



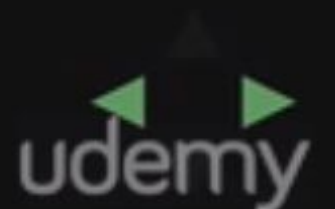
Intro to Backend

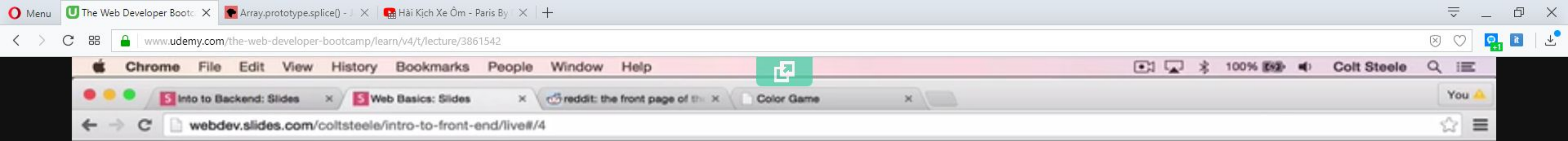
- Review Internet Basics
- Static Vs. Dynamic Sites
- Stacks/Back End Technologies





<http://www.udemy.com/courses>





Finding the Right Address

`www.udemy.com` → `23.235.47.175`

- Your query is submitted to your ISP
- Within your ISP, the DNS takes the Domain name and turns it into an IP address



Going to that Address

`www.udemy.com` → `23.235.47.175`

- A request is sent to the desired IP address via HTTP
- Your request finds the fastest path possible path to the server with the specified IP
- This is not a direct journey. It requires hopping from server to server until we arrive



