

JAVASCRIPT DEVELOPMENT

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HELLO!

- 1. Pull changes from the svodnik/JS-SF-14-resources repoto your computer
- 2. Open the 16-deploying folder in your code editor

JAVASCRIPT DEVELOPMENT

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

CRUD & Firebase / Deploying your app

WEEK 10

Final project lab / React

WEEK 11

Final Project Presentations

EXIT TICKET QUESTIONS

- 1. Using firebase is almost like getting data using API calls. Is there a way we could store the data and pull data from desktop? I have a spreadsheet full of data as backend for display at DOM based on user selection.
- 2. Can Firebase identify user activity & track data analytics?
- 3. How to make this website online / have multiple users with their own data that only they can modify and no one else.
- 4. When building the app code, do we simply create the html, css, and JS files in a single project (similar to our regular class files) and start going? Or is there something else we have to do?

FINALIZING YOUR CODE

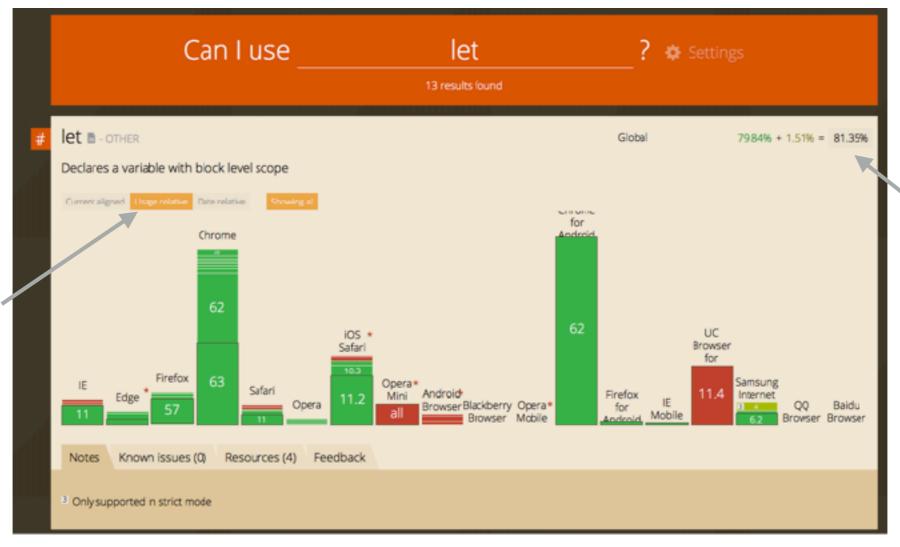
TRANSPILING

virtually all browsers in use support ES5

only modern browsers support ES6+



caniuse.com



"Usage relative" option shows proportional graph

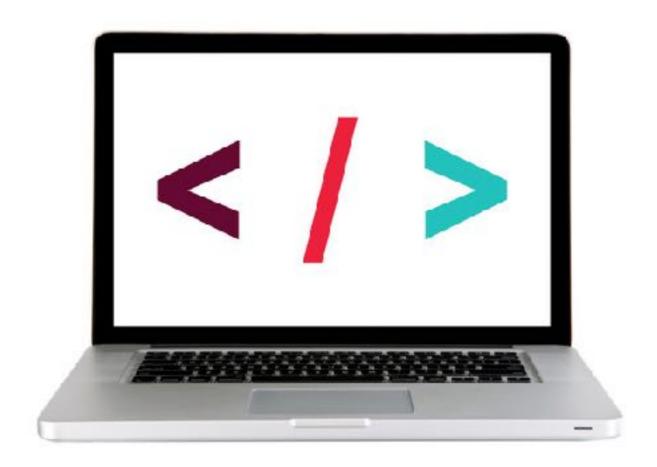
Estimated percent of global browser traffic that can parse this feature

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

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

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

LET'S TAKE A CLOSER LOOK



EXERCISE — TRANSPILE CODE USING BABEL



KEY OBJECTIVE

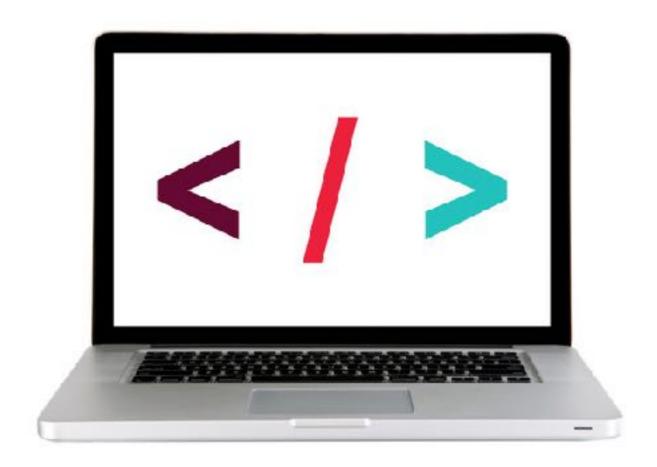
• Ensure backward compatibility by using Babel to transpile code.

