Course Introduction

Basic Web Design,

DCAT, Thursdays 9-12pm

Ying-Yu Chen

Course Staff

- Instructor:

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  - Expertises: Human Computer Interaction, User Centered Design, Internet Of Things, Designing for Families

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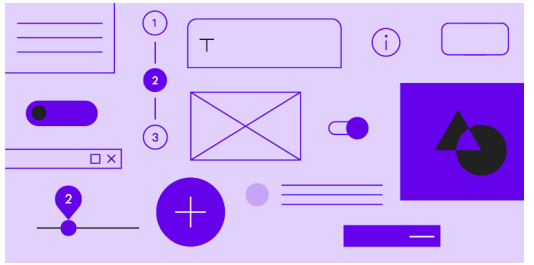
  Email questions to teaching assistants. They will reply in 24 hours, excluding weekends.

What is this course about?

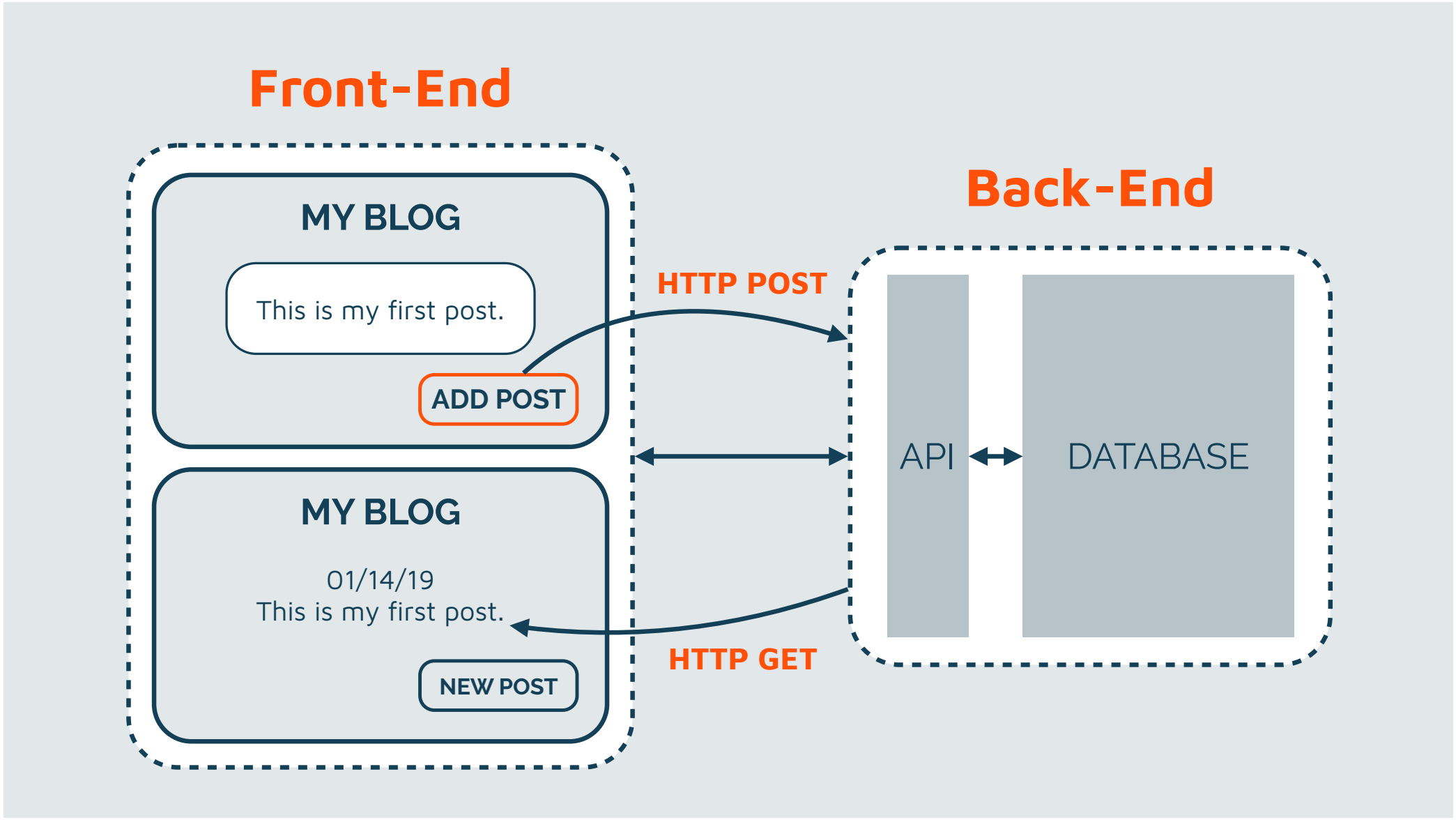
WEB SKILL SETS

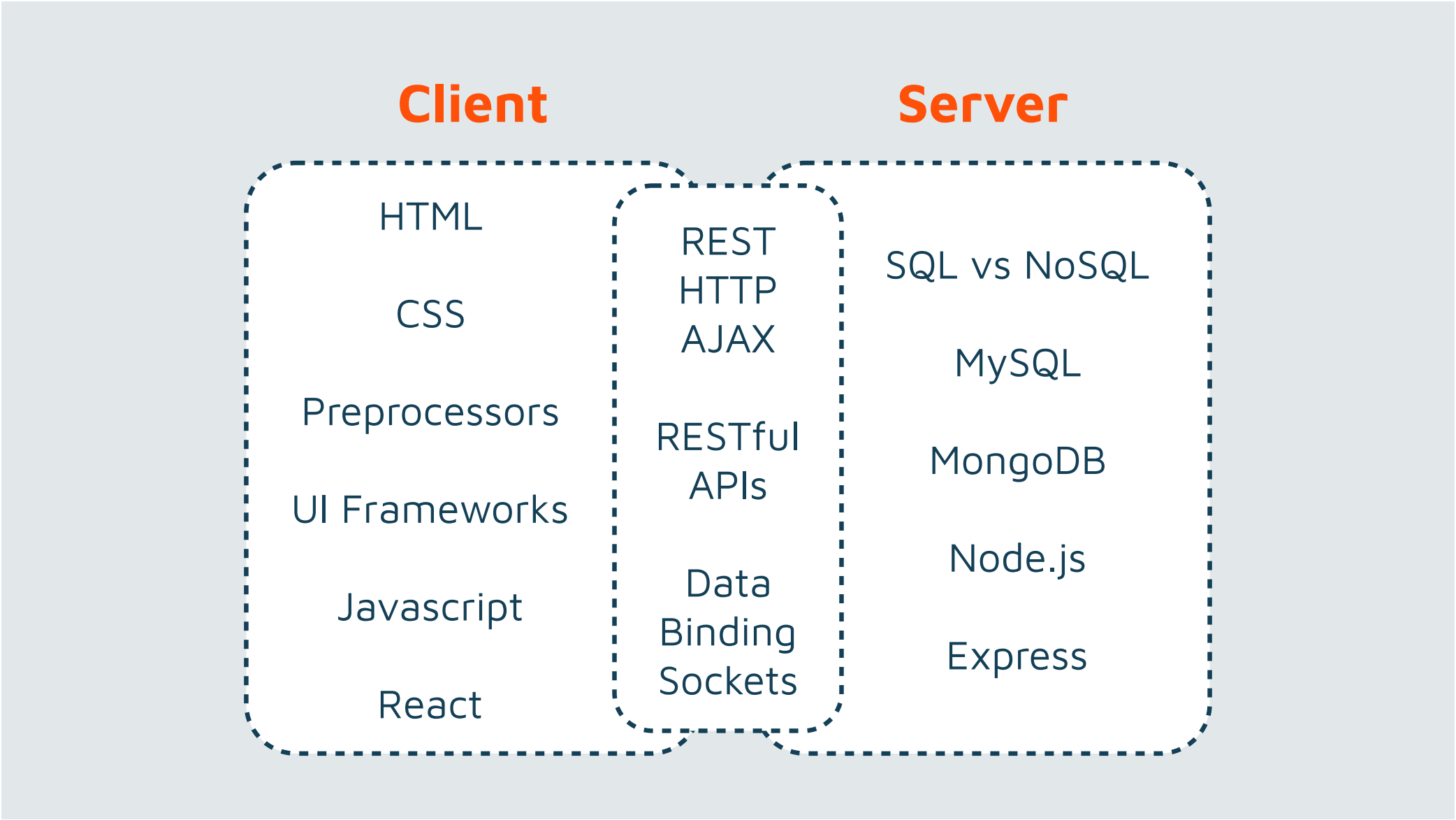
Front-End

Back-End



Design


Front-End
MY BLOG
This is my first post.
ADD POST
MY BLOG
01/14/19
This is my first post.
NEW POST
HTTP POST
HTTP GET
Back-End
API
DATABASE


Client
Server
HTML
CSS
Preprocessors
UI Frameworks
Javascript
React
REST
HTTP
AJAX
RESTful
APIs
Data
Binding
Sockets
SQL vs NoSQL
MySQL
MongoDB
Node.js
Express