Udemy Server Responds

`www.udemy.com` → `23.235.47.175`

- The requested server figures out exactly what we're asking for(/courses)
- The server builds us the right content, often pulling information from database
- The server responds with any combination of HTML, CSS, and JavaScript
- And then...





```
const express = require('express');
const app = express();
const port = 3000;

app.use(express.json());
app.use(express.urlencoded({ extended: true }));

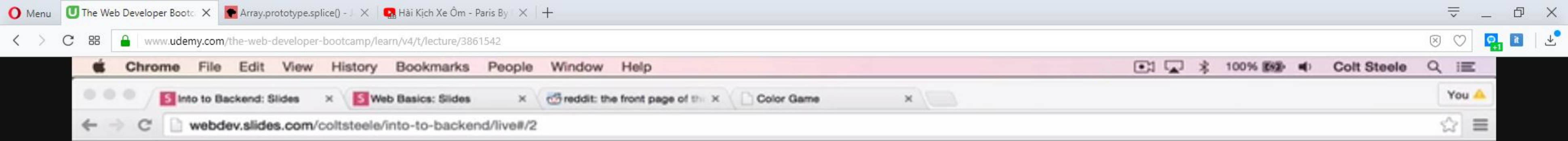
// Routes
app.get('/', (req, res) => {
  res.send('Hello World!');
});

app.get('/api/hello', (req, res) => {
  res.json({ message: 'Hello from API!' });
});

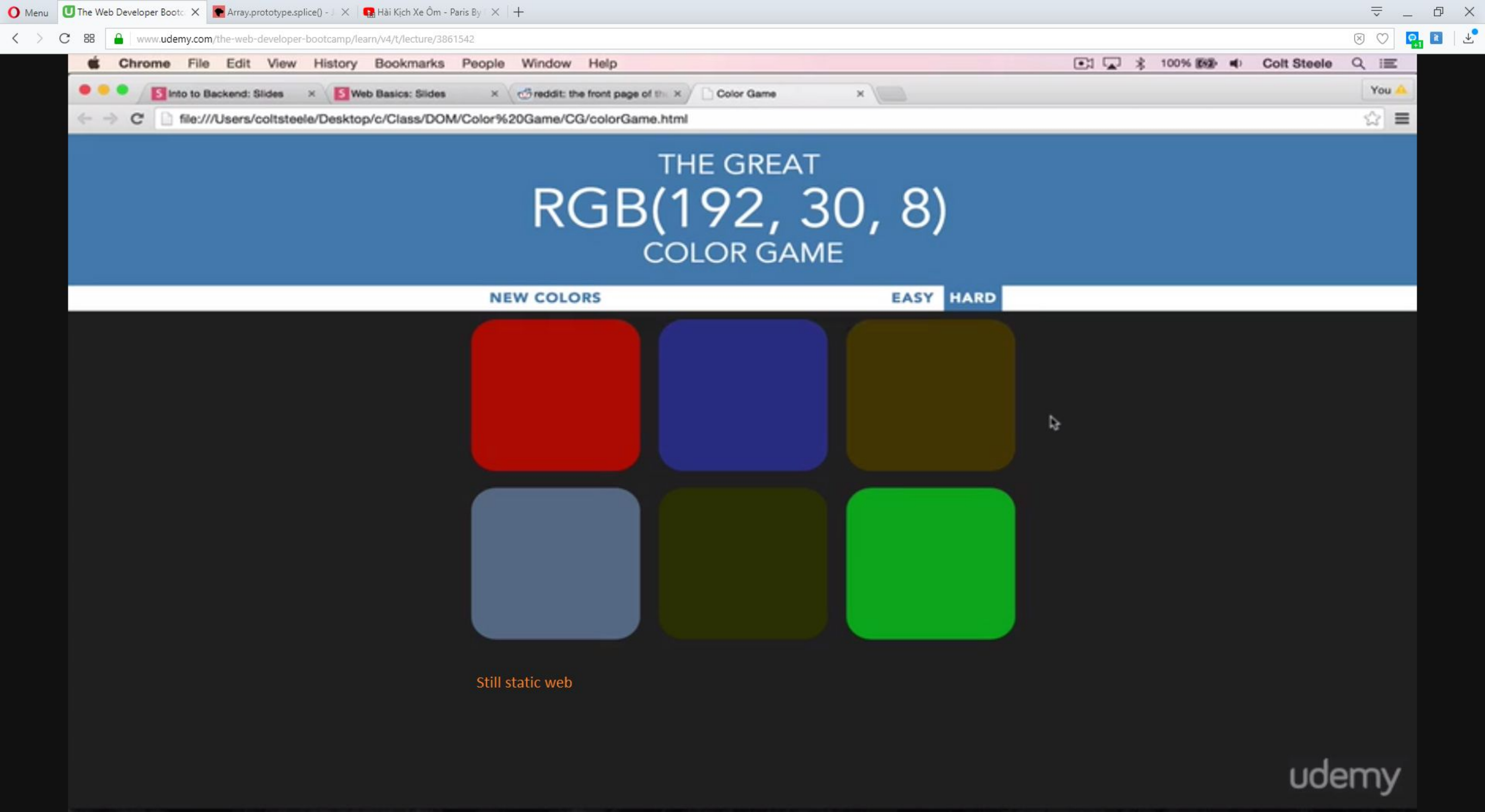
// Error handling
app.use((err, req, res, next) => {
  console.error(err.stack);
  res.status(500).send('Something broke!');
});

// Start the server
app.listen(port, () => {
  console.log(`Server is running on port ${port}`);
});
```





