GENERAL ASSEMBLY

JAVASCRIPT DEVELOPMENT

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HELLO!

1. Pull changes from the `svodnik/jsd6` repo to your computer
2. Open the `starter-code` folder in your code editor

INTRO TO CRUD AND FIREBASE

LEARNING OBJECTIVES

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

- Explain what CRUD is.
- Explain the HTTP methods associated with CRUD.
- Implement Firebase in an application.
- Build a full-stack app with create and read functionality.

AGENDA

- CRUD
- Firebase intro and setup
- Create
- Read
- Update
- Delete

WHAT DID WE DO LAST TIME?

- Context and `this`
- Module pattern

`this`

function call method	`this` value
function invocation	
method invocation	
constructor function	
event handler	

`this`

function call method	`this` value
function invocation	global object (`window`)
method invocation	object that owns the method
constructor function	newly created object
event handler	element event fired from

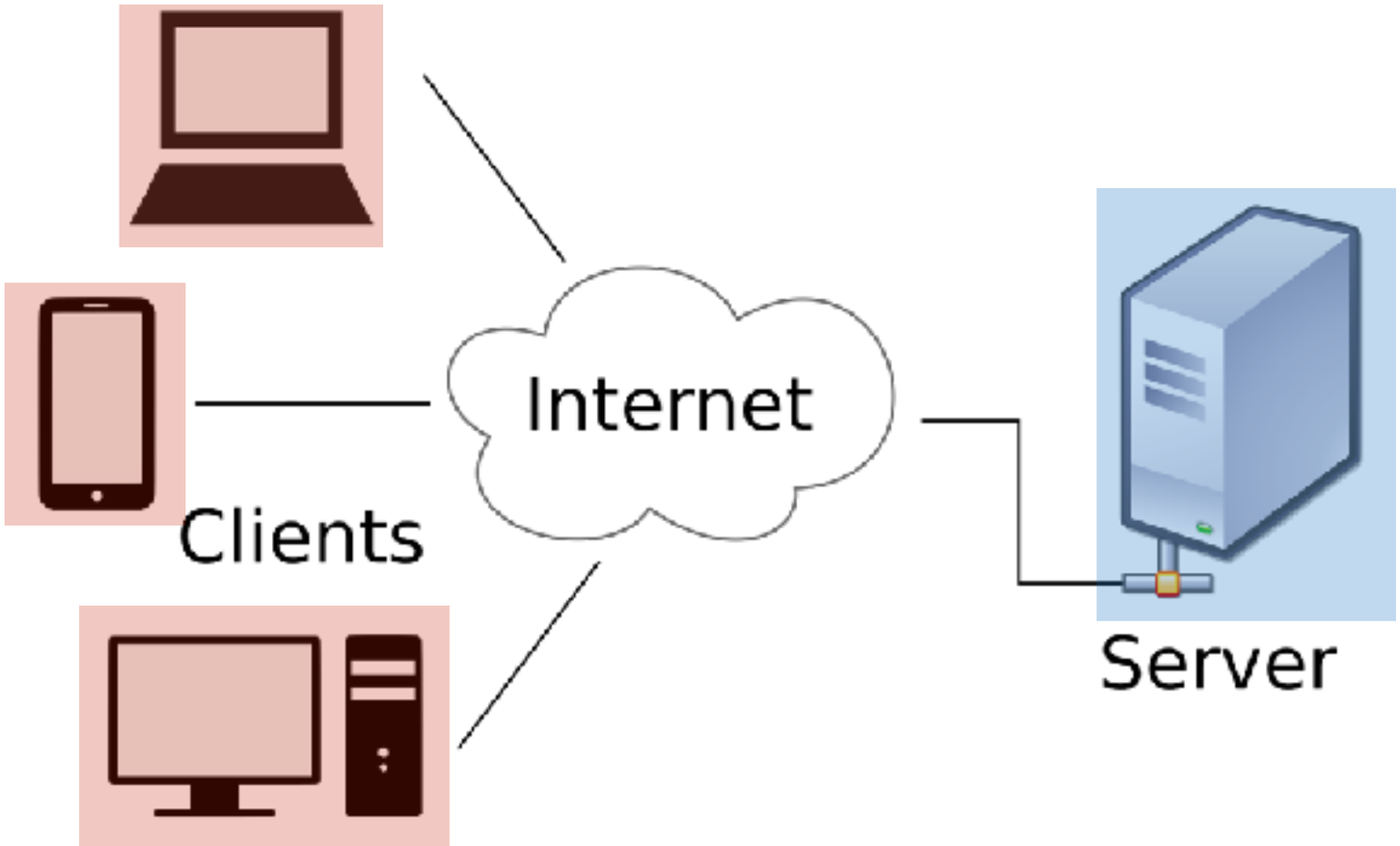
Checkin and questions

- The **most significant thing I learned** about `this` and the module pattern is _____.
- My **biggest outstanding question** about `this` and the module pattern is _____.

