GENERAL ASSEMBLY

JAVASCRIPT DEVELOPMENT

Sasha Vodnik, Instructor

HELLO!

1. Pull changes from the `svodnik/JS-SF-15-resources` repo to your computer
2. Open the `16-deploying` folder in your code editor

DEPLOYING YOUR APP

LEARNING OBJECTIVES

At the end of this class, you will be able to

- Understand what hosting is.
- Identify a program's needs in terms of host providers.
- Ensure backward compatibility by using Babel to transpile code.
- Optimize code before deployment
- Deploy to a web host.

AGENDA

- Transpile with Babel
- Lint with ESLint
- Minify with Uglify-JS
- Add a polyfill
- Deploy with Firebase

WEEKLY OVERVIEW

WEEK 9	Deploying your app / Final project lab
WEEK 10	React / Graduation!

ACTIVITY

EXERCISE

KEY OBJECTIVE

- Check in on final projects

TYPE OF EXERCISE

- Groups of 2-4

TIMING

6 min

1. Share what you have done so far on your final project (notes/outline, wireframe, pseudocode, basic functionality…)
2. Share your next step. If you're not sure, share where you are right now and brainstorm with your group what next steps might look like.

EXIT TICKET QUESTIONS

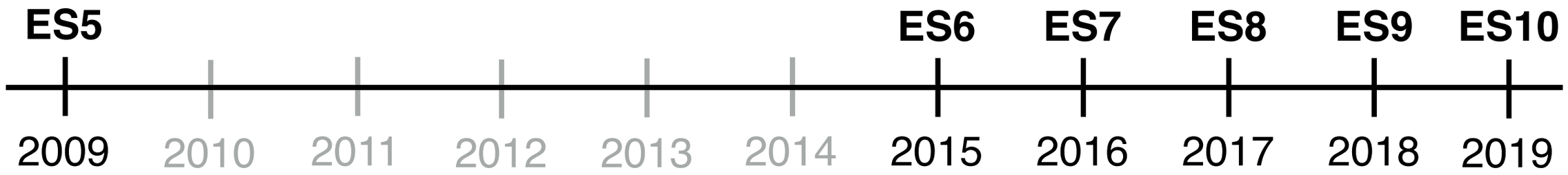
1. When referencing the database, are there any methods or functions that will not be allowed by default?

FINALIZING YOUR CODE

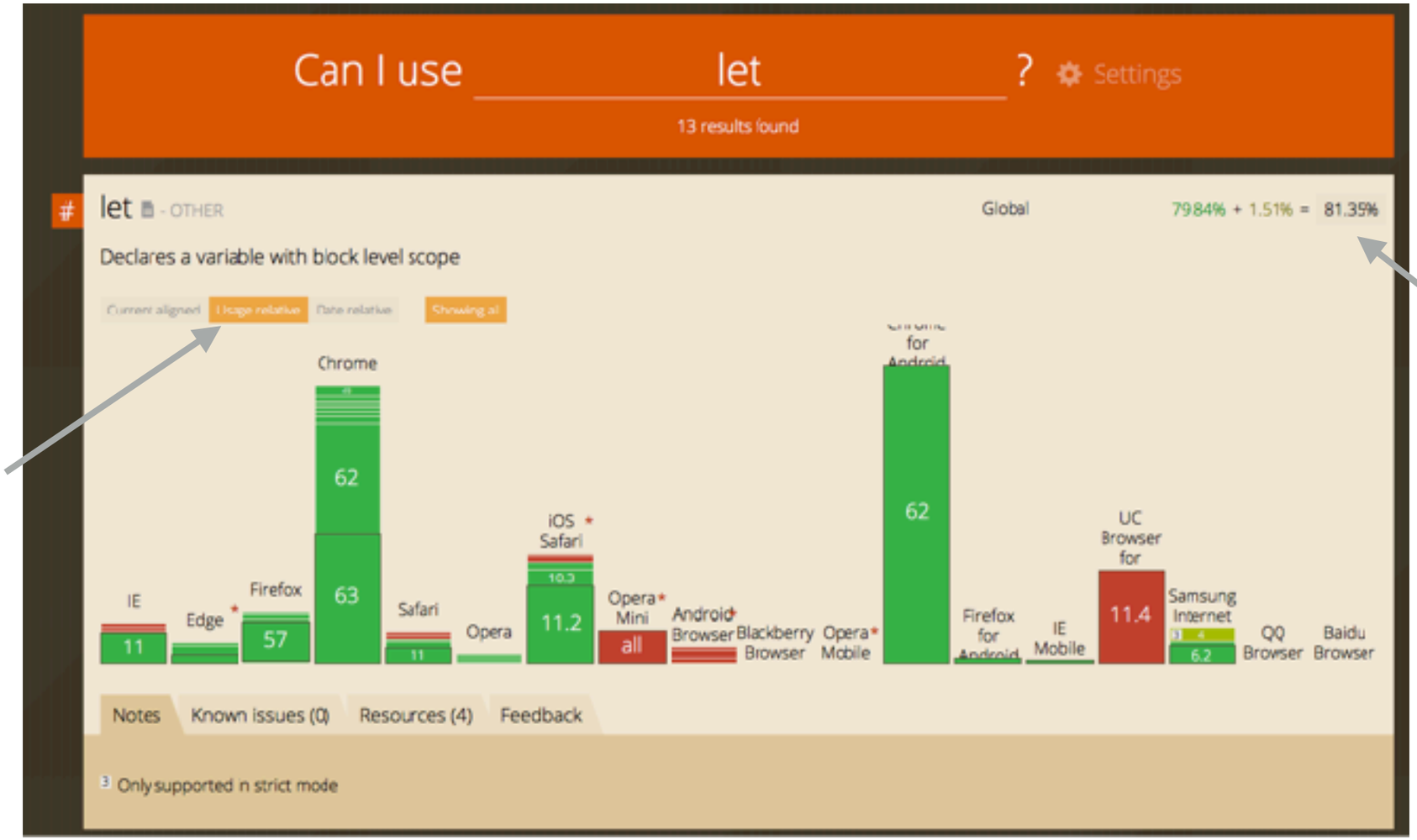
TRANSPILING

virtually all browsers
in use support ES5

only modern browsers
support ES6+



caniuse.com



"Usage relative" option shows proportional graph

Estimated percent of global browser traffic that can parse this feature

Transpiling involves rewriting code that uses ES6+ features to produce the same result using ES5 code