Static Vs. Dynamic



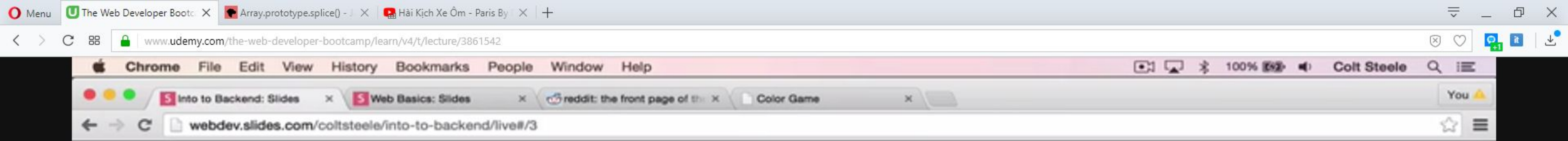
THE GREAT RGB(192, 30, 8) COLOR GAME

NEW COLORS

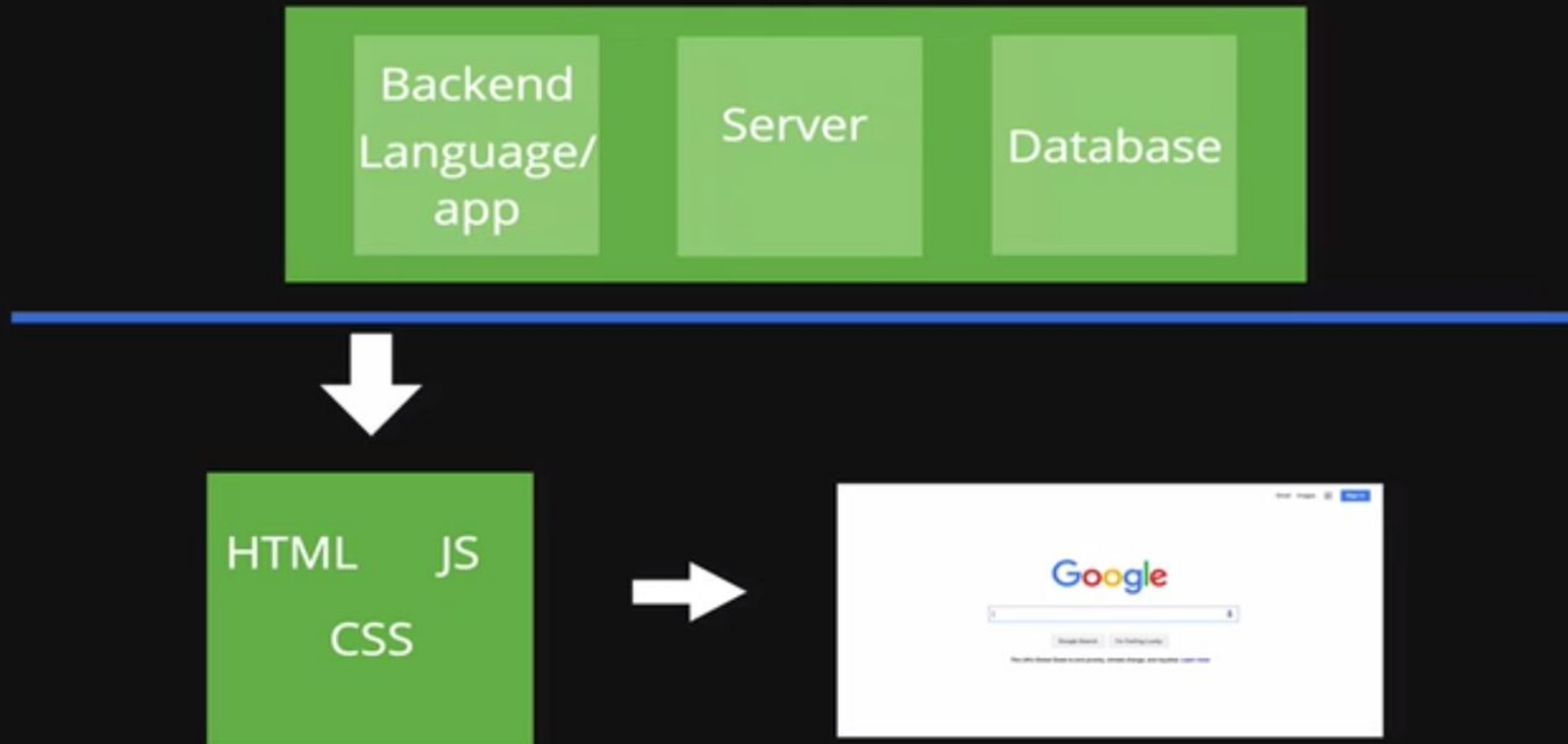
EASY HARD

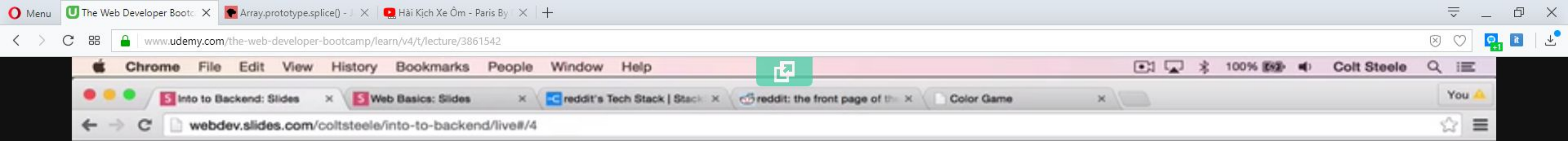


Still static web