HTML

Most web pages are written in HTML

Content is embedded in a set of nested HTML tags

Layout engine parses HTML into a Document Object Model (DOM)

Web browsers use generated DOMs to render pages

```
<!DOCTYPE html>
<html>
  <head>
    <title>Photo Gallery</title>
  </head>
  <body>
    <div class="photo">
      <h3>My first photo</h3>
      <img src="picture1.jpg"/>
    </div>
    .
    .
    .
  </body>
</html>
```

CSS

Language for specifying presentation

Selectors map styles to markup

Describes how to render

Separation of content from presentation

```
html {
  line-height: 1.15;
}

body {
  margin: 0;
}

h1 {
  font-size: 2em;
  margin: 0.67em 0;
}

img {
  border-style: none;
}
```

JAVASCRIPT

Front-end interactions

Dynamic content

Server-side programming (Node.js)

Object-oriented, imperative, functional

DATA BINDING

HTTP: request-response protocol

AJAX: send and receive data
without reloading the page

JSON: data exchange format

DATABASES

SQL (MySQL)

NoSQL (MongoDB)

Graph (Neo4j)

APIS AND SERVER LOGIC

HTTP requests: GET, POST, DELETE, UPDATE

Designing a RESTful API

Node.js and Express

Web Sockets

WILL THIS COURSE BE OUTDATED NEXT YEAR?