ES6

```
const taxRate = 0.0875;
let items = [];

let addToCart = () => {
  // do something
}
```

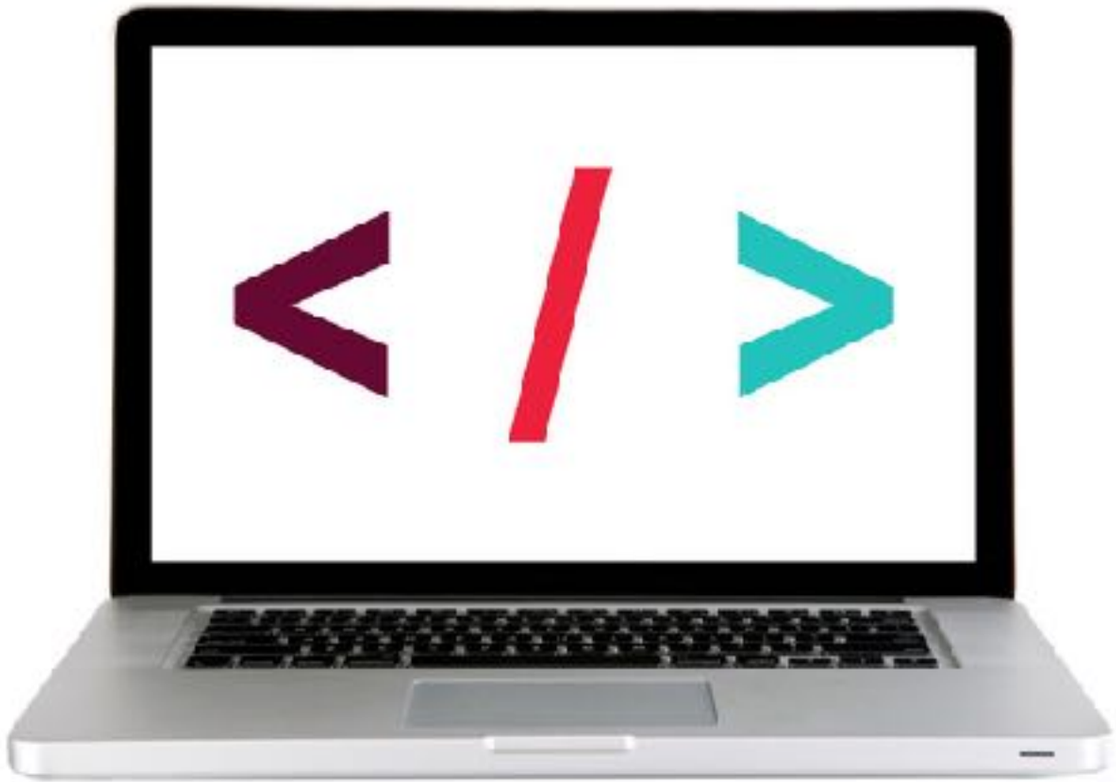
transpiling

ES5

```
var taxRate = 0.0875;
var items = [];

function addToCart() {
  // do something
}
```

LET'S TAKE A CLOSER LOOK



EXERCISE — TRANSPILE CODE USING BABEL

KEY OBJECTIVE

- Ensure backward compatibility by using Babel to transpile code.

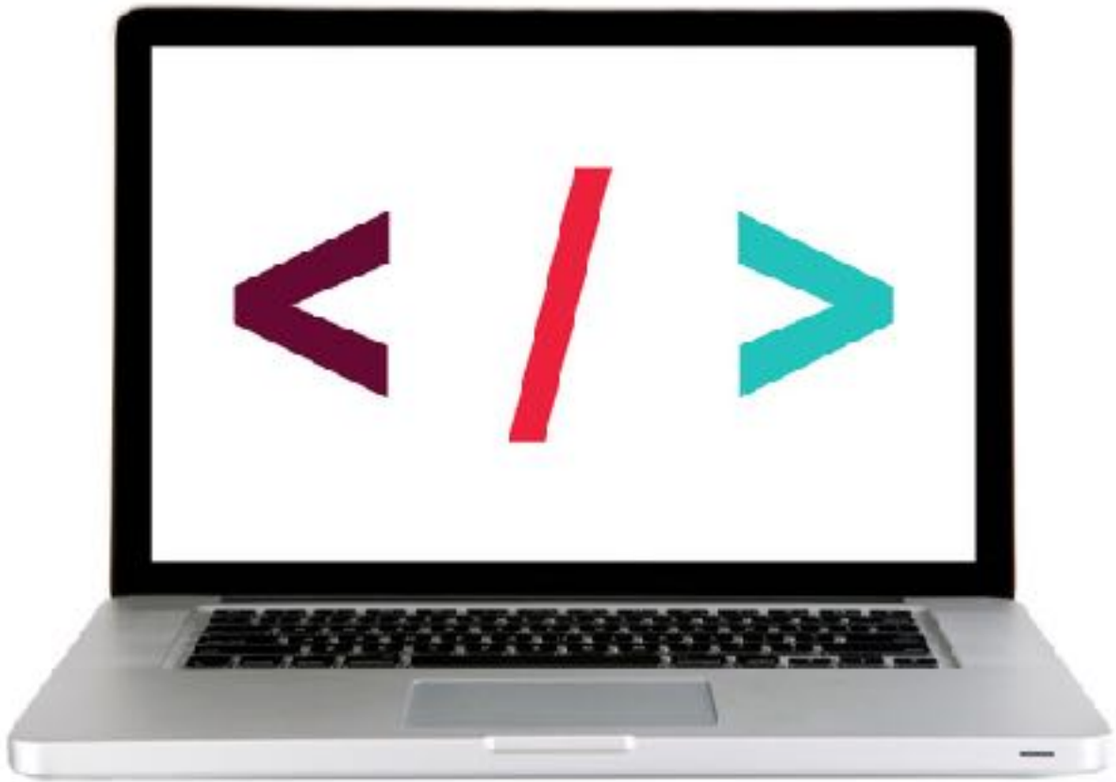
TIMING

5 min

1. Configure Babel for the Firebase app you created in the previous class.
   (If your code isn't quite working, use the code in the `starter-code > 1-transpiling-exercise` folder as a starting point.)
2. Run Babel to create an ES5-compatible version of your code.
3. Open the converted file in your editor and verify the code was transpiled.
4. Open index.html and change the source for the script element to the JavaScript file created by Babel.
5. Test your app in the browser and make sure it still works as it did previously.

