

# UI programming on the web

Drexel University

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@krob

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## TODAY

### TOP NEWS

#### EDUCATION

Drexel class learning about UI programming

#### LOCAL

Baker: Stay Off the Roads

#### LOCAL

Walsh: 'Stay Indoors,' Parking Ban in Effect 'Until Further Notice'

#### REGION

Coast Guard Rescues Sailors 140 Miles off Nantucket

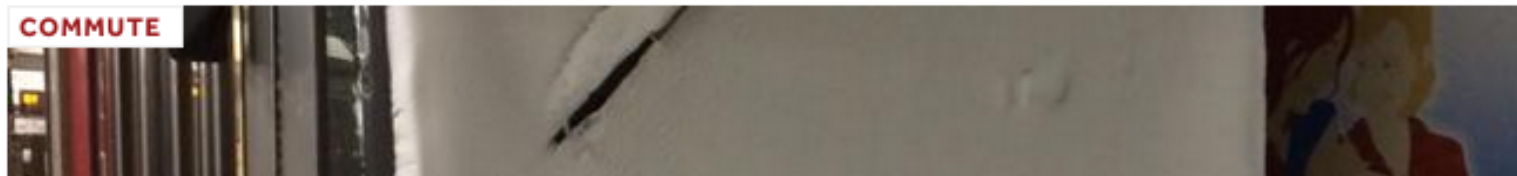
#### SPORTS

Former Bruins Defenseman Steve Montador Dies at 35

#### NATIONAL

Scorpion Stings Passenger on Alaska Airlines Flight

#### COMMUTE



# UI programming on the web

We'll learn about how the web uses HTTP as a communication protocol, how browsers and web servers typically interact, and the different building blocks involved in making web applications.