TIMING

5 min

- 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-transpilling-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.

LET'S TAKE A CLOSER LOOK



EXERCISE — LINT CODE USING ESLINT



KEY OBJECTIVE

Optimize code for deployment.

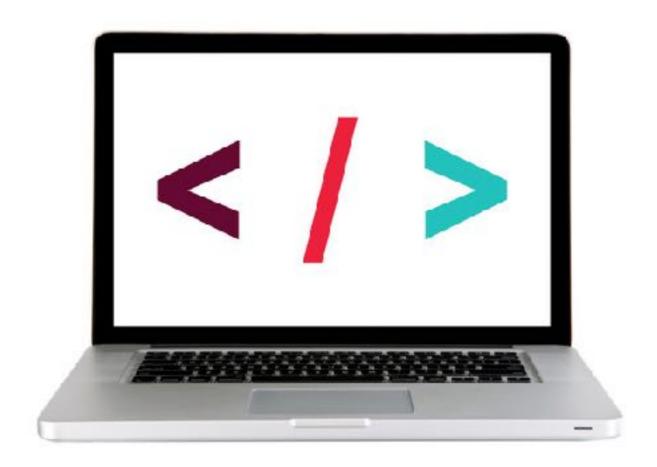
TIMING

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

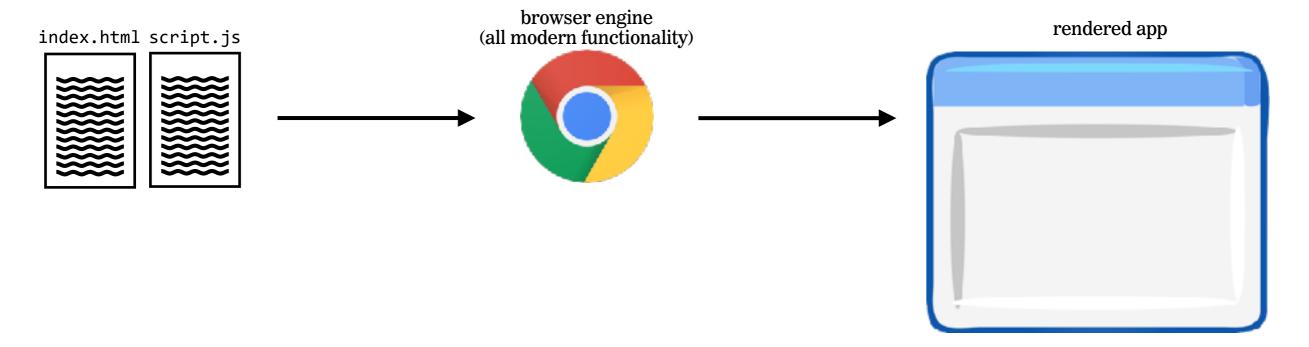
Optimize code for deployment.

TIMING

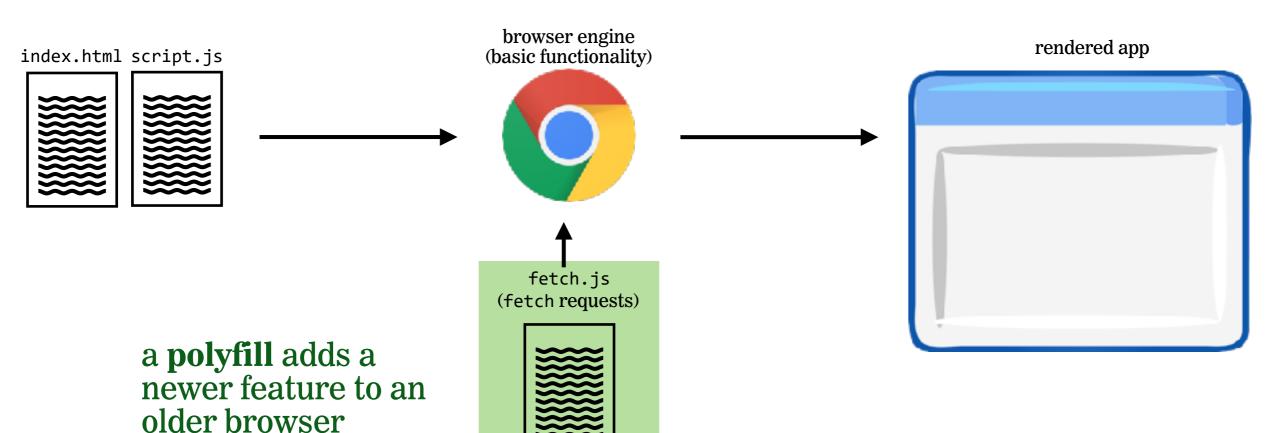
- 3 min
- 1. At the command line, navigate to the folder containing your Firebase project.
- 2. Use uglify to create a minified version of app.js, outputting to app.min.js.
- 3. Open index.html and change the source for the script element to app.min.js.
- 4. Test your app in the browser and make sure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