What are some apps that allow you to create, read, update, and delete data?

Back-end review

Front end
- HTML
- CSS
- JS



Back end
- JS
- Python
- Ruby
- PHP
- …

CRUD

- Create
- Read
- Update
- Delete

CRUD and HTTP

CRUD action	Corresponding HTTP verb
Create	POST
Read	GET
Update	PATCH/PUT
Delete	DELETE

EXERCISE — API METHODS

KEY OBJECTIVE

- Identify API methods that let you implement CRUD functionality using a popular web service

TYPE OF EXERCISE

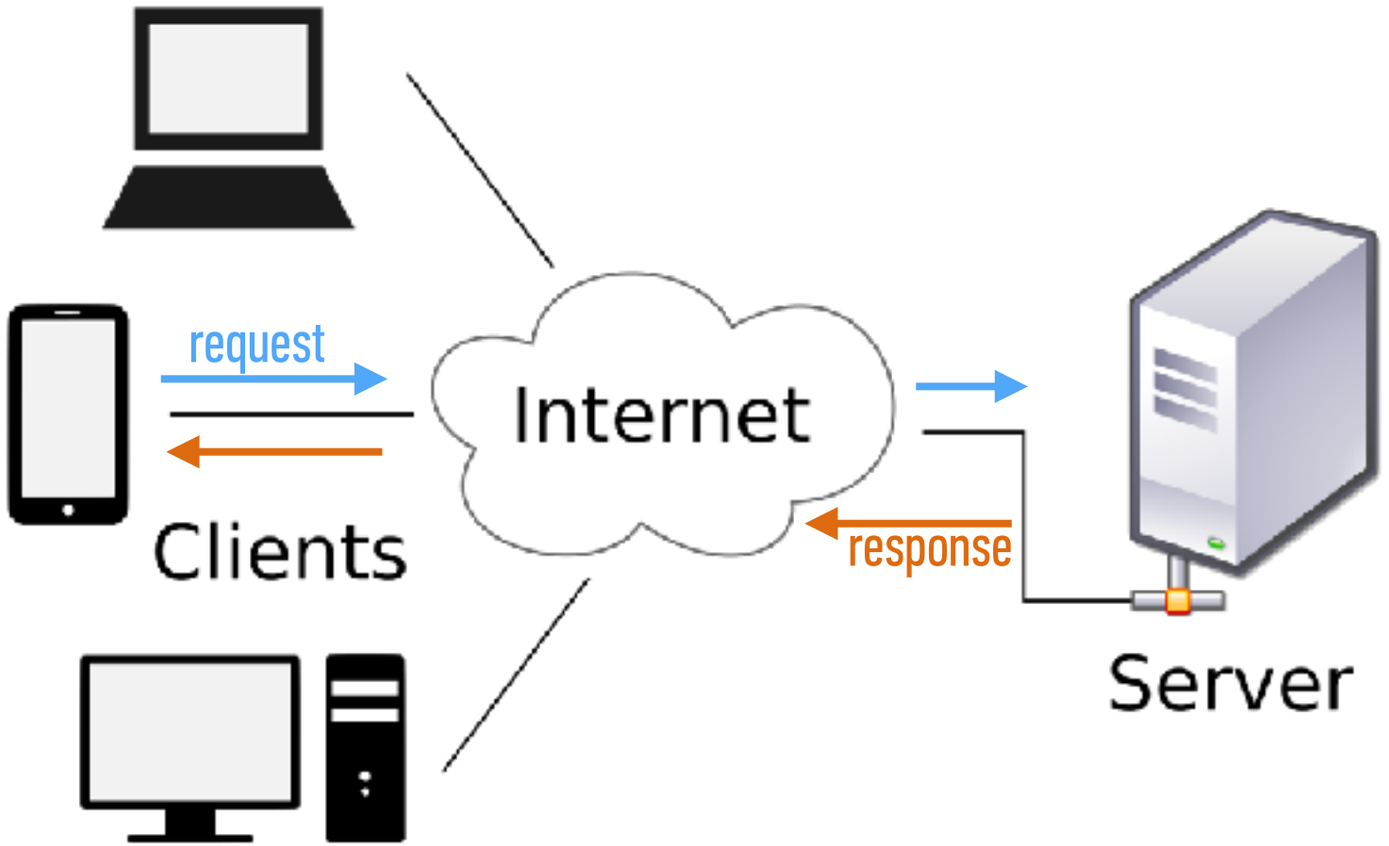
- Groups of 3

TIMING

5 min

1. Research your assigned API to see what HTTP methods a developer must use to perform at least one instance of create, read, update and delete. (If your API doesn't fully support CRUD, note any limitations.)
2. Further, define what exactly is being created, read, updated or deleted. For example, for Facebook what HTTP method on what endpoint must you ping in order to create a post in a feed?

