

Electronic Business Development — Lab 1 — Intro & Environment Setup

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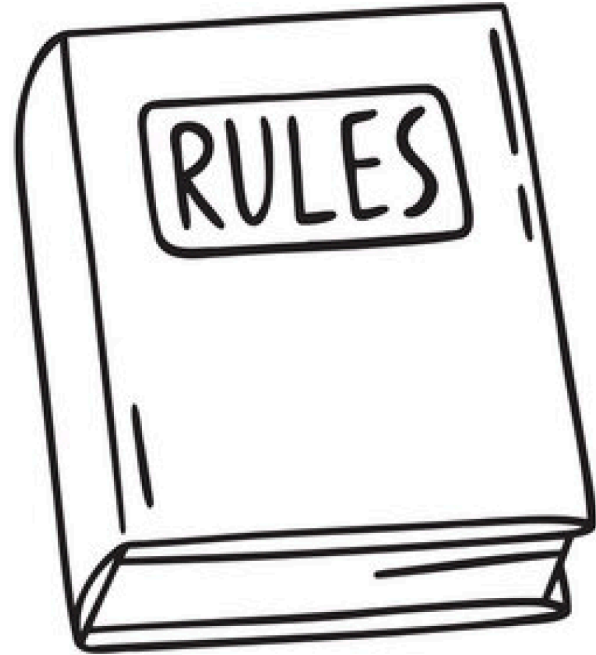
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Rules and code of conduct

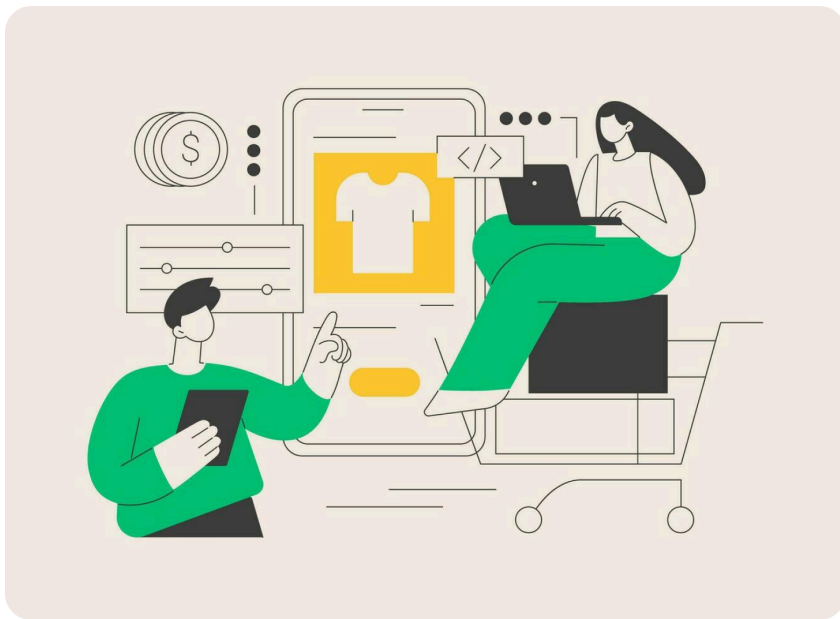
- **Punctuality:** a grace period of 15 minutes is permitted, solely for recording attendance.
- **Mobile phones:** allowed for taking notes only. Anything unrelated to the session is not permitted.
- **Focus:** no side conversations during the session. Please participate in all activities.
- **Communication:** email and office hours only.





Introduction and course overview

Setting the stage for our web development journey



Course intro and description

- We build a simplified Airbnb clone across the semester.
- You learn full-stack development by doing.
- By the end you build your own project.



Lab agenda

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- | | |
|---------------|---|
| 10 min | Course overview |
| 10 min | Software development lifecycle |
| 20 min | Tools and tech stacks: VS Code, Git, GitHub, MERN |
| 30 min | Lab activities |
| 20 min | Assignment and questions |
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Software development life cycle



Quick recap of lecture 1

- Intro to programming in JavaScript. The refresher assignment covers this.
- What full-stack web development means.
- If you missed it, the slides are on the CMS.

Software development life cycle

- The lab lives mostly in the development box. The lectures give you the theoretical foundation you need as a software developer.
- Understanding the whole cycle is what makes the development box make sense.





The tools we will use

- There are thousands of tools out there.
- This course locks in six: VS Code, Git and GitHub, Node.js, MongoDB, React, Express.
- The world is bigger than this. You are encouraged to explore outside class.



Hands-on activities and assignment

Practical exercises to get started

VS Code



Visual Studio Code is the editor we use for everything in this course. It is free, cross-platform, and extensible.

Docs: code.visualstudio.com/docs

Install the extensions we recommend on the CMS.

✓ ACTIVITY

1. Open a folder in VS Code.
2. Create a file called `hello.js`.
3. Write a `console.log` and save.

Node.js

Node.js is a JavaScript runtime that runs outside the browser. It is what lets us write backend code in JavaScript.

Docs: nodejs.org/en/docs

Command What it does

<code>node -v</code>	Prints the installed Node.js version
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<code>npm -v</code>	Prints the installed npm version
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<code>node <file></code>	Runs a JavaScript file
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✓ ACTIVITY

Install Node.js and npm, then run:

```
1  node -v
2  npm -v
3  node hello.js
```



Git

Git is version control. It tracks every change you make to your code, so you can go back, compare, and collaborate.

Docs: git-scm.com/doc

Command	What it does
<code>git init</code>	Creates a local repository
<code>git status</code>	Shows the current branch and what has changed
<code>git add <files></code>	Moves changes from the working directory to staging
<code>git commit -m "<msg>"</code>	Records the staged changes with a message
<code>git clone <url></code>	Copies a remote repository to your machine
<code>git pull</code>	Brings remote changes down into your local copy
<code>git push</code>	Sends your local commits up to the remote

Every one of these has a button in VS Code. You do not have to type them, but you should know what the button does.



Your first repository

```
1  git --version
2  git init
3  git add hello.js
4  git commit -m "First commit"
```

GitHub

GitHub hosts Git repositories so you can share them and work together. GitLab and Bitbucket do the same job.

Docs: docs.github.com/en

✓ ACTIVITY

1. Create a GitHub account.
2. Create a new repository.
3. Push your local repository to it.



Assignment

Besides the project and its deliverables, there are **3 assignments** for the course.

They are meant to both refresh anyone who already knows these topics and introduce them to anyone who does not.

There will be **3 assignments** this semester (in addition to the project and its deliverables):

1. Get familiar with Git, GitHub, VS Code, shell basics, and the full development set up used in this course.
2. Get familiar with JavaScript as a language.
3. Get familiar with HTML and CSS, and with JavaScript linked to them.

Deadlines and further details will be shared soon. For now, start working on Assignment 1.



References & useful links

INSTALL AND SET UP

[Git — downloads](#)

[Git documentation](#)

[VS Code documentation](#)

[Node.js documentation](#)

GIT AND GITHUB

[GitHub Docs](#)

[Git and GitHub learning resources](#)

[GitHub Skills catalogue](#)

JAVASCRIPT

[MDN JavaScript reference](#) — the one to bookmark

[javascript.info](#) — tutorial, beginner to advanced

[Exercism JavaScript track](#)

GOING FURTHER

[roadmap.sh — full stack](#) — how the pieces fit together

[MIT Missing Semester](#) — shell and version control, with exercises

Nothing on this slide is required. It is here for when you get stuck or want to go further.

Questions?

Open floor for any questions