LINTING

LET'S TAKE A CLOSER LOOK



EXERCISE — LINT CODE USING ESLINT

KEY OBJECTIVE

- Optimize code for deployment.

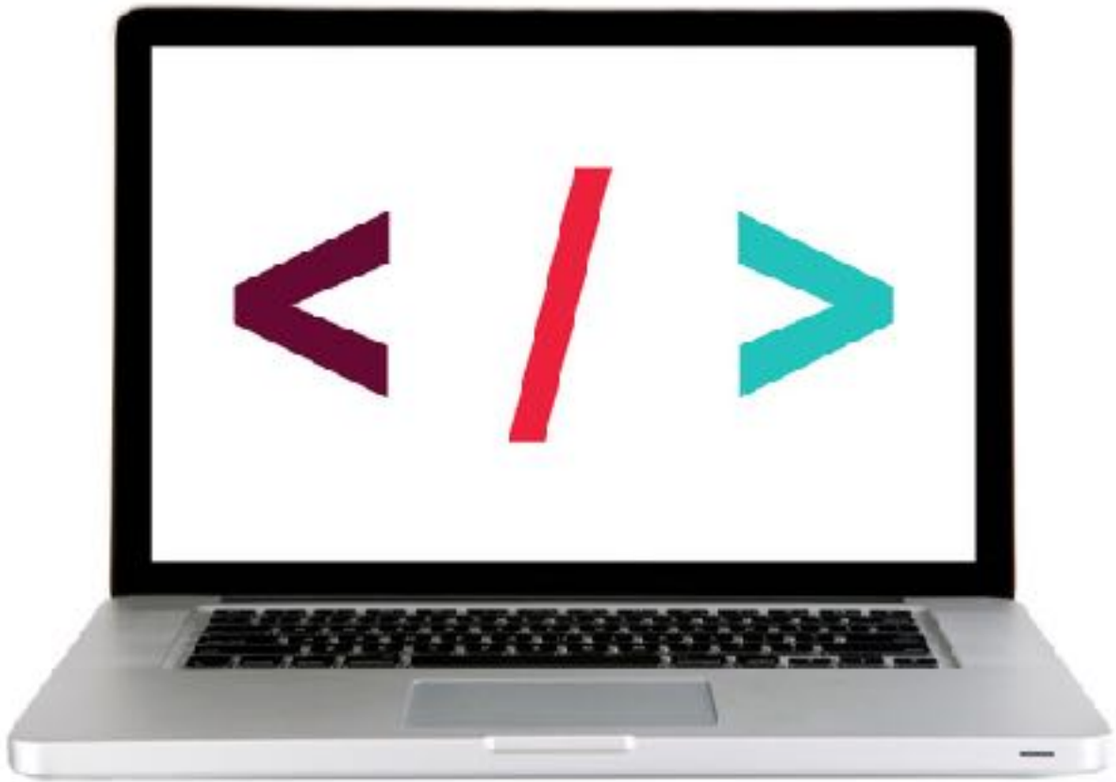
TIMING

3 min

1. In your browser, open https://eslint.org/demo.
2. Copy the contents of `app.js` from your Firebase project, paste in the left pane of the ESLint interface, and verify that no errors are shown.
3. If errors are flagged, fix them in the web interface, then when the code is error-free, copy the code from the web interface (click in the code and press `command+A`), then replace the code in `app.js` with the copied code. Save your changes.
4. Test your app in the browser and make sure it still works as it did previously.

MINIFYING

LET'S TAKE A CLOSER LOOK



EXERCISE — MINIFY CODE

KEY OBJECTIVE

- Optimize code for deployment.