Focus on concepts not just specific technologies

Understand how trends rose and have changed

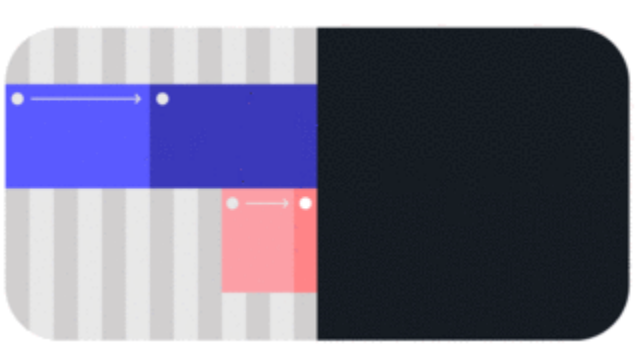
~1989: Unix-based web browsers

~1995: First graphical Web browsers

https://blog.froont.com/brief-history-of-web-design-for-designers/

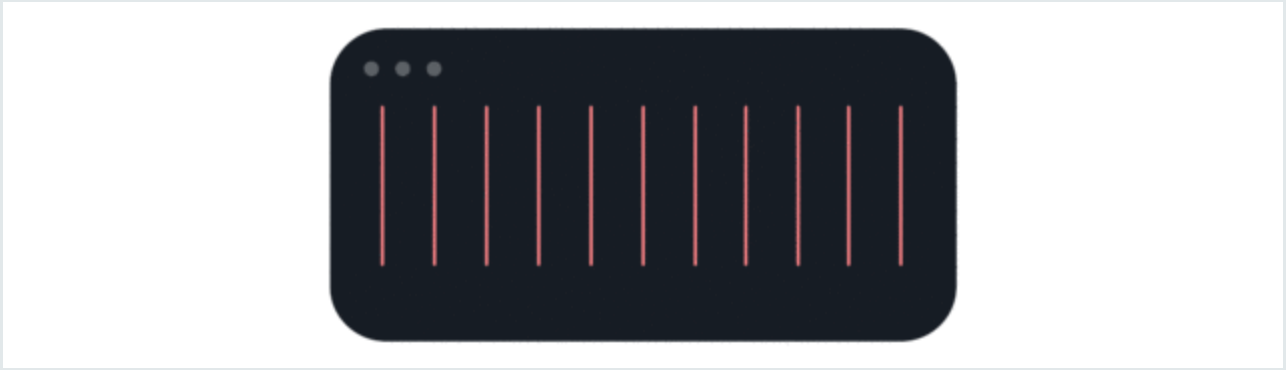
~1995: Javascript & Dynamic Content

~1996: Flash animations



~1998: CSS came on the scene

~2007: Grid systems



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~2010: Responsive design

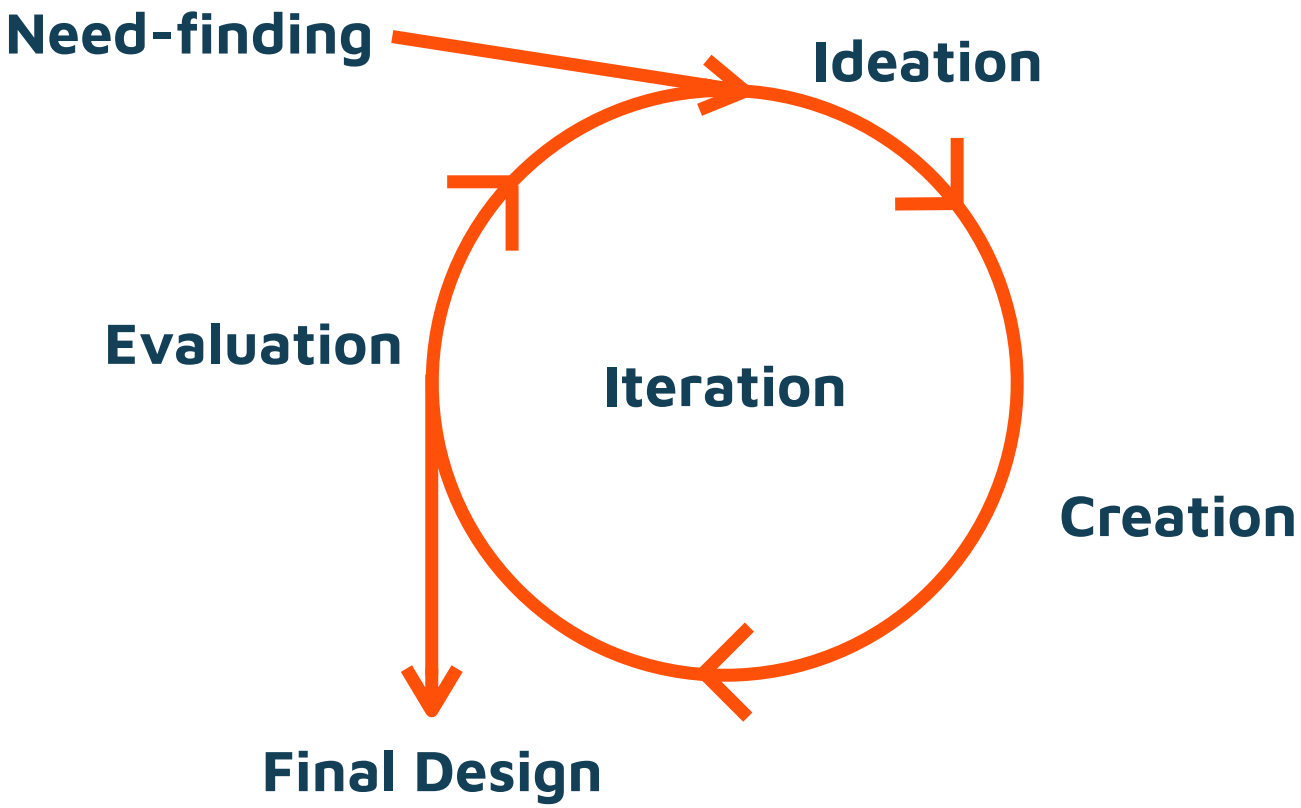
Last few years: Flat design

https://blog.froont.com/brief-history-of-web-design-for-designers/

Future?

https://blog.froont.com/brief-history-of-web-design-for-designers/

DESIGN EMPHASIS



LECTURES and LABS

First 2 hours: Lectures cover Concepts and Code Examples

Last 1 hour: Labs let you exercise the code taught in the lecture and do the exercise (Homework)

If there is no homework we will have other exercises

Bring your laptops to class and follow along

Team Final Project

- Design and implement **original** website
- 5-6 person team
- 4 milestones:
  - M1- Lo-fi prototype,
  - M2 - Project proposal: midterm presentation & report
  - M3 - Hi-fi prototype (user testing)
  - M4 - Final presentation and demo

55% of the grade

Idea Pitching & Team Formation

One person, One Slide, one minute (3/16)

Project idea inspirations:

https://g0v.tw/en-US/project-from-registry.html

Assignments

- There are five assignments in this clat.
- Personal assignments and you must to complete it on your own, but you can dicuss with others.
- You can do it at class lab time and discuss with your classmates and TAs.
- Copy paste other's code is plagiarism and you score will be marked 0
- Late assignments receive 0% because they are designed for you to almost complete them in Lab time

40% of the grade

Team Formation Questionnaire

https://docs.google.com/forms/d/e/1FAIpQLScgx6l-wY5TVA-xYZQgHQ8QalKQepOjAs_UC9Ud85-CTLN_-g/viewform?usp=sf_link

ACADEMIC INTEGRITY

Consult external resources to complete assignments

Clearly **cite** any contributing source

Failure to cite any contributing source will be considered **cheating**

Verbatim duplication of any source will always be considered **plagiarism**

NEXT CLASS: HTML