



Embrace Opportunity

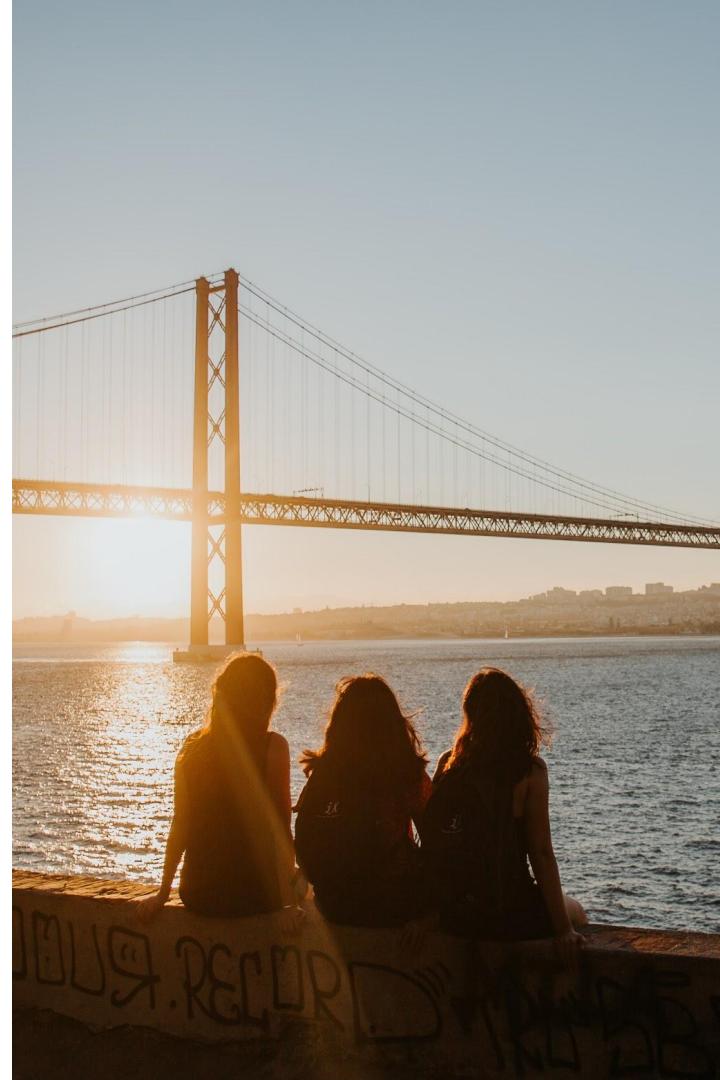


Welcome to liX

Web Development

Week 1 | Day 1

jX



Introduction

Head teacher and TAs - let's all meet
one another!

2 truths and a lie

- 1st person alphabetically starts
- 2nd person guesses the lie
- 2nd person goes next
- 3rd person guesses and so on

Agenda

- Introduction and advice
- Course content
- Expectations
- Development environments
- HTML recap
- CSS recap
- Bootstrap intro
- Exercises & homework

Internships

An overview of the internship process

Internship Objectives

- An opportunity to practice your skills in the real world
 - Technical skill set
 - Team work - teams of 3-5
 - Remote working
- Start with the end in mind
 - Resume bullet points
 - Interview material
 - LinkedIn endorsements
 - Letters of recommendation
- Take advantage of the iX community of support



Internship Placement Process

- We will be evaluating your class performance for engagement, skill set & team mindset
- You will receive the Internship Explorer which contains a brief of all the available projects
- We encourage you to schedule a 1:1 with your TA to discuss your career goals
- You will have the opportunity to share your preferences in a survey
- TAs will recommend placements based on class performance and preferences, head teacher & iX core staff will review

Internship Timelines

Monday	Tuesday	Wednesday	Thursday	Friday
6 Process announced in class - Internship Explorer shared	7	8 Preference survey	9	10 Teams announced
Schedule a 1:1 with your TA to discuss career goals and review the Internship Explorer				
13 Send intro email to company	14	15 In class internship orientation; receive Day 1 checklist	16	17

TA Support Process

An overview of the TA office-hours and support process

How to reach out for support

1. You have a dedicated slack team that you can make use of for any small queries you may have towards the teaching team, or if you just want to hang out/socialize digitally in any of the open channels
2. You are welcome to e-mail us during office-hours
3. You are welcome to schedule a 20 minute slot with the teaching team, below are the calendly links:

<https://calendly.com/cameron-kirkpatrick>

<https://calendly.com/akhil1234mara>

<https://calendly.com/harjot-2>

<https://calendly.com/vonketelhodtm>

Support Template

The hardest part of software development, is continuously self-learning and tackling difficult problems

The best way to learn this is to practice. Therefore, before reaching out to us, ensure you have filled out this template on the calendly link:

The problem I am facing is...