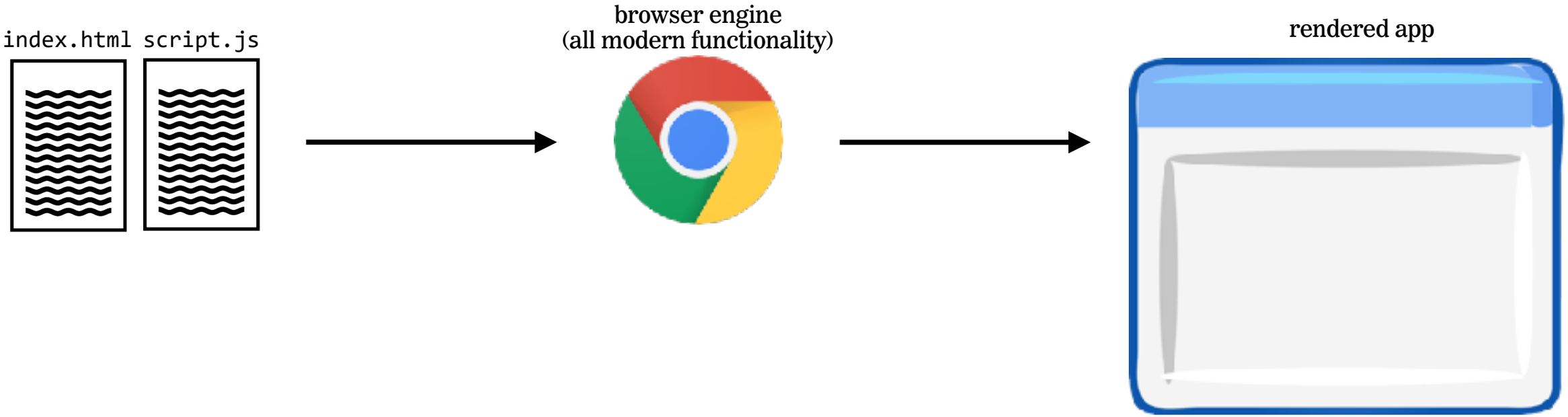
TIMING

3 min

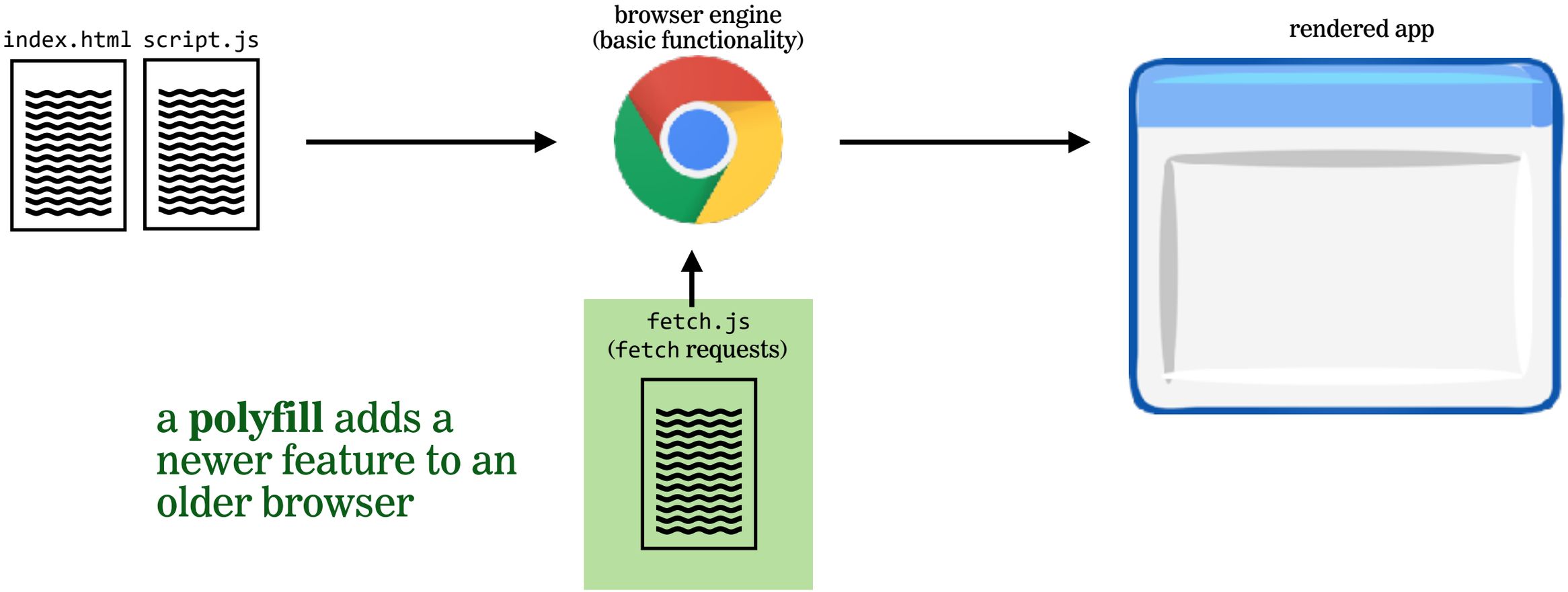
1. At the command line, navigate to the folder containing your Firebase project.
2. Use uglify to create a minified version of `app.js`, outputting to `app.min.js`.
3. Open `index.html` and change the source for the script element to `app.min.js`.
4. Test your app in the browser and make sure it still works as it did previously.