# UI programming on the web

HTTP, Servers and Clients

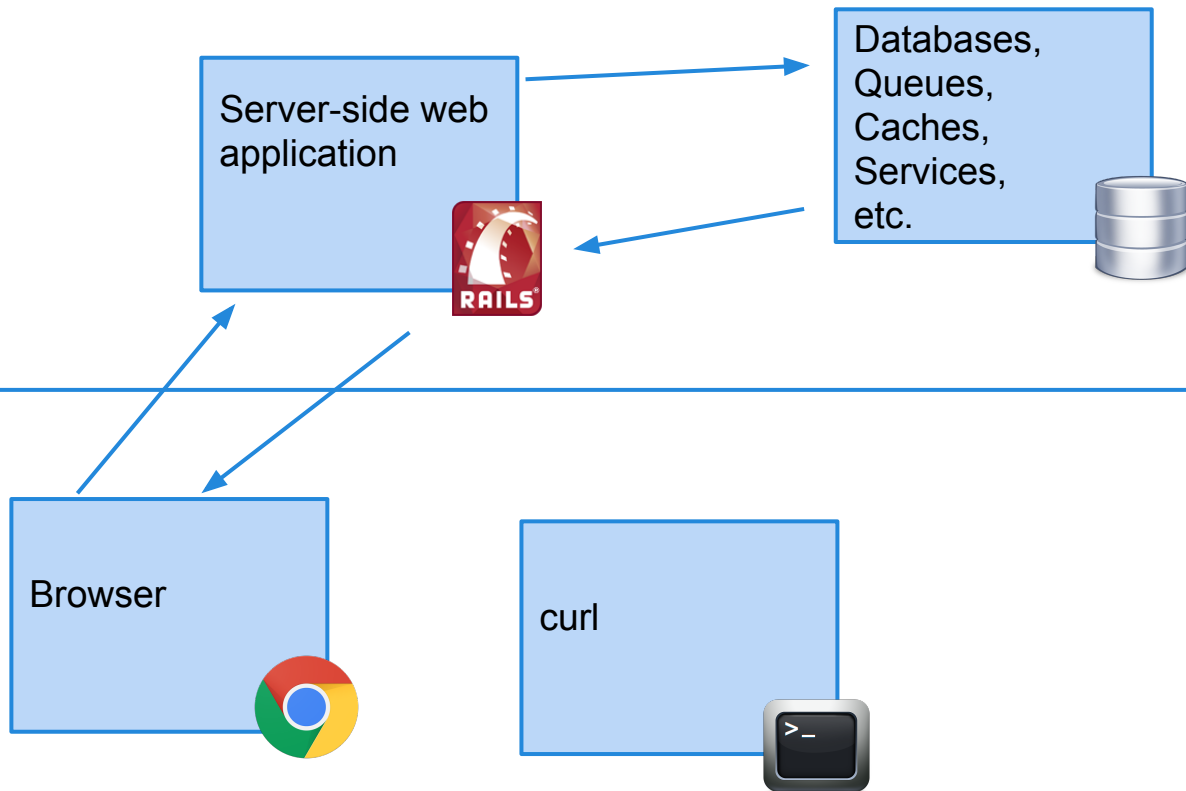
Browsers

- HTML, CSS, JavaScript
- XHR, WebSockets

Fitting your use

JavaScript strengths

# HTTP, Servers and Clients



# HTTP, Servers and Clients

Request and response

Methods

Query string, request body

Headers

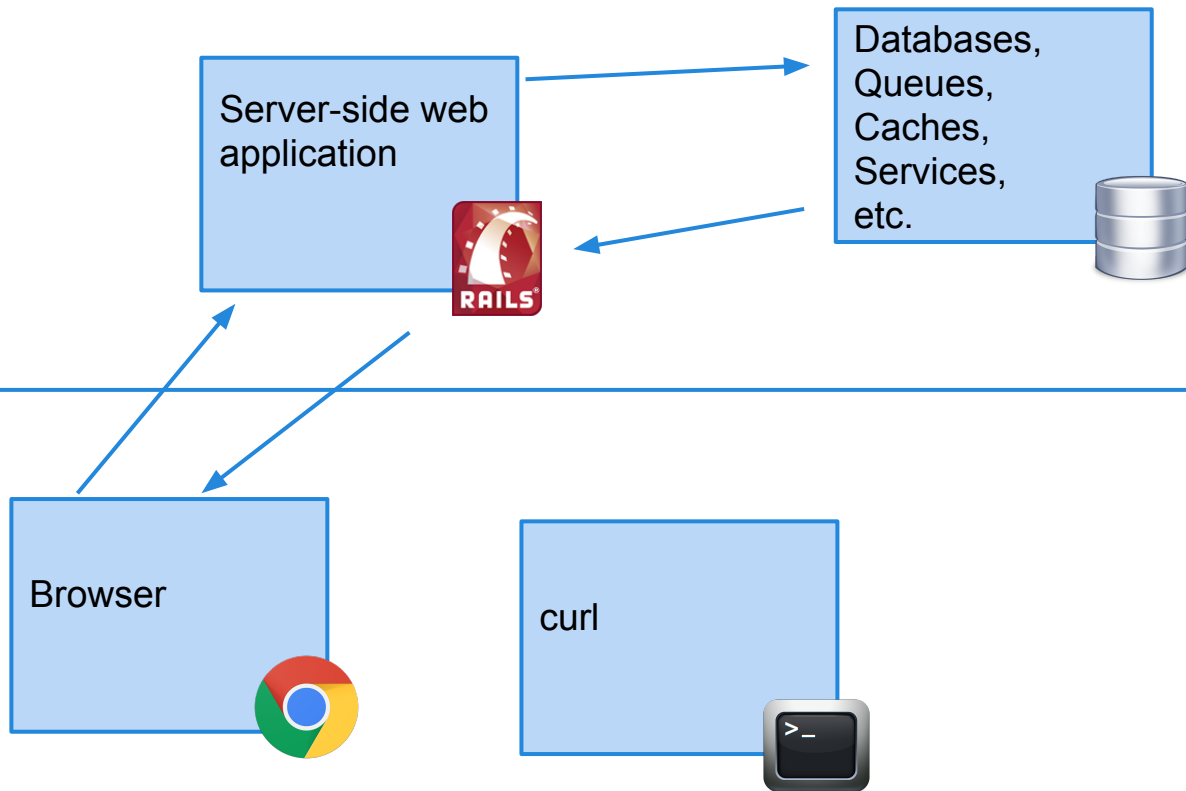
# HTTP, Servers and Clients

Serving files

Creating response dynamically

Connecting to other services

# HTTP, Servers and Clients





**HTML**



**JS**



**CSS**



# Browsers - HTML, CSS, JavaScript

HTML is for content

CSS is for styling

JavaScript is for browser programs



# Browsers - HTML, CSS, JavaScript

HTML is for content

DOM (Document Object Model)

Tree - nodes, attributes, children



# Browsers - HTML, CSS, JavaScript

CSS is for styling

Rules, scoped with tags, classes and ids

Box model, flow, flexbox



# Browsers - HTML, CSS, JavaScript

JavaScript is for running programs

Code runs in the browser

Security sandbox



JS



# Browsers - JavaScript

Interactivity

Animations

Canvas



# Browsers - JavaScript

XmlHttpRequest, aka AJAX

WebSockets

localStorage







# Fitting your use case

Google Maps

“Time to first tweet”

Real-time visualizations