JavaScript For Web

Week 1, Lecture 1 - Introduction to web development and this course.

Instructor: Jason Xu

Course Schedule

Session	Time
Lecture 1	40min
Break	10min
Lecture 2	40min
Break	10min
Tutorial	60min
Office hour	30min

- Participate in lectures is required for attendence.
- Tutorial and office hour are optional.

Course Objectives

Week 1 - Week 2 (Nov 20 - Dec 1)

- Web Development Intro/Review
- Setup Dev Environment
- JavaScript Fundamentals(variables, operations, loop, arrays, functions, etc.)
- Assignment 1

Week 3 - Week 4 (Dec 4 - Dec 15)

- JavaScript in Web Development(ES6, Objects, DOM, Node, JSON, Linting, Form Validations, APIs, etc.)
- Assignment 2
- Final Project: Start at week 3, individual Web project, develop a website/webpage based on your skill set. More description will be posted later this course.

Grading & Evaluation

- Attendence - 30%
- Assignments - 40% (20% for each, 2 assignments in total)
- Final Project - 30%

Assignment

40% of total grade.

- We will have two assignments for the whole program.
- Each assignment has five exercises.
- Each exercises are expected to take less than 20min.
- We will work on these exercises during the tutorial.
- Read the description carefully when working on assignment.
- For each assignment, you will submit exercise files to Canvas all together.

Content	Due Date
Assignment 1	Dec 1, Friday, 11:59pm PT
Assignment 2	Dec 15, Friday, 11:59pm PT

Tutorial

Optional

- An oppotunity to develop your self-learning skill.
- We will work on assignment exercises and talk about the solution.
- Readings, videos which are related to lecutre topics.
- Tips about final Projects.
- Ask for help.

About Instructor

Jason Xu

Fullstack JavaScript Web Developer 💻

- Bechelor of Science, Computing Science Major, Statistics Minor, Simon Fraser University, Canada.
- Master of Engineering, Computer Engineering, University of Victoria, Canada.
- Worked for SAP Canada as Software Developer in JavaScript.
- Worked for a local company as Backend Developer in Java.
- Develop websites for startups, local/international business, friends, etc.
- Currently working as a Web dev instructor at CCC.

Hobbies: Bass 🎸, music, basketball and snowboarding.

Tell me more about yourself

Anything you'd like to share:

- Name
- Experiences
- Skills
- Hobbies, Your favorite music, etc.

What is Web development

- Build and maintain websites.
- Project focused and collaborating with a team.
- Coordinate the client's needs.
- Experimenting with new technologies.

Types of Web Developers

Frontend: client side, the stuff you see on the website in your browser.