POLYFILLS

APP FUNCTIONALITY IN A MODERN BROWSER

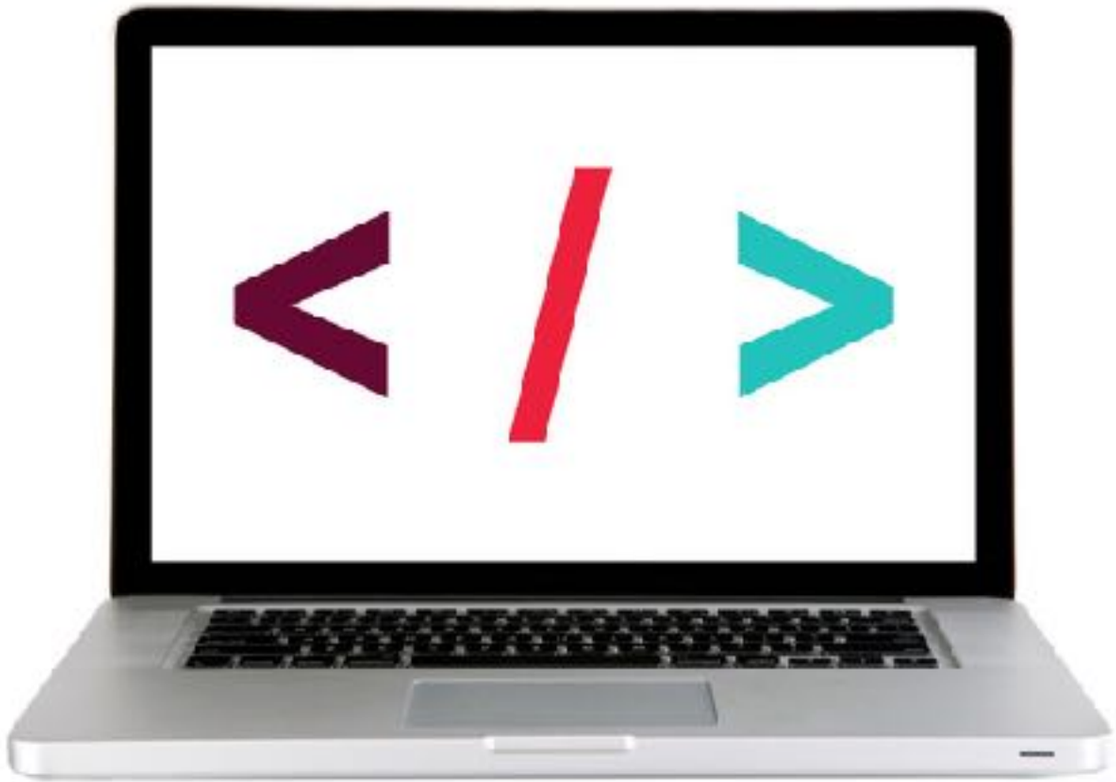


APP FUNCTIONALITY IN AN OLDER BROWSER



a **polyfill** adds a newer feature to an older browser

LET'S TAKE A CLOSER LOOK



EXERCISE — ADD POLYFILLS

KEY OBJECTIVE

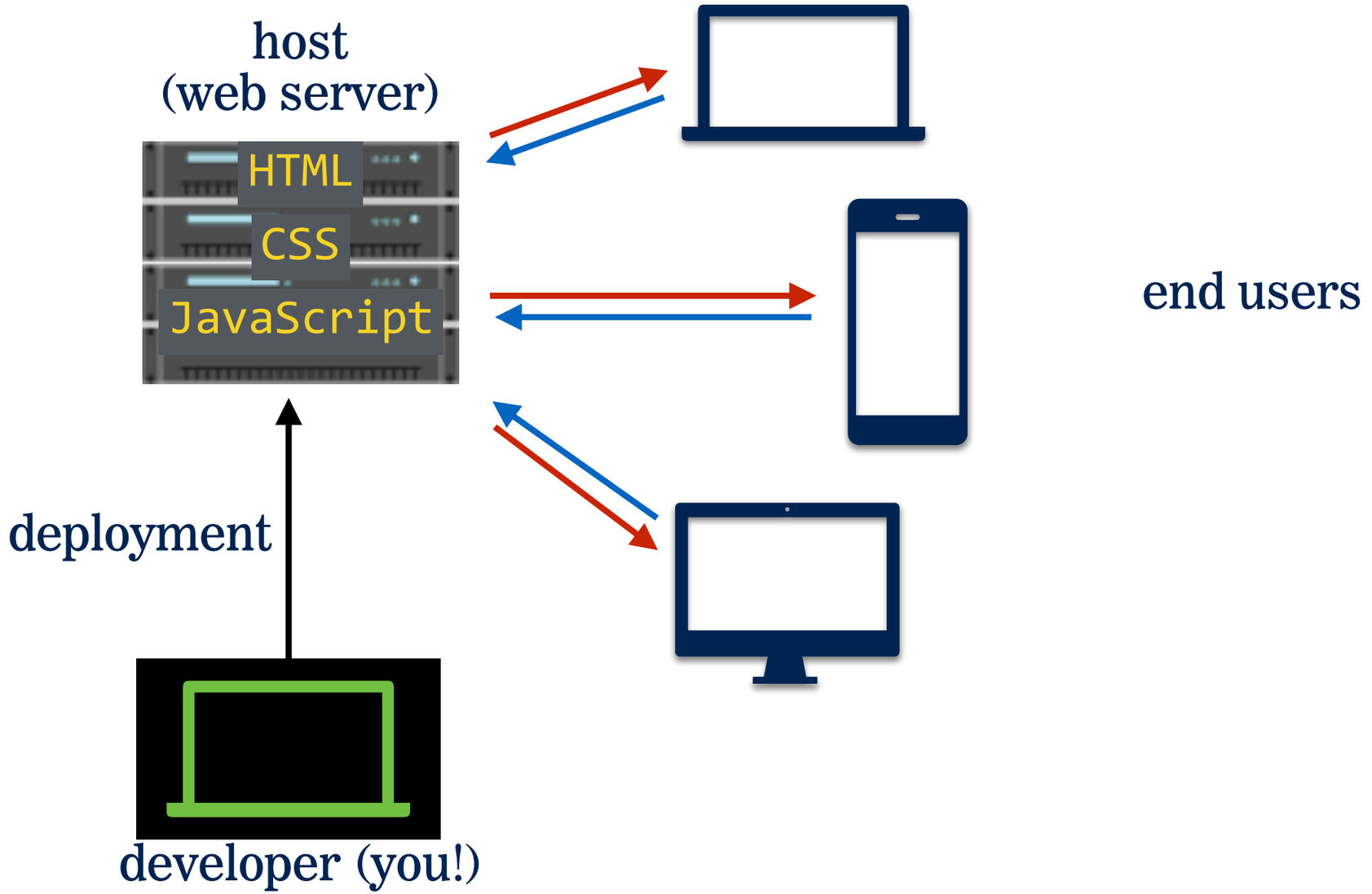
- Optimize code for deployment.