I have tried the following 3 - 4 methods/processes/functions etc.

I have visited these 2 - 3 websites based on the following Google searches

Course content

An overview of everything we will be covering in this course.

Day 1

- Introduction to Web Dev - HTML/CSS
- Ensure that everybody has their local development environment set up from the pre-work
- Introduce CSS Framework (Bootstrap)
- **Exercises**
 - Walkthrough examples of a basic HTML and CSS (grid vs bootstrap) website
- **Homework**
 - Rebuild and improve the “introduce yourself” web page using Bootstrap (responsiveness for all media)

Day 2

- Introduction to Git and Github
- Introduction to JavaScript - Language Fundamentals recap
- The DOM: Selectors, traversal, crud elements, events and listeners, bubbling and delegation, local storage
- **Exercise**
 - Simple Interest calculator and number guesser
- **Homework**
 - Movie Guesser (Bad explanations collected from survey)

Day 3

- Introduction to Object Oriented Programming in JavaScript
- OOP in JS, mention old constructors, prototypes, work with new classes
- **Exercise**
 - Contact book (old vs new, ES5 vs ES6)
- **Homework**
 - Task List using ES6 Classes

Day 4

- Asynchronous JS, Promises and Async Await
- Introduction to the internet, HTTP and API's
- XMLHttpRequest and the fetch API
- REST, Fetch and http requests
- **Exercise**
 - API requests (GitHub user profile)
- **Homework**
 - Update GitHub API application in some way

Day 5

- Advanced JavaScript and Abstractions
- Regular expressions: Form validation example
- JS Patterns: Module and MVP, singleton, factory, observer, mediator, state
- **Exercise**
 - Validate form input using regex
- **Homework**
 - No homework, it's **Friday!**

Day 6

- Introduction to data and data modeling
- Discuss various ways of storing data, various database types
- Introducing Firebase real-time database
- **Exercise**
 - A simple CRUD app
- **Homework**
 - Hook up Movie Guesser app to firebase

Day 7

- Introduction Database relationships
- How to model complex data
- **Exercise**
 - An app with related data
- **Homework**
 - A author-book registry

Day 8

- Introduction to Authentication
- Create registration and login functionality into your apps
- **Exercise**
 - A simple registration/login app
- **Homework**
 - Add auth to your previous app of choice

Day 9

- Introduction to infrastructure, the cloud and deployments
- Deploy your apps to the internet
- **Exercise**
 - Deploy an app to the internet
- **Homework**
 - Deploy a previous app of choice

Day 10

- Recap of everything + fun game project
- Preparing for internships
- **Exercise**
 - Building a tetris game
- **Homework**
 - Build out your game if you want to (Friday no homework)

Day 11 onwards

- Exploring more advanced web frameworks, to expand on our knowledge
- Explore any relevant API's or concepts that you may find necessary within your internship companies
- Supporting you within your internship companies (relevant topics and themes from internships)

Some advice

Find a friend to work with, it is much easier to stay motivated.

Team work makes the dream work...

Day 12

- Introducing TypeScript
- Introducing angular models

Day 13

- Introducing data binding (basic)
- Introducing directives (basics)

Day 14

- Introducing routing in angular
- Introducing services in angular

Day 15

- Handling forms in Angular
- Introducing HTTP Client in angular

Day 16

- Connecting angular to our firebase database
- Third-party API's I

Day 17

- Graphing libraries (analytics/admin panels)
- Location based libraries/services (Google Maps)

Day 18

- “Where to from here” guide
- Internship project presentations
- Good-byes

Development environment

Ensure everyone has VS Code installed with various recommended extensions and packages.

The Terminal

- Developers window into our tools - this is where we will live and breath every day
- We interact with and get feedback from our tools through commands in the terminal
- **Working Directory** - the current directory we are in
- Let's look at some live examples...

[Mac Cheat Sheet](#)

[Windows Cheat Sheet](#)

VS code and extensions

Visual Studio Code is the IDE (Integrated Development Environment) we will all be using in class

Some example extensions to explore:

- ESLint
- HTML Boilerplate
- Live server
- Prettier



Packages and programs

Tools that you should have already installed that we will quickly explore and ensure is running

- Node (node -v)
- NPM (npm -v)
- GIT console tools (git --version)



Terminal Exercise

1. Open up terminal / Command Line on your computer
2. Using terminal or the windows explorer create your iXperience working directory (your project folder for the course)
3. Navigate to the working directory
4. We will always start here each day!