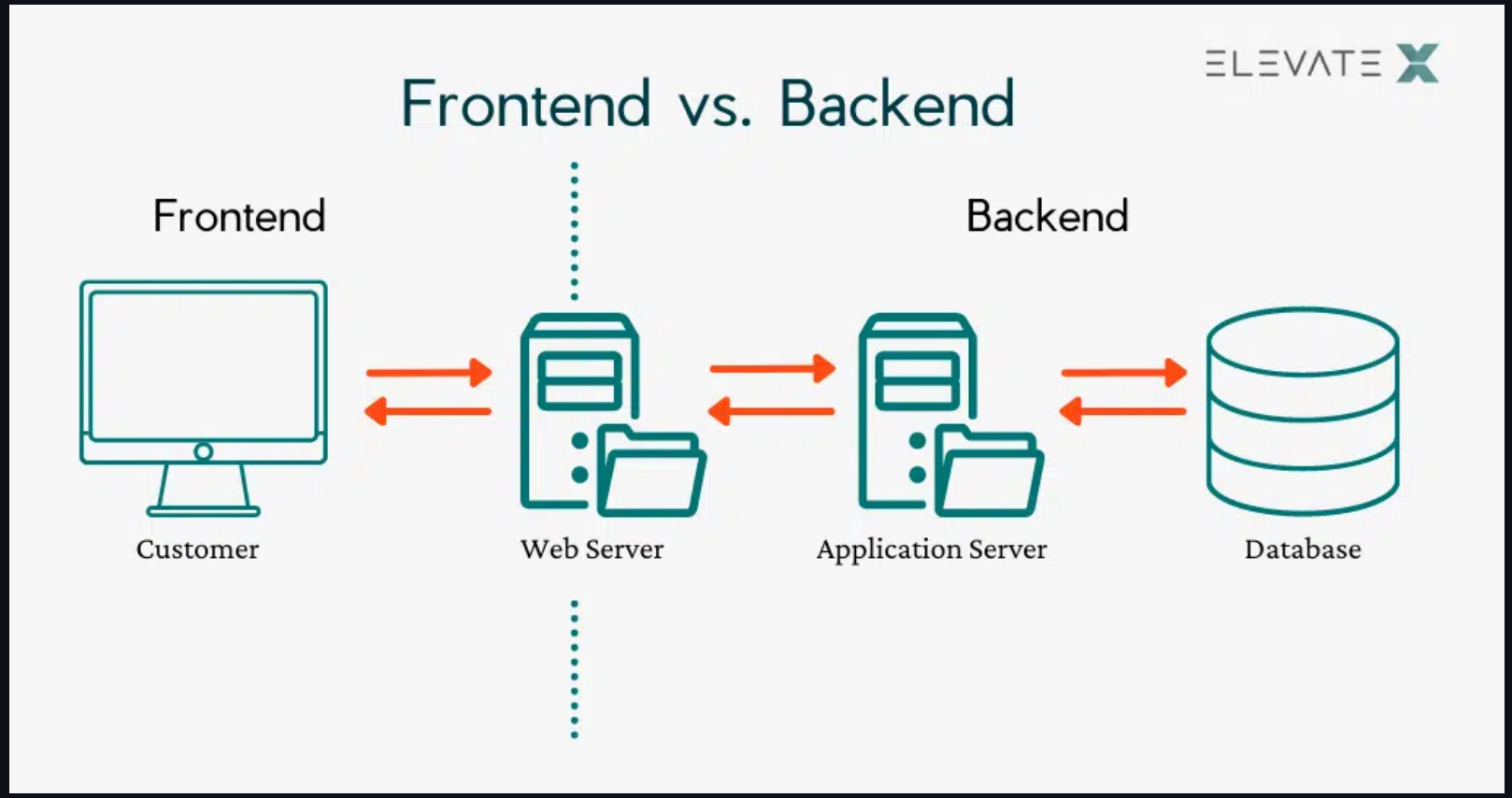
- The presentation of user interface(UI) elements. ex: Navigation Bar.
- Tools: HTML, CSS, JavaScripts, Bootstrap, React, etc.

Backend: server side, the heart of the Web application.

- Data communication between server, application and database.
- Tools: Express, Java, Python, .Net , SQL, AWS, Linux, etc.

Fullstack: working with both the frontend and backend.

Frontend vs Backend



Comment: **JavaScript** can be used on both frontend and backend.

Web Basics

- Internet: connects users from all over the world in a single massive network.
- Ethernet: connects devices in a local area network(LAN).
- Web page: a document which can be displayed in a web browser.
- Website: a collection of web pages.
- Web server: A computer that hosts a website on the internet.
- HTTP, URL, Domain name, Port.

You should know all of this, but don't have to go too much in detail. check more about Web basics

Web page/Websites Basics

What does this "document" means:

- **HTML**: Content & Layout
  - a language that how documents and web pages are displayed in a web browser, the language for the building blocks of any website.
- **CSS**: Styling
  - a style sheet language that determines how a document created in HTML is styled (colors, font styles, layout and responsive features).
- **JavaScript**: Interactive Elements
  - a programming language that allows you to change CSS and HTML elements on your website after the site has been loaded.

Introduction to JavaScript

JavaScript(JS) is a scripting or programming language that allows you to implement features on web pages.

- Store useful value inside variables.
- Operations on variables/events. ex: Change pieces of text, click a button, etc.
- ES6: The morden standard of JS with new features and syntax. We will follow ES6 in this course.
- more functionality in Frameworks/APIs builts on top of JS.

Foundation is very important. We always need a good foundation of JS when we learn a new technologies built on top of JS.

Dev Tools

- Computer
- Chrome
- Text Editor(VSCode)
- Command Lind Interface (CLI)/Terminal
- Git: version control system.
- Github: a service service that allows you to upload, host, and manage your code using Git with a nice web interface
- Google, Stack Overflow, chatGPT, etc.

Useful resources for JS

Must have

- MDN Web docs

Optional

- w3schools
- devdocs.io

Suggestion & Comments

- Self-learning, find your own way.
- Take small steps.
- Ask for help.
- Don't worry, have fun and you can learn anything!

Summary

- Web/Web Dev Basics.
- Frontend and Backend Development.
- HTML, CSS and JavaScript.
- Dev Tools.
- What's next: HTML/CSS Review and JavaScript Fundamentals.

Thank you.