POLYFILLS

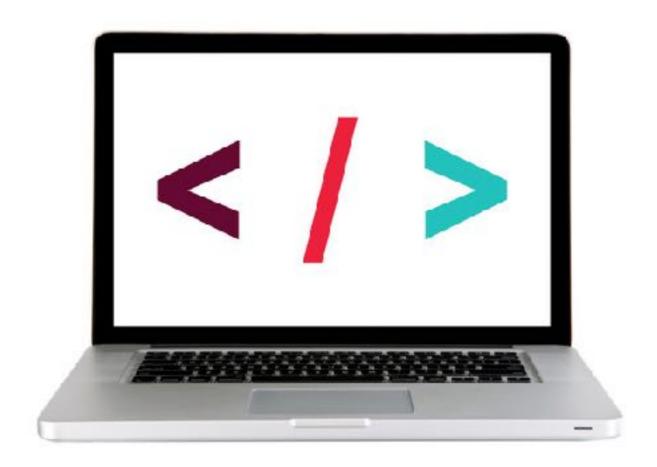
APP FUNCTIONALITY IN A MODERN BROWSER



APP FUNCTIONALITY IN AN OLDER BROWSER



LET'S TAKE A CLOSER LOOK



EXERCISE — MINIFY CODE



KEY OBJECTIVE

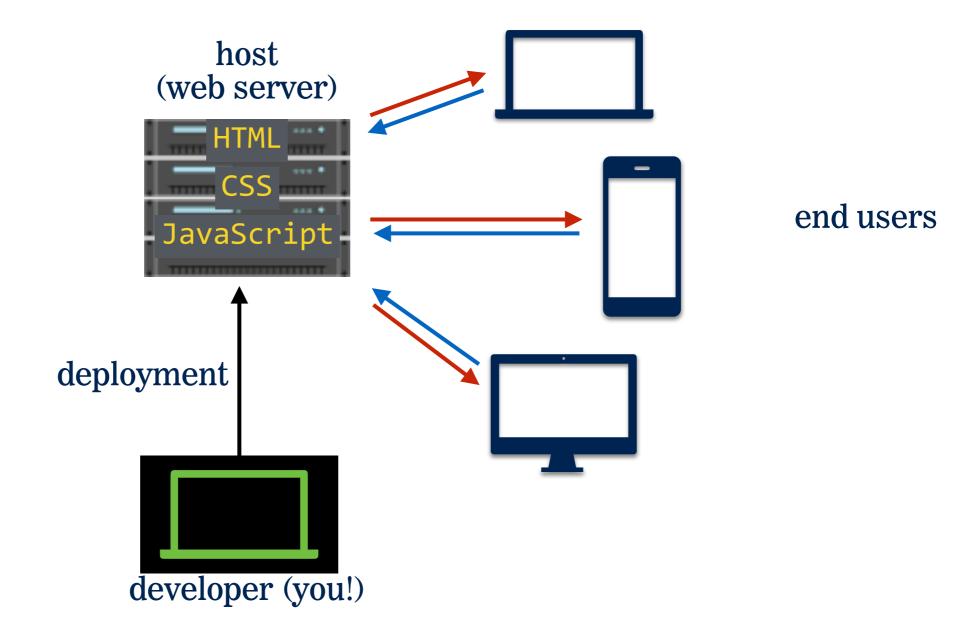
Optimize code for deployment.