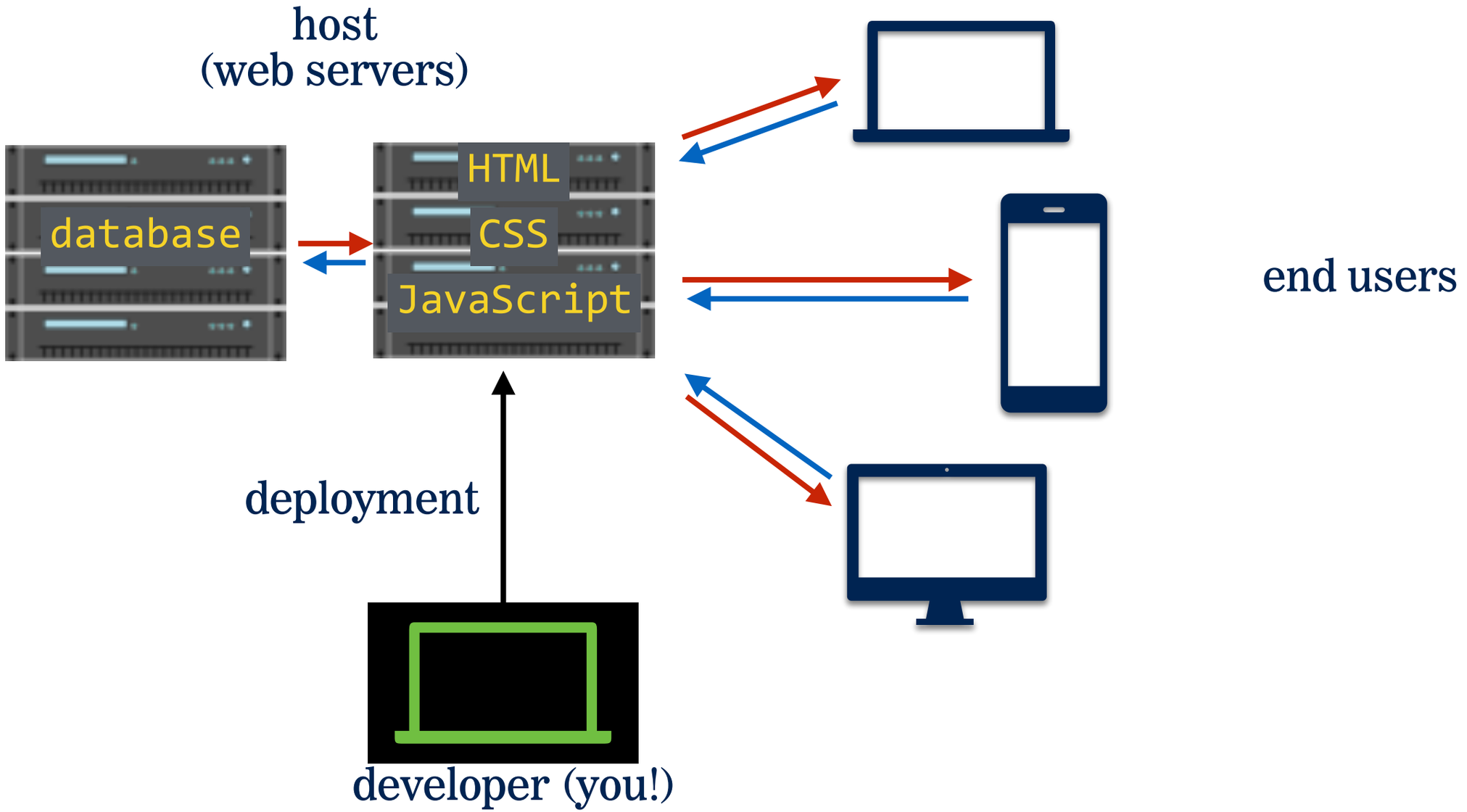
TIMING

5 min

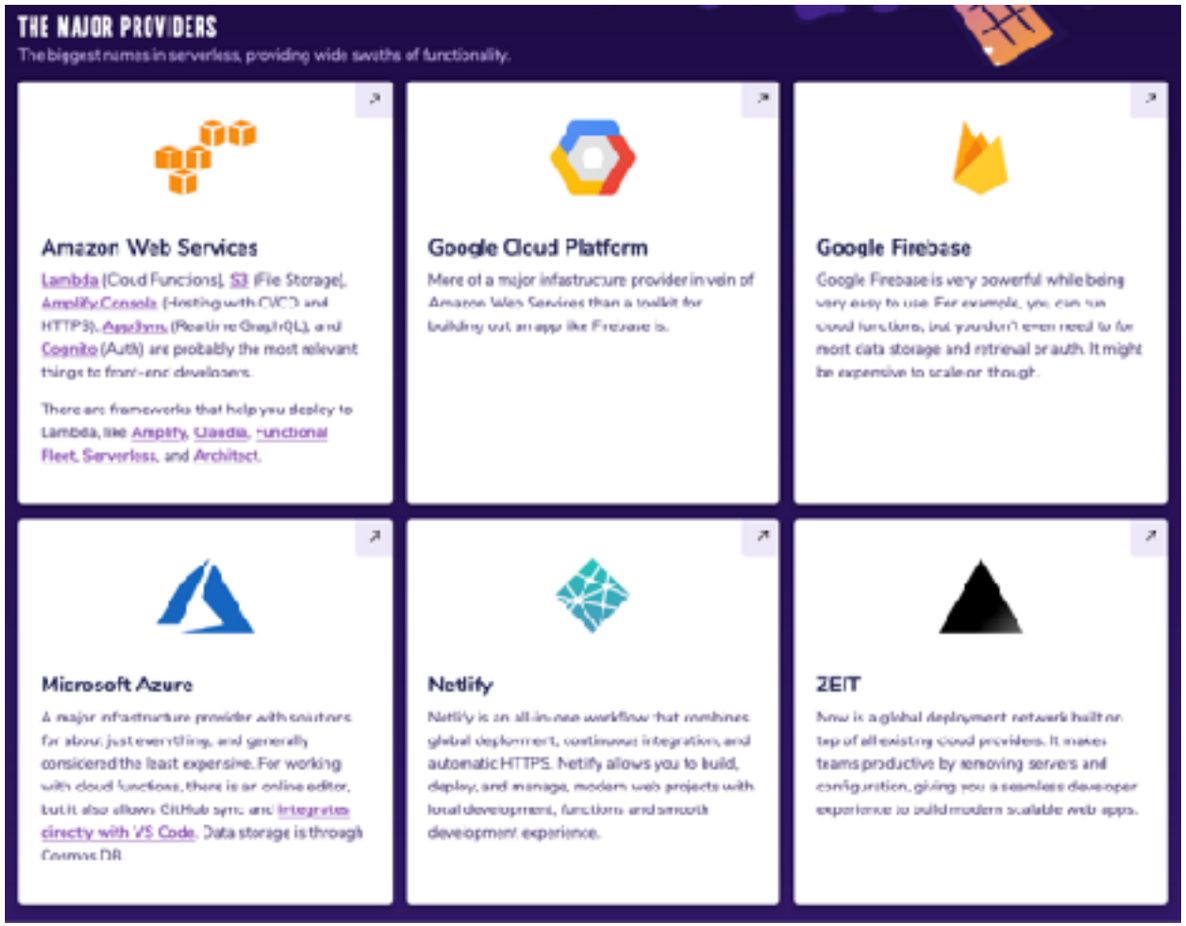
1. At the command line, navigate to the folder containing your Firebase project.
2. Add polyfills to enable Fetch in older browsers.
3. If you have access to a browser that does not support Fetch, test your app in that browser and make sure it works
4. Also test your app in a modern browser and ensure it still works as it did previously.

DEPLOYMENT


host
(web server)
HTML
CSS
JavaScript
end users
deployment
developer (you!)