Example: /Users/me/documents/ix

Now we are ready...

Let's jump into the content!

HTML, CSS, and Bootstrap

An overview of the important elements and features of HTML and CSS followed by an intro to Bootstrap.

CSS Grid

- A powerful layout system in CSS
- Compared to flex-box, it is a 2-dimensional system (columns and rows)

You can find some nice documentation [here](#)

CSS Flexbox

- Another layout system in CSS
- Compared to grid, it is a 1-dimensional system (but still equally powerful)
- You can combine both to build up your layouts

You can find some nice documentation [here](#)

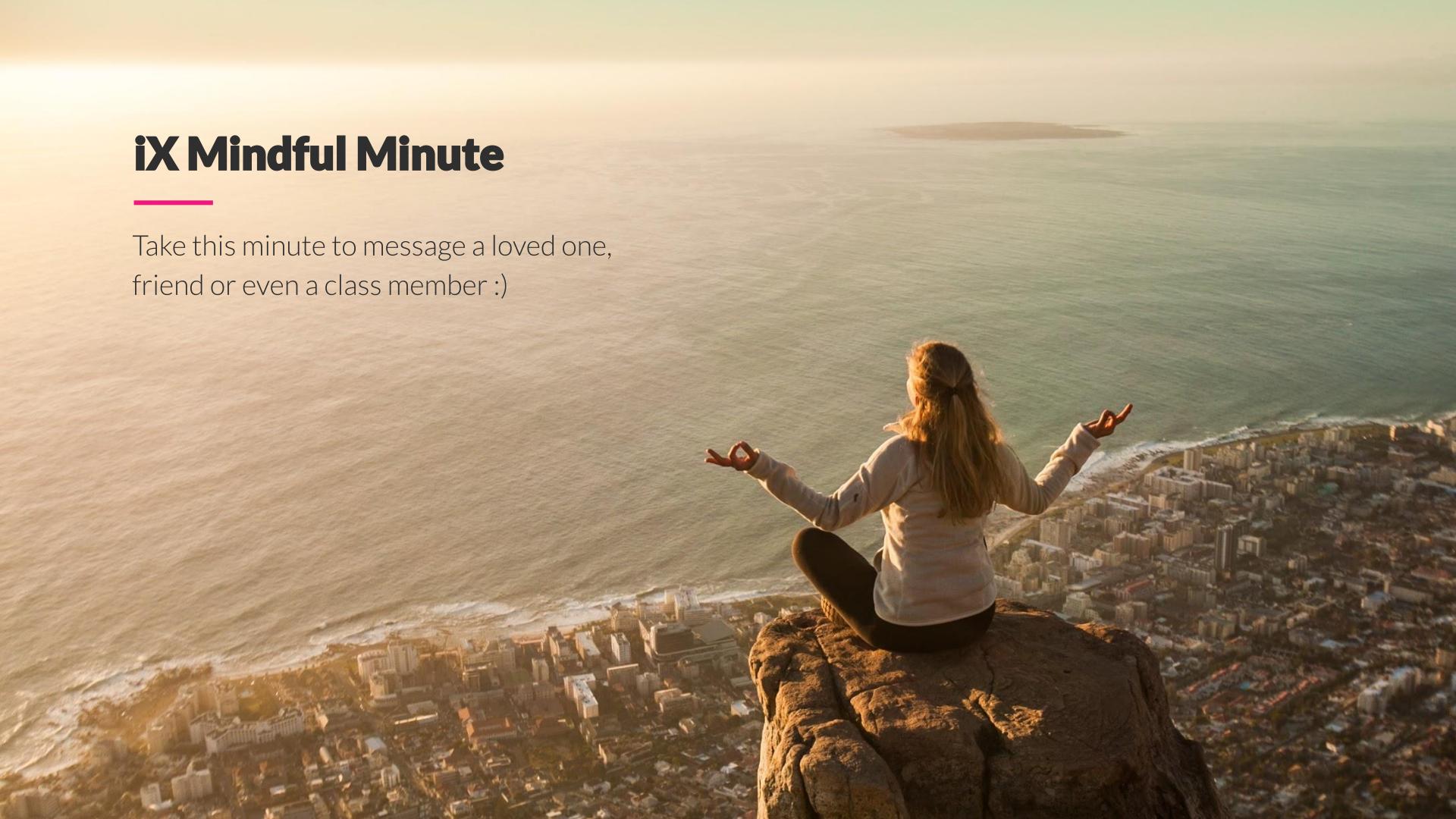
Bootstrap

- A common CSS framework
- Speeds up our frontend development
- Provides re-usable css classes
- Important improvement is that it includes its own grid system based off of flexbox

You can find the [bootstrap documentation here.](#)

iX Mindful Minute

Take this minute to message a loved one,
friend or even a class member :)



Exercise and homework

Exercise: Grid/Flexbox vs Bootstrap
website

Homework: Bootstrap Intro website

Looking ahead and homework

Exercise

- Simple CSS Grid Box Example
- Website using CSS grid and flexbox
- Website using Bootstrap

Homework

- Make another webpage introducing yourself, using only Bootstrap

Simple CSS Grid Box Example

Open up this [code pen](#) and change some of the properties in the CSS and see Grid Box in action.