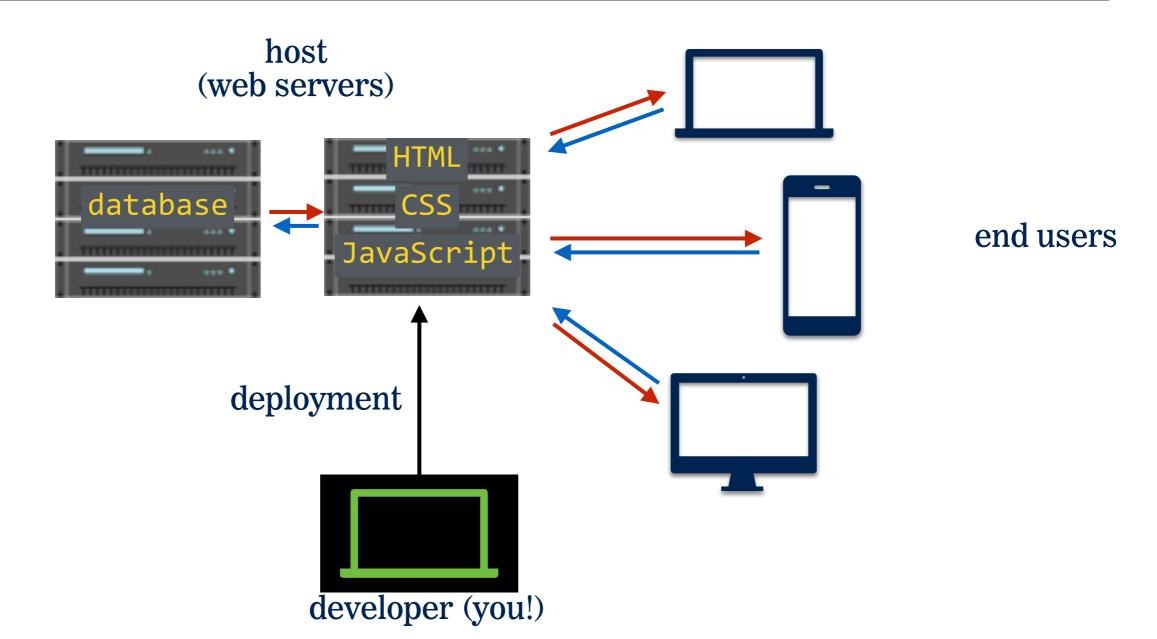
TIMING

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





INTRO TO CRUD AND FIREBASE

ALTERNATIVE "SERVERLESS" SERVICES



Google Firebase

Relevant Capabilities

Auth

Realtime Database

Media Storage

Cloud Functions

Quick Overview

Google Firebase is very powerful while being very easy to use. For example, you can run cloud functions, but you don't even need to for most data storage and retrieval or auth. It might be expensive to scale on though.



Google Cloud Platform

Relevant Capabilities

Everything

Quick Overview

More of a major infestructure provider in veln of Amazon Web Services than a toolkit for building out an app like Firebase is.



Amazon Web Services

Relevant Capabilities

Everything

Quick Overview

Lambda, API Gateway, 3S, and Cognito (auth) are probably the most relevant things to front-end developers. AppSync is a hit like Firebase. There are trameworks that help you deploy to Lambda, like Course and Europional Floot.



Microsoft Azure

Relevant Capabilities

Everything

Quick Overview

A major infrastructure provider with solutions for about just everything, and generally considered the cheapest. For working with eleud functions, there is an enline editor, but it also allows 3tt-lub sync and integrates directly with V3 Code. Data storage is through Cosmes D8.



StdLib

Relevant Capabilities

Cloud Functions

Quick Overview StdLlb is based on

Function as a Service ("server-less") architecture, popularized by AWS Lambda, You can use StdLib to build medular, scalable APIs for yourself and other developers in minutes without having to manage servers, gateways. comains, write documentation, or build SDKs. They also offer Code.xvz, and online code oditor for working with the APIs.



Webtask

Rolovant Capabilities

Cloud Functions

Basic JSON data store

Quick Overview

An in-browser editor for creating and testing cloud functions. Seems like the nicest experience for this particular job. It's kinds of an elaborate demonstration of Autho Extend, which is essentially a way to take Webtask and put it in your own app.



IBM Cloud Functions

Relevant Capabilities

Cloud Functions

Quick Overview

Doer/Whisk.



Backendless

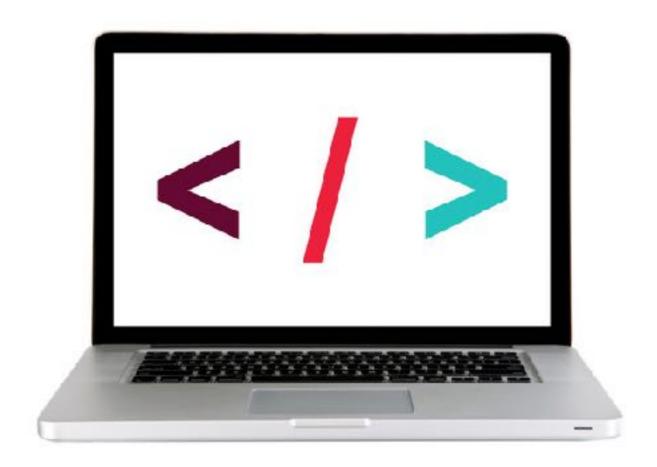
Rolovant Capabilities

Realtime Database

Auth Quick Overview

All-in-one kind of service similar to Firebase, including the realtime database. Has a PFO wersion you can host yourself, if you're, ya know, into running servers.

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

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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NEXT CLASS PREVIEW Final Project Lab

Q&A