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# JAVASCRIPT INTRODUCTION

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Anirach Mingkhwан

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## Anirach Mingkhwan

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Network Technologies Information Science Natural Inspired Computing Mobile Computing

FOLLOWING

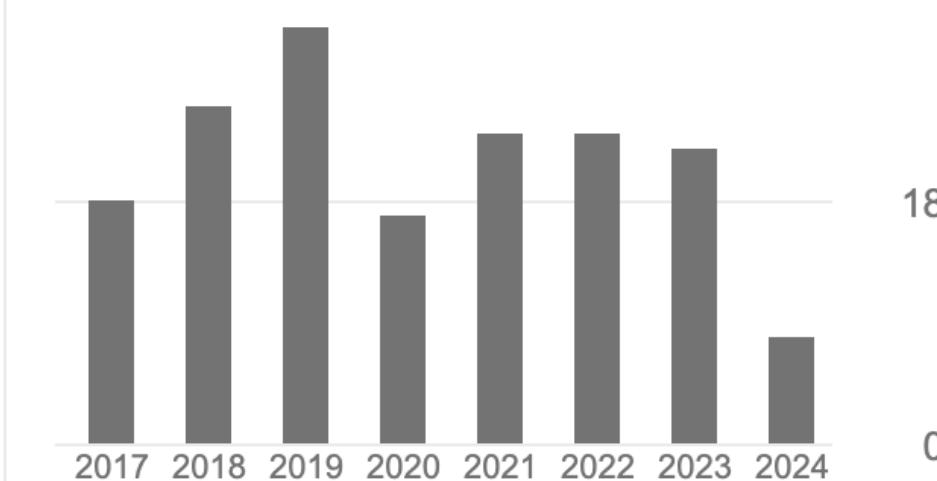
Cited by

[VIEW ALL](#)

All Since 2019

Citations	497	124
h-index	12	6
i10-index	15	1

36



CITED BY YEAR

TITLE

### Libraries in Transformation: Navigating to AI-Powered Libraries

P Meesad, A Mingkhwan

Libraries in Transformation: Navigating to AI-Powered Libraries 1, [https ...](https://...)

### Designing and Implementing Chatbot Dialogues for Effective Knowledge Exchange: A Methodological Approach

Y Ruamsuk, A Mingkhwan, H Unger

2024 IEEE International Conference on Big Data and Smart Computing (BigComp ...)

### X-WiKi: Graph-Based Knowledge Aggregation from Wikipedia Pages i

S Simcharoen, A Mingkhwan, H Unger

2024 IEEE International Conference on Big Data and Smart Computing (BigComp ...)

### DIFFSTRACT: distinguishing the content of texts

Y Ruamsuk, A Mingkhwan, H Unger

Proceedings of the 2022 6th International Conference on Natural Language ...

### Generating and Evaluating Text Summarisations using Text-representing Centroids (TRC)

Y Ruamsuk, A Mingkhwan, H Unger

2022 Research, Invention, and Innovation Congress: Innovative Electricals ...

### A Concept for Recommender Systems Based on Text-Representing Centroids

1

2022

H Unger, M Kubek, H Unger, M Kubek, Y Ruamsuk, A Mingkhwan

The Autonomous Web, 25-33

### ผล ของ การ เรียน ด้วย ระบบ การ เรียน แบบ ปรับ เหมาะ ตาม รูป แบบ การ เรียน รู้ VARK เพื่อ เสริม สร้าง ผล สัมฤทธิ์ ทางการ เรียน ของ นักศึกษา ระดับ ปริญญา ตรี สาขา เทคโนโลยี สารสนเทศ มหาวิทยาลัย เทคโนโลยี ...

B Daoruang, C Sanrach, A Mingkhwan

Journal of Educational Measurement Mahasarakham University 27 (2) 178-181

### Co-authors

[EDIT](#)



Madjid Merabti  
University of Sharjah, UAE

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Paul Fergus  
Professor of Machine Learning a...

>



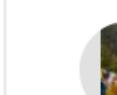
Martin Hanneghan  
Subject Head for Computer Scie...

>



Julaluk Watthananon  
Rajamangala University of Techn...

>



Herwig Unger  
FernUniversität in Hagen

>



Hathairat Ketmaneechairat  
College of Industrial Technology, ...

>

Trash

[anirach.m@fitm.kmutnb.ac.th](mailto:anirach.m@fitm.kmutnb.ac.th)

## Grade categories

Grade category*	Default points*	X
Class Participation	5	
20 / 100		
Grade category*	Default points*	X
HW-01	5	
5 / 100		
Grade category*	Default points*	X
HW-02	5	
5 / 100		
Grade category*	Default points*	X
HW-03	5	
5 / 100		
Grade category*	Default points*	X
HW-04	5	
5 / 100		
Grade category*	Default points*	X
HW-05	5	
5 / 100		
Grade category*	Default points*	X
Project	10	
7 / 100		
Grade category*	Default points*	X
Midterm	30	
7 / 100		
Grade category*	Default points*	X
Final	30	

The screenshot shows the Exercism website dashboard for user Anirach. At the top, there's a navigation bar with links for Dashboard, Tracks, Mentoring, Community (with a 'New' badge), and Donate. To the right are icons for a profile picture, a bell, notifications (4), and more options. Below the nav, a sidebar shows 'Anirach' and 'Anirach Mingkhwan'. A blue button says 'See your journey on Exercism >'. The main area features a large 'Welcome back, Anirach!' message with a subtext about solving exercises and getting mentored. It includes a call-to-action button for contributing or donating. Below this are four cards: 'Continue learning on your tracks', 'Try your hand at mentoring', 'Contribute to building Exercism', and 'Donate to help us grow sustainably'. On the right, there's a section for 'Your Tracks' showing progress for JavaScript and Python, each with 2 completed exercises out of 139 and 131 respectively. A 'Discover more tracks' link is also present.

{`}` **Anirach**  
Anirach Mingkhwan

Dashboard Tracks Mentoring Community New Donate ❤️

See your journey on Exercism >

# {`}` Welcome back, Anirach!

Solve coding exercises and get mentored to gain true fluency in your chosen programming languages. Exercism is open-source and not-for-profit.

Exercism is built by people like you. Can you [contribute](#) or [donate](#) to help us grow?

Continue learning on your tracks

Try your hand at mentoring

Contribute to building Exercism

Donate to help us grow sustainably

## Your Tracks

**JavaScript**  
2 / 139 exercises completed

**Python**  
2 / 131 exercises completed

[Discover more tracks →](#)

<https://exercism.org/>

The screenshot shows the Exercism JavaScript track dashboard. At the top, there's a navigation bar with links for Dashboard, Tracks, Mentoring, Community (with a 'New' badge), and Donate. On the right side of the header are icons for a user profile (showing 4 notifications), a bell, and a shield.

The main section features a large 'JavaScript' title with a yellow hexagon icon containing 'JS'. Below it, it says '205,490 students'. There are four tabs: Overview (selected), Syllabus, Exercises, and About.

**Your Activity**

You're 1.4% through the JavaScript track. Keep it up! 🚀

A progress bar shows 1.4% completion. Below the progress bar is a grid of 139 exercise icons. The first two are green with checkmarks, while the rest are grey with locks. At the bottom of the grid, it says 'Completed 2', 'In-progress 0', 'Available 40', 'Locked 97', and 'Total Exercises 139'.

**Contributors & Mentors**

215 contributors  
4104 mentors

**Activity Metrics**