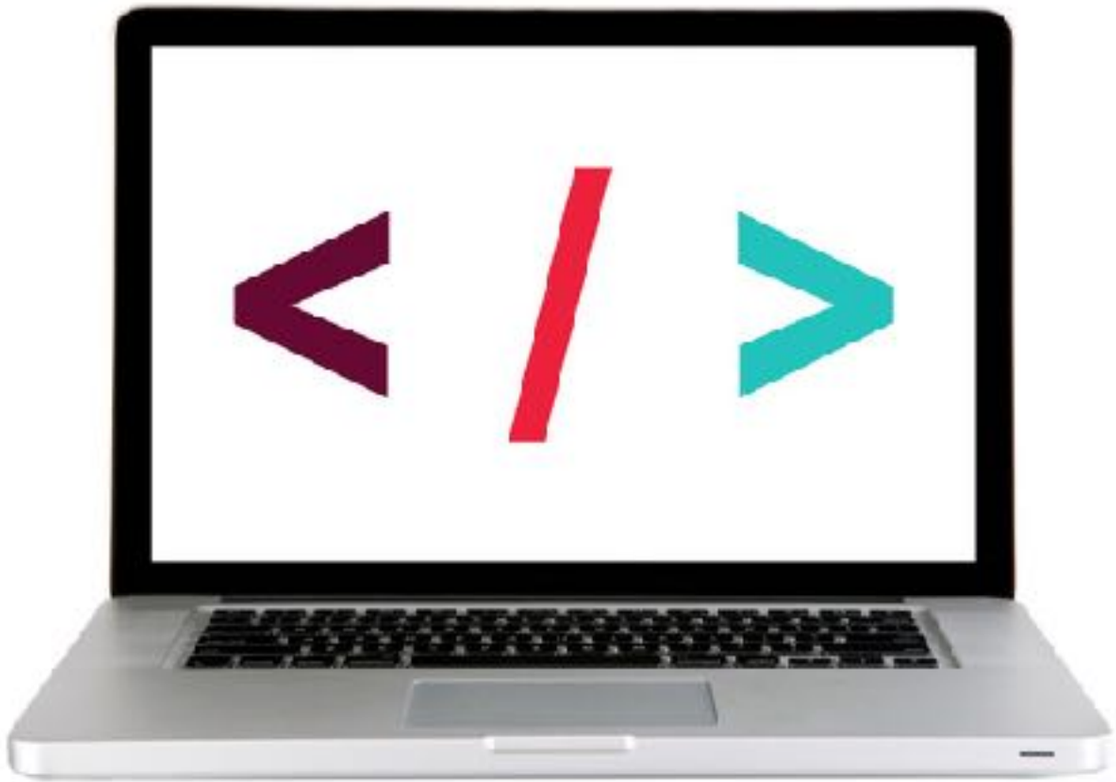

host
(web servers)
database
HTML
CSS
JavaScript
end users
deployment
developer (you!)

ALTERNATIVE “SERVERLESS” SERVICES



https://thepowerofserverless.info/services.html#major-providers

LET'S TAKE A CLOSER LOOK



EXERCISE — PUSH CHANGES TO FIREBASE

KEY OBJECTIVE

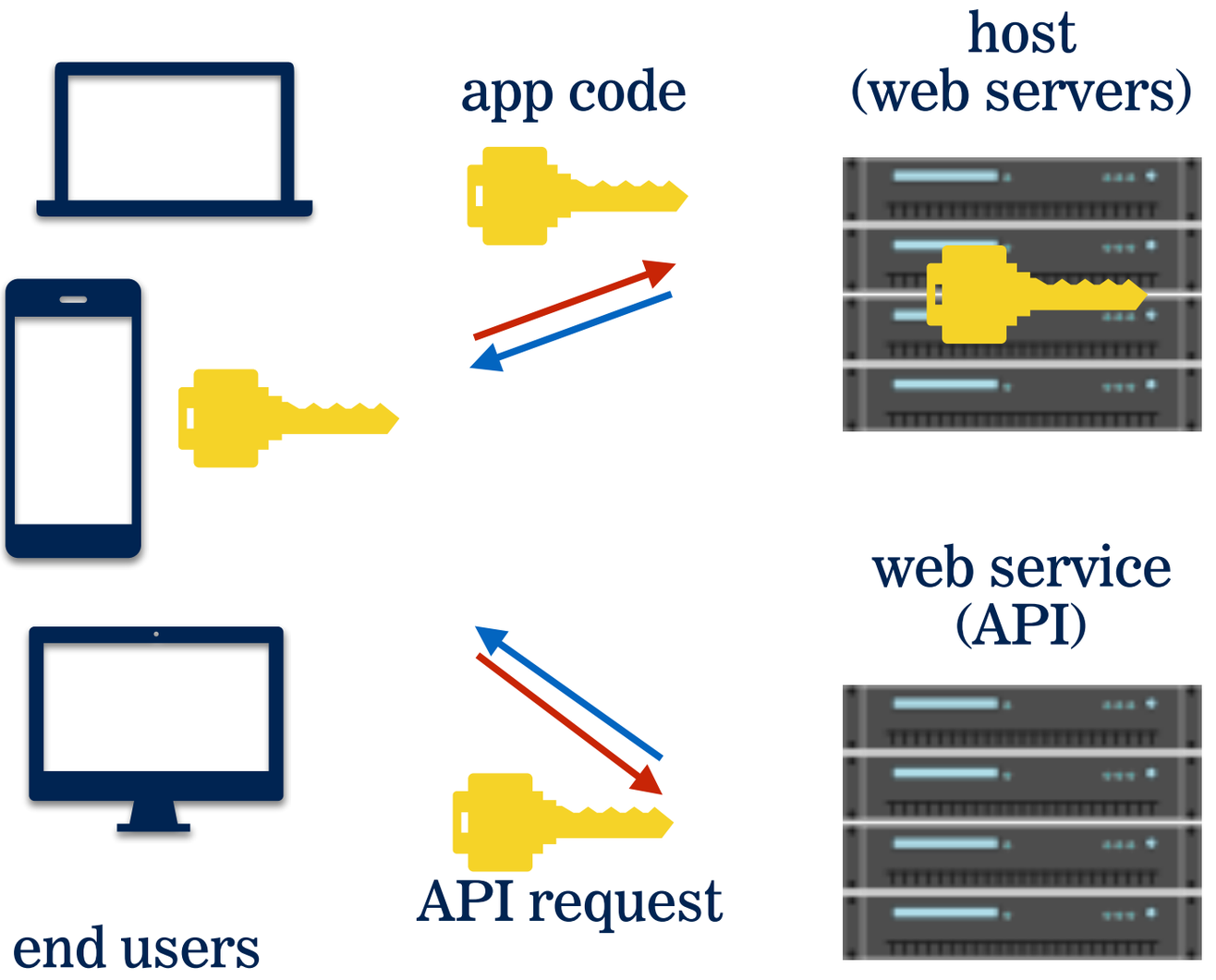
- Deploy to a web host.

