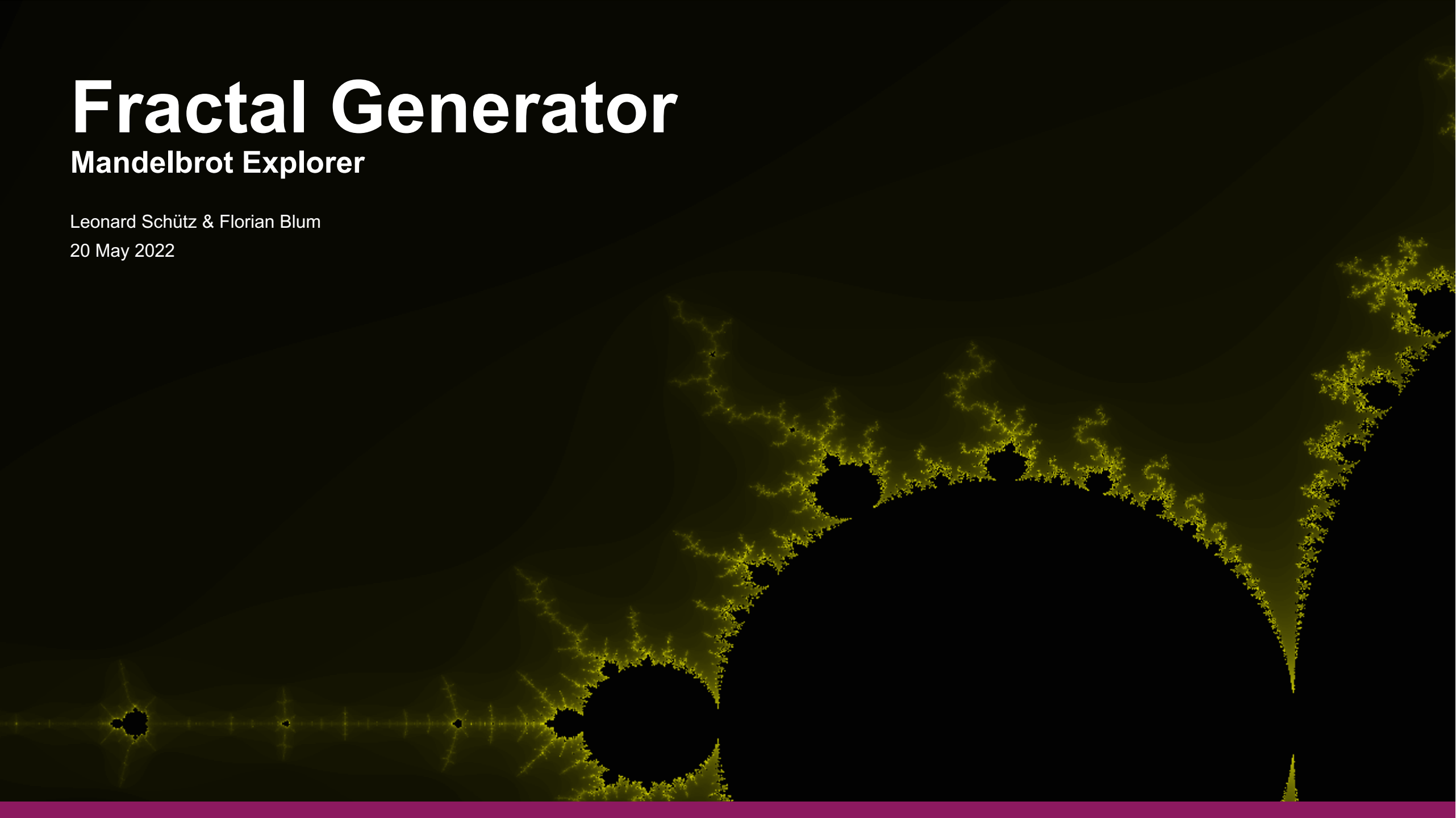


Fractal Generator

Mandelbrot Explorer

Leonard Schütz & Florian Blum

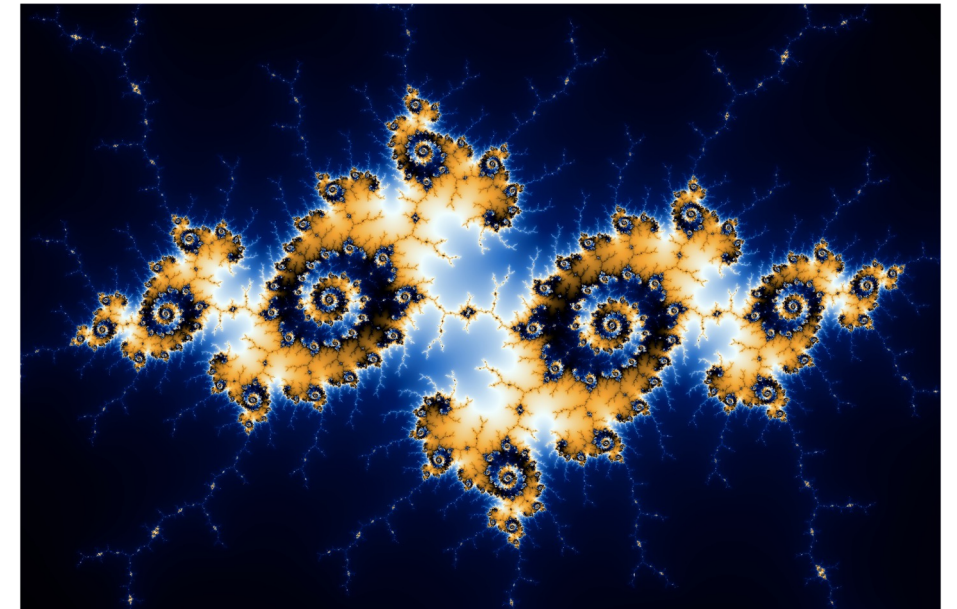
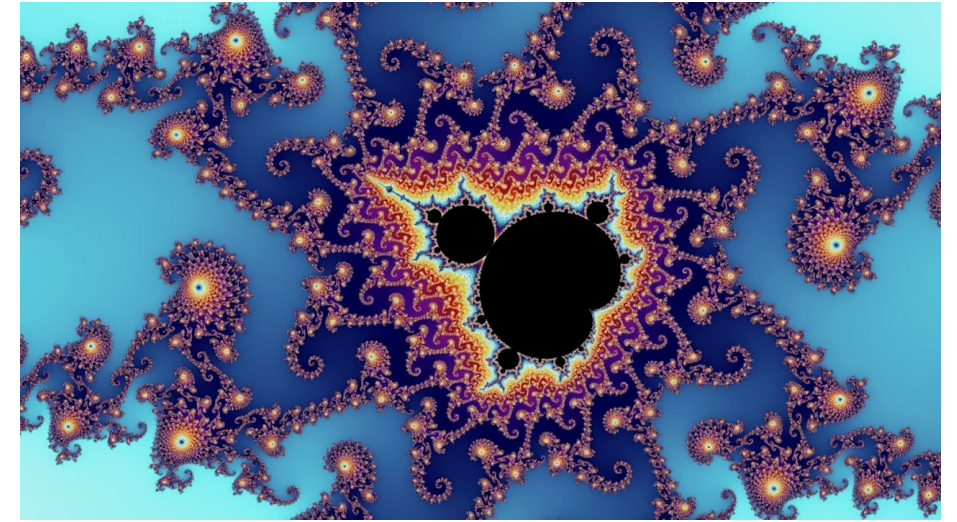
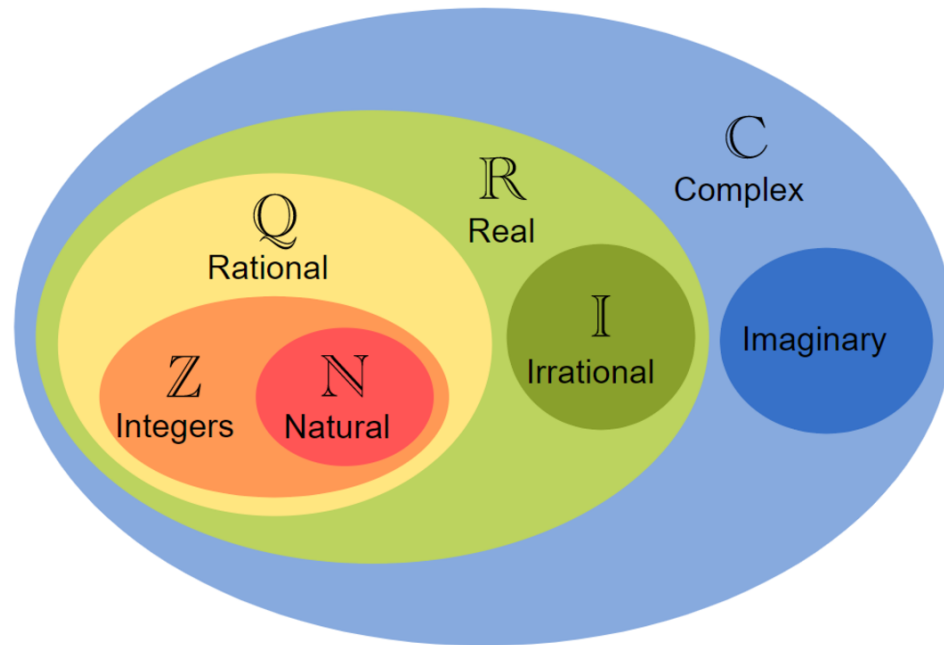
20 May 2022



Agenda

- What is a Fractal?
- Vision
- Demonstration
- Components
- Architecture
- Design Decisions
- Q&A

What is a Fractal?



Vision



MANDELBROT SET
EXPLORER



SAVE AND LOAD
INTERESTING AREAS



FAULT TOLERANT
BACKEND

Fractal Generator

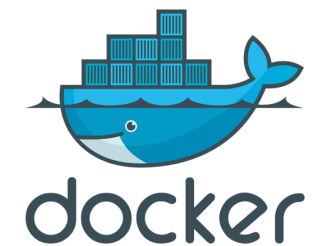
Demonstration

- [Link](#)

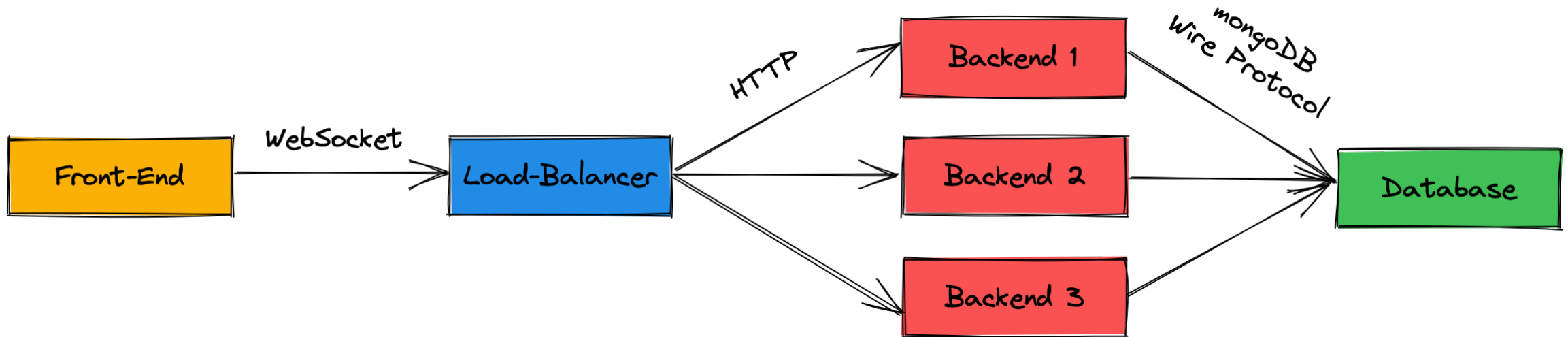
Fractal Generator

Components

- Frontend
- NodeJS Backend
- Traefic Load Balancer
- MongoDB Database



Architecture



Database Schema

```
const fractal = {  
  timestamp: 1649944007019,  
  origin_x: 2.8963834047317505,  
  origin_y: 63.3856737613678,  
  width: 540,  
  height: 360  
}
```


Design Decisions

- NoSQL vs SQL
- ExpressJS
- Front end navigation rendering

Q&A