THE CLIENT-SERVER MODEL WITH CRUD



Stores HTML/CSS/JS code

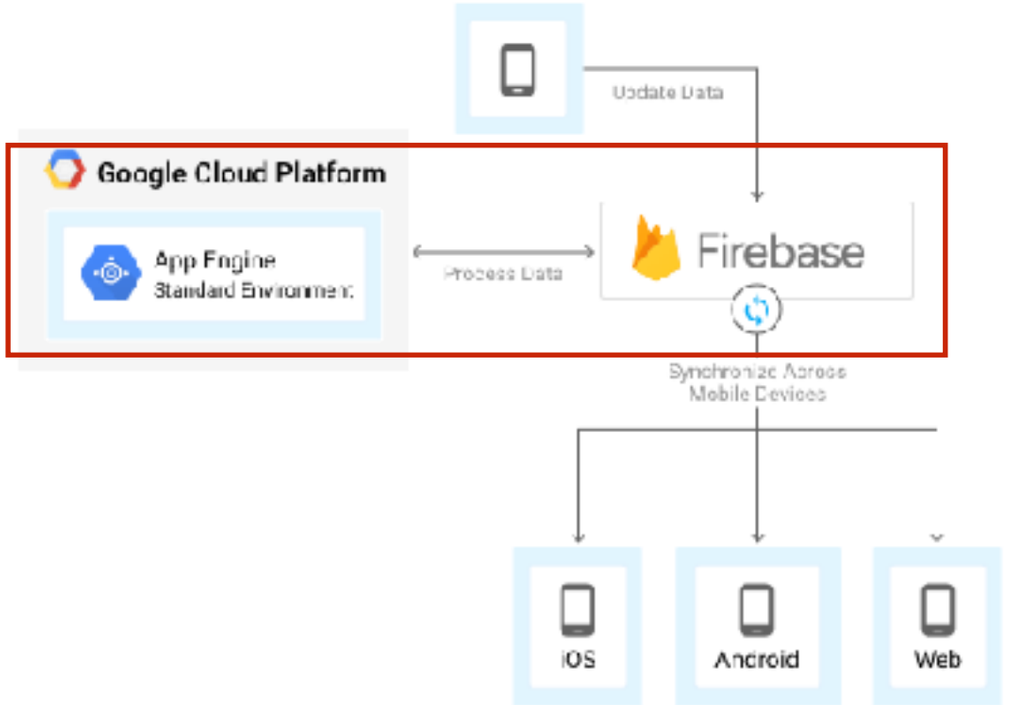
- Accepts HTTP requests
- Generates HTTP responses

Stores database

- Provides create access
- Provides read access
- Provides update access
- Provides delete access

FIREBASE

Back end



LAB — PLAN A CRUD APP

KEY OBJECTIVE

- Plan a full-stack app with full CRUD functionality

TYPE OF EXERCISE

- Solo or in pairs

TIMING

20 min

1. Come up with an idea for an app that implements CRUD. You'll build your app this week in class (this is not your final project). Your app must be able to Create, Read, Update and Delete data.
2. Build out your HTML, CSS, and JS files.
3. Use the Firebase dashboard to create your new app.
4. Get the URL key to initialize your app, and initialize your Firebase app utilizing the starter code.

LAB — IMPLEMENT CREATE FUNCTIONALITY

KEY OBJECTIVE

- Build the Create functionality of a full-stack app

TYPE OF EXERCISE

- Solo or in pairs

TIMING

20 min

1. Create a form
2. Get user input
3. Create a section in your database for your data
4. Save your data to the database
5. Change security rules to allow access without authentication
6. View your data in the Firebase dashboard

BREAK (5 MINUTES)

LAB — IMPLEMENT READ FUNCTIONALITY

KEY OBJECTIVE

- Build the Read functionality of a full-stack app

TYPE OF EXERCISE

- Solo or in pairs

TIMING

20 min

1. Examine the API documentation at `https://firebase.google.com/docs/reference/js/firebase.database.Reference`
2. Listen for changes (use `.ref()` and `.on()`)
3. Add returned data to your front end using DOM manipulation

LEARNING OBJECTIVES - REVIEW

- Explain what CRUD is.
- Explain the HTTP methods associated with CRUD.
- Implement Firebase in an application.
- Build a full-stack app with create and read functionality.

NEXT CLASS PREVIEW

Deploying your app

- Add update and delete functionality to a full-stack app.
- Understand what hosting is.
- Identify a program's needs in terms of host providers.
- Deploy to a web host.

Exit Tickets!

Q&A