

Web Services

Web Services are flexible

- Just human conventions on what/how you send/get
- Just normal requests to the server
- Not technical differences

Different Conventions

- SOAP is web requests with lots of XML
- GraphQL is a "query language"
 - send JSON-like "query" text
 - Get JSON back
- REST is HTTP as the query language
 - URL is the "resource"
 - HTTP Method is the "interaction"
 - HTTP Status Code is the result
 - Send whatever body
 - get whatever response

REST Services

This course will use REST services

- most common
- not hard to transition away

GraphQL is growing in popularity

- but heavier pieces

REST Urls

The URL of the web requests:

- NOT a static file
- NOT an action
- Is an idea of a thing
- Generally a noun
- May use subdirectories for granularity

REST Sample URLs

- **good** /students
- **good** /students/courses
- **good** /cats/internet/Maru
- **good** /cats/habits
- **Bad** /addCat
- **Bad** /callDogs

URL is something you can do different actions on

HTTP Methods

The HTTP Method in REST is what action you are doing to the resource

- GET - Read
- POST - Create
- PUT - Replace
- PATCH - Update
- DELETE - Delete

HTML Forms can only do GET/POST

Sending Data

Path can have details

- example: `/cats/internet/Maru`
- example: `/students/Svathi/grades`

Query params might be used

- GET has no body
 - search params, filters, etc

Body Params have details

- Usually the record changes

Getting Results

Returned body can be anything

- Often JSON data, even with non-JS server
- Flexible, easy to parse

This Course

We will be mostly

- sending JSON in requests
- getting JSON in response

Will parse JSON and use to rerender HTML