1. Create a new folder in your local iX working directory to recreate this in your local machine
2. You need an index.html and style.css file (link them together)
3. Change the column spec in css so that you get the following results:

The grid consists of 9 items arranged in a 3x3 layout. Each item is a light purple rounded rectangle containing a snippet of Latin text. The text is as follows:

- Top-left: "Lorem ipsum dolor sit amet consectetur adipisciing elit. Esse aliquid laboriosam minima ex praesentium recusandae reprehenderit unde sit tempore atque aut commodi quae expedita corrupti, dignissimos architecto. Eius, maiores ad?"
- Top-middle: "Quibusdam, eos esse dolorum facere voluptatem elus, dolore quis totam aspernatur obcaecati harum? Nihil eligendi eos minus odit minima earum incidunt rem fugit reprehenderit, molestiae possimus eveniet itaque laudantium excepturi."
- Top-right: "Ducimus quibusdam inventore delectus doloribus dignissimos. Dignissimos quos officia minus exercitationem perspicillatis harum iusto molestiae deleniti quod sunt amet recusandae autem, neque doloremque ad alias eaque consequuntur nesciunt quis eius!"
- Middle-left: "Cumque aspernatur ex ipsum dolorum elus, tempore omnis minus sequi architecto totam sunt maxime nemo, ab repellendus. Aut voluptatem saepe voluptatibus nisi ipsum. Debitis corporis culpa ipsa error nemo doloribus."
- Middle-middle: "Consequatur dolore, architecto quos saepe consequatur libero minus totam? Enim optio provident commodi corporis officia, sunt maiores? Cupiditate consequatur, cumque natus corporis velit sunt ad magni aliquid facere deleniti molestiae."
- Middle-right: "Voluptatibus similique modi voluptatum voluptatem quo quod minima ducimus facere, sequi libero accusamus nisi nobis? Minima error tempore quo esse quod odit, deleniti labore nulla ullam velit nemo neque sint!"
- Bottom-left: "Qui, corporis delectus? Paritur vel autem commodi, accusantium, voluptate obcaecati iste, a debitis facilis
- Bottom-middle: "Recusandae tempora ab error omnis exercitationem illo accusamus esse sit ipsa accusantium iure, possimus
- Bottom-right: "Dolorem saepe accusamus sed placeat porro ex, ab, vel eaque libero incidunt facilis delectus, iure odio dicta error consequuntur perspicillatis quasi? Corrupti incidunt quia asperiores quo magnam at minima laudantium?"

Simple CSS Website

1. Create a new folder in your local iX working directory to recreate this in your local machine
2. You need an index.html and style.css file (link them together)
3. You need to achieve the following website using CSS Grid/Flexbox. Make sure its mobile responsive
4. Once completed, do the same website using Bootstrap

Simple CSS Website

Welcome to Mobile First Web Design!

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[Read more](#)

Mobile and Web Development

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Web Development

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Mobile Applications

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Tech Marketing

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We handle all of your digital needs

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Contact Us

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contact@appstrax.tech

About Us

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Mobile First Web Design
Project followed by [Student X](#)

Homework: Intro Website using Bootstrap!

1. Create a new folder in your local iX working directory to recreate this in your local machine
2. Re-create your introduction website (from the pre-work) using nothing but Bootstrap CSS
3. (You will have custom CSS for specific customizations like colors and effects that you might want, the challenge is to use the bootstrap layout system classes instead of defining them yourself)

Communication Platforms



Zoom

All classes
TA Office hours



Canvas - your LMS

Prework, readings, slides,
homework assignments



Workplace

Community events &
celebrations
Community communications



Slack

Class queries
Class chat

Who to contact?

Course or internship queries?
Ask your Teaching Team

Community queries?
Ask dani@ixperience.co

Any other issues or queries?
Email: support@ixperience.co

Thanks for listening!

Tomorrow: Git, GitHub and the
JavaScript DOM



A photograph of a person from behind, looking out over a calm ocean at a sunset. The sky is a gradient of orange and yellow, and the water reflects this light. The person has curly hair and is wearing a red jacket.

iX

See you tomorrow