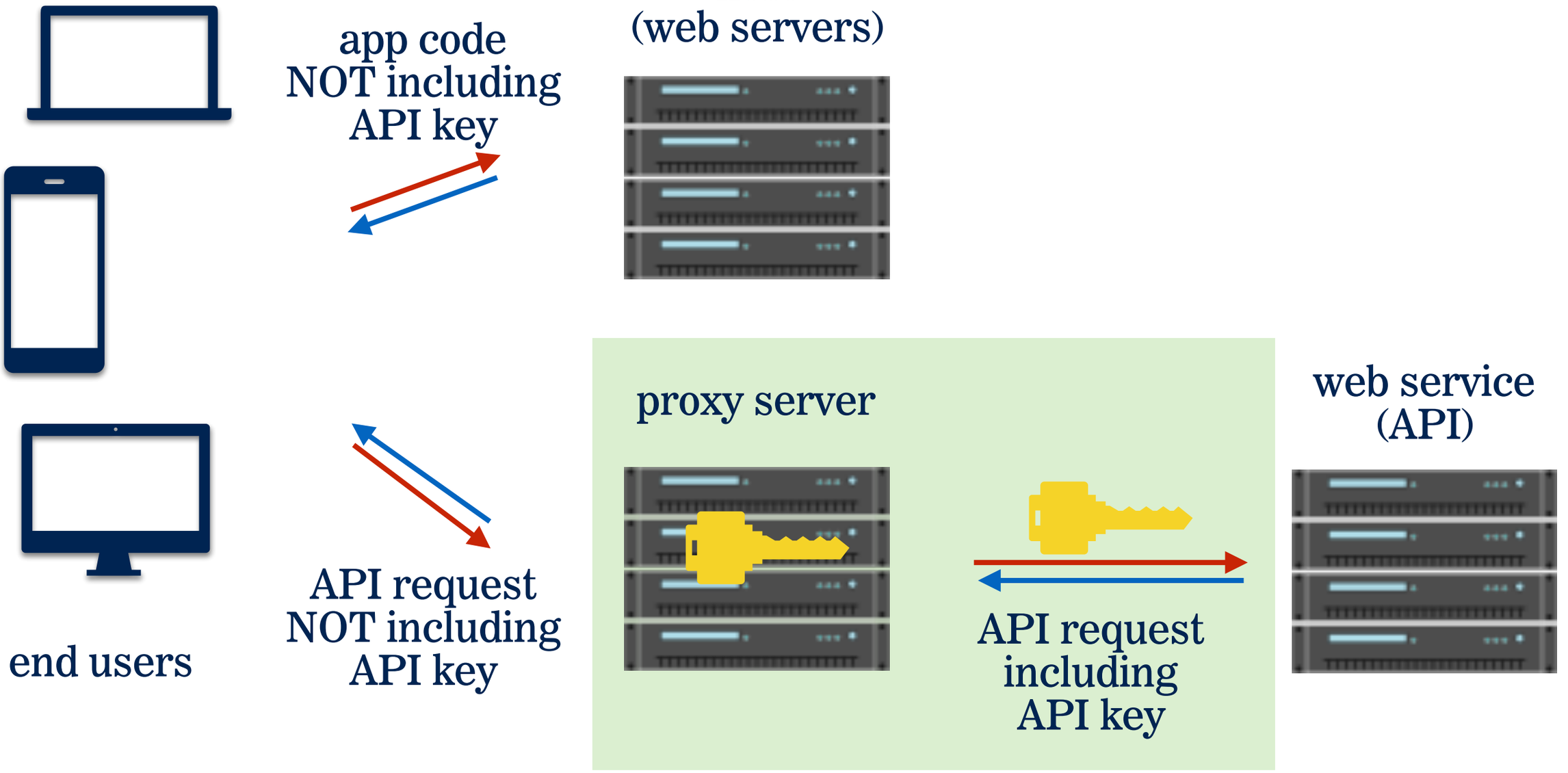
TIMING

5 min

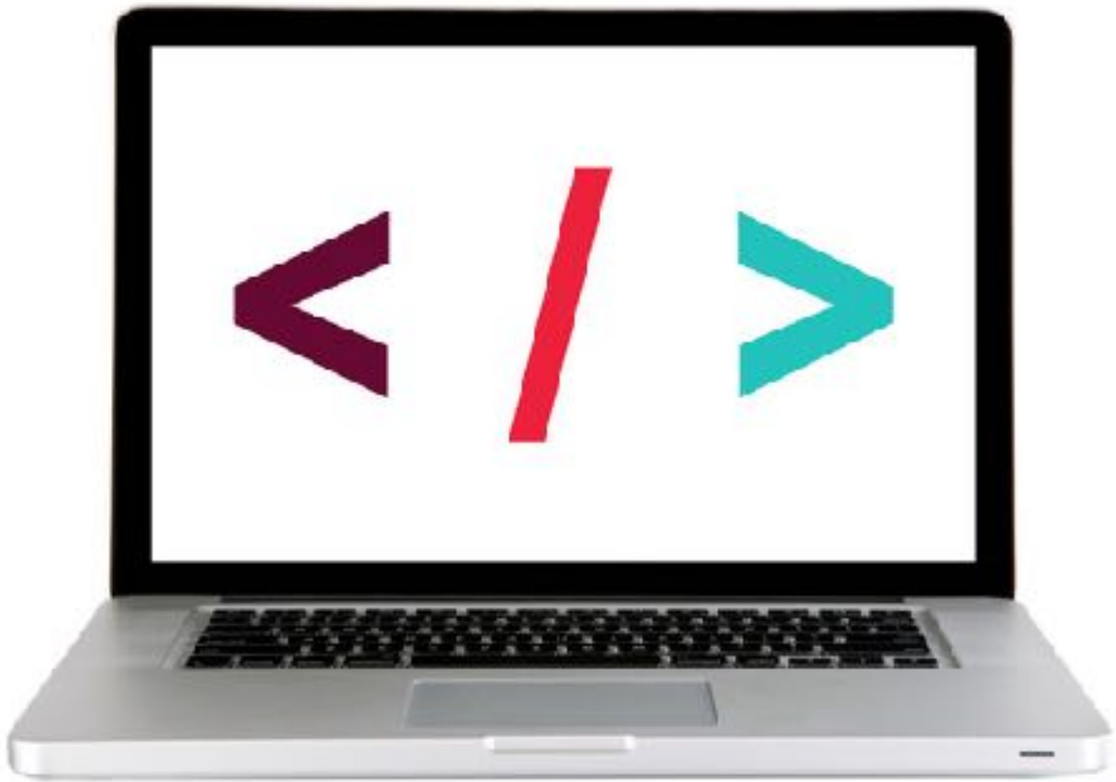
1. Make a change to the HTML, CSS, and/or JavaScript for the project you deployed to Firebase.
2. Push your changes to Firebase and verify that your updated code is what you see in your browser at *appname*`.firebaseapp.com`

PROXY SERVERS


app code
host
(web servers)
web service
(API)
API request
end users


host
(web servers)
app code
NOT including
API key
proxy server
web service
(API)
API request
including
API key
API request
NOT including
API key
end users

LET'S TAKE A CLOSER LOOK



Exit Tickets!

(Class #16)

LEARNING OBJECTIVES - REVIEW

- Understand what hosting is.
- Identify a program's needs in terms of host providers.
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- Optimize code before deployment
- Deploy to a web host.

NEXT CLASS PREVIEW

Final Project Lab

Q&A