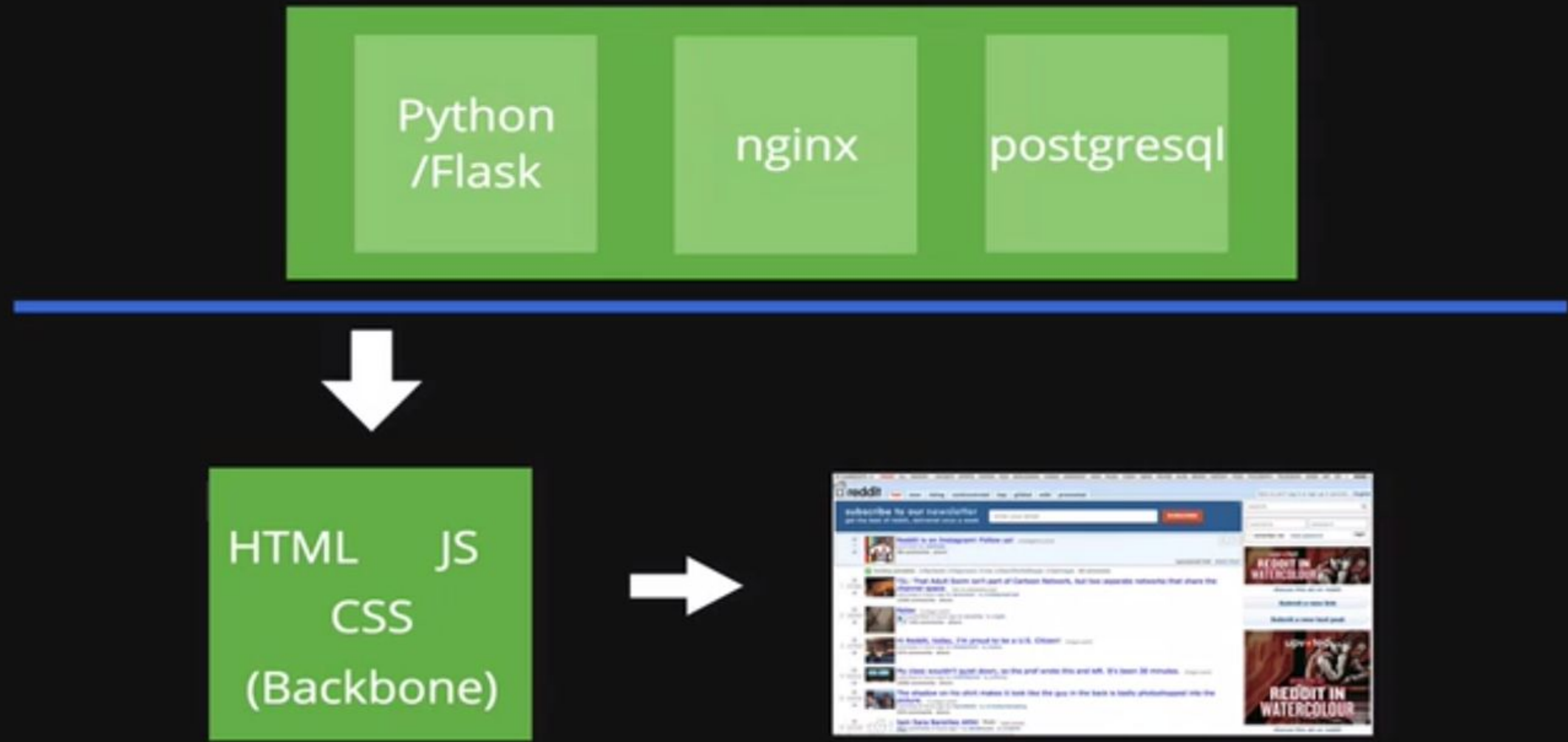


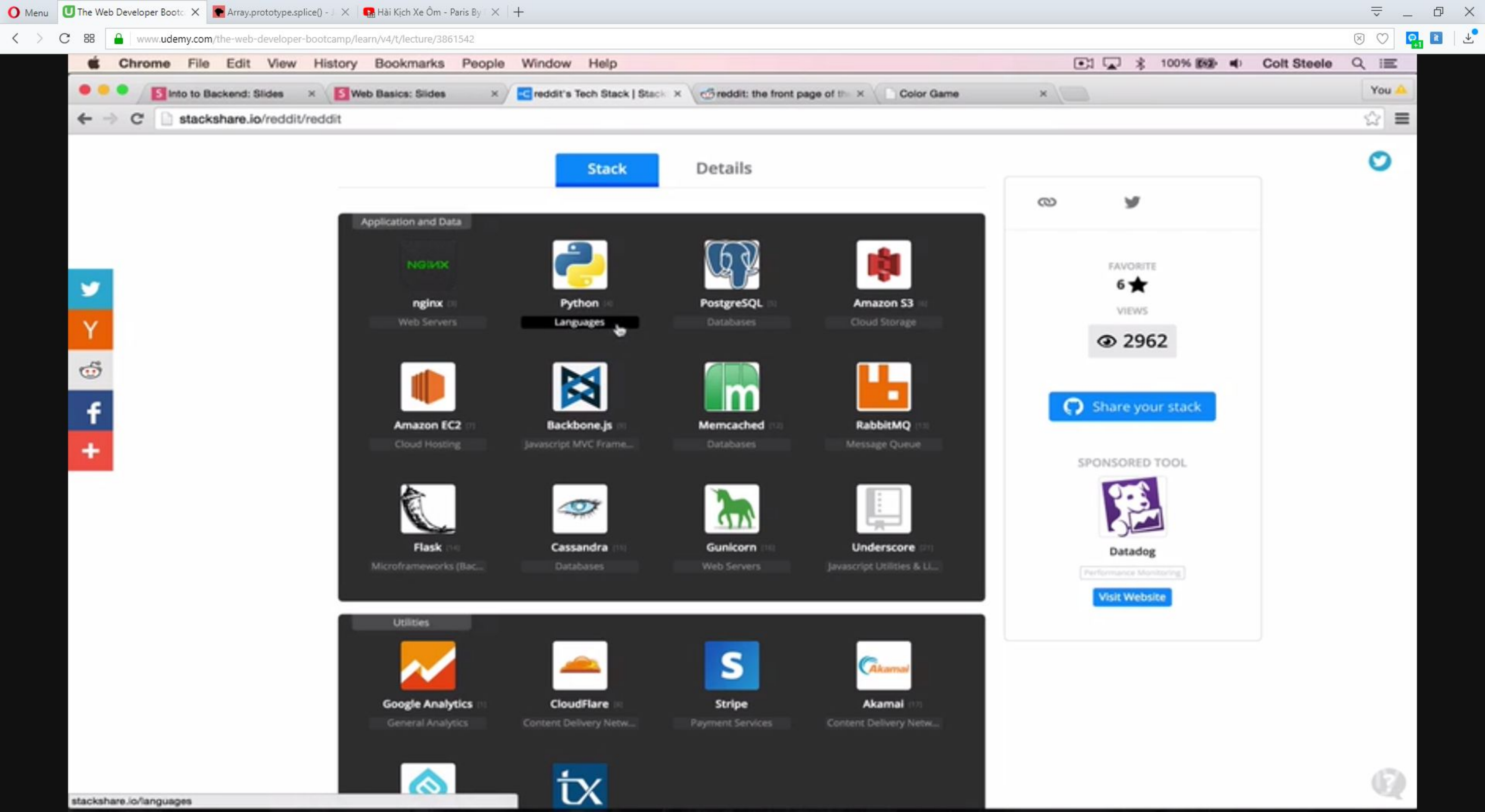
A Generic Stack

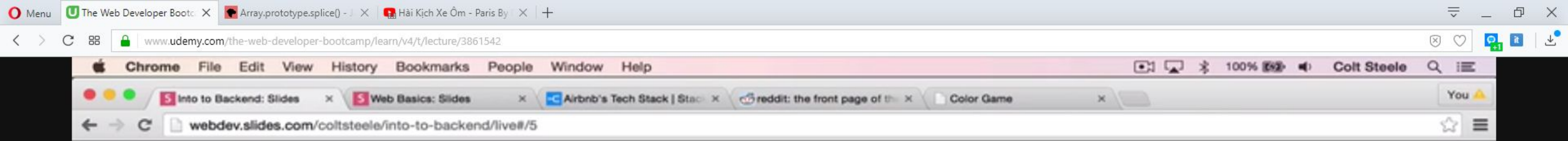




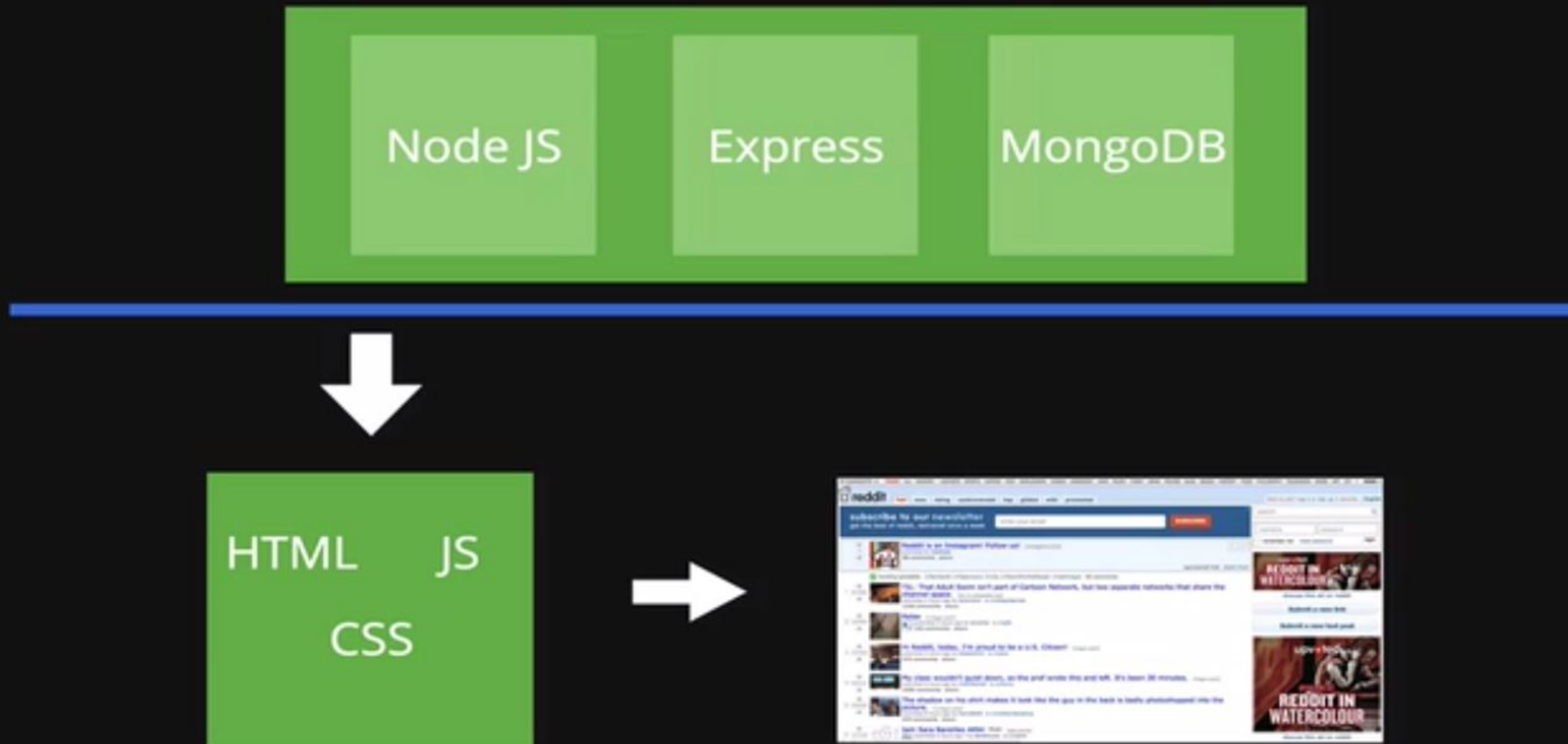
Reddit's Stack

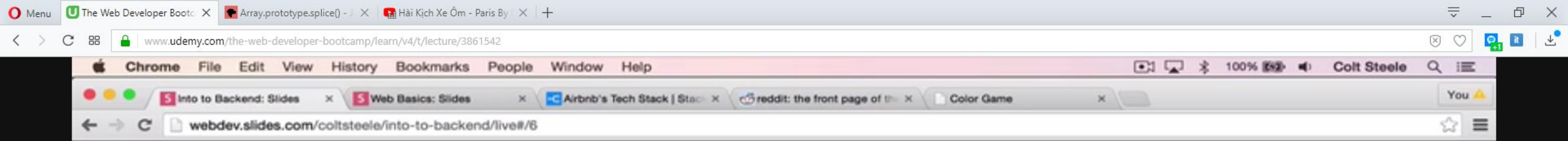






Our Stack





Potential Backend Features

Check if the user is logged in

Figure out what HTML, CSS, and JS to send to the User

Sign Up a User

Add new post to DB

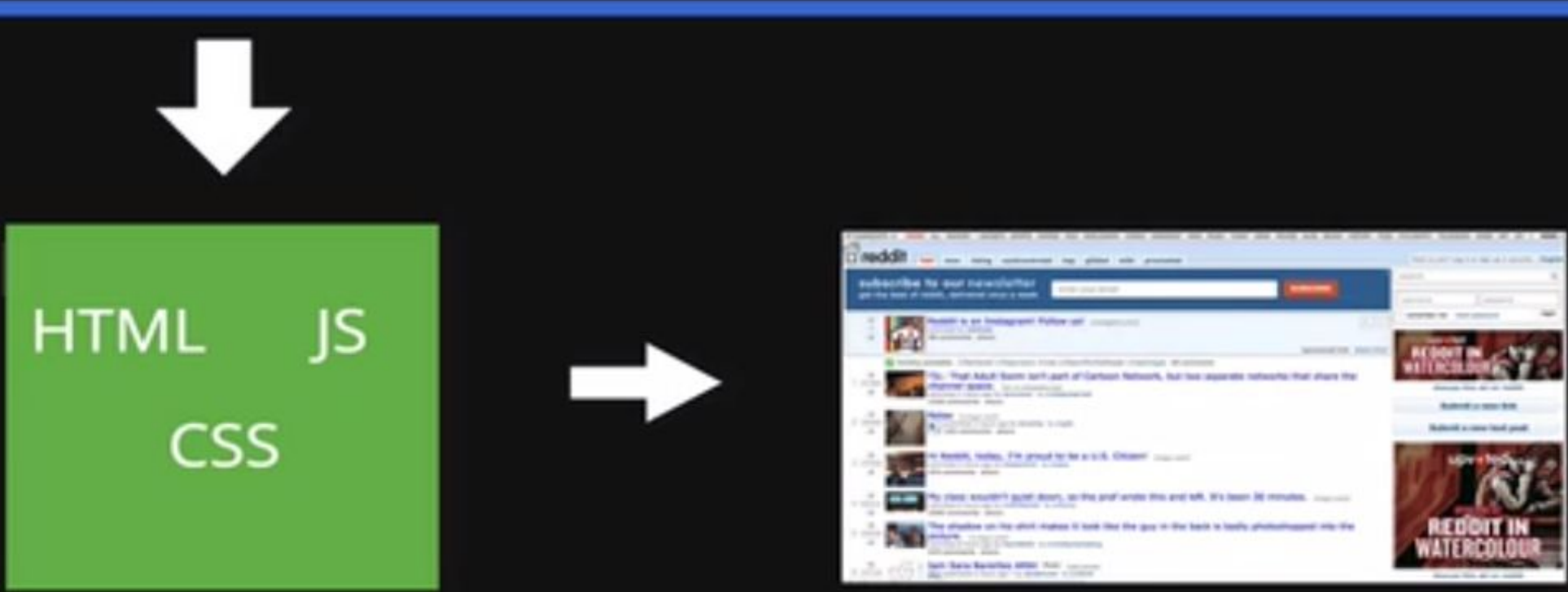
Create new comment

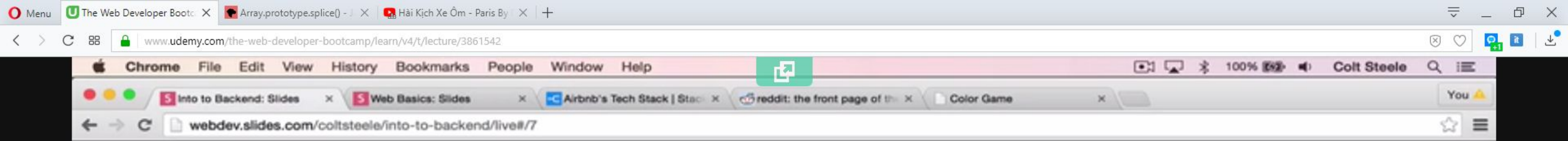
remove post from DB

Sort/Rank posts

Create subreddit

Add to newsletter





Frontend

Backend

1. Ask for reddit homepage



2. Get top posts from DB
send back home page content

3. Browser renders home page



4. User enters "dogs" in search box and submits form



5. Finds all posts in DB about "dogs"

7. Browser renders search page



6. Sends back HTML for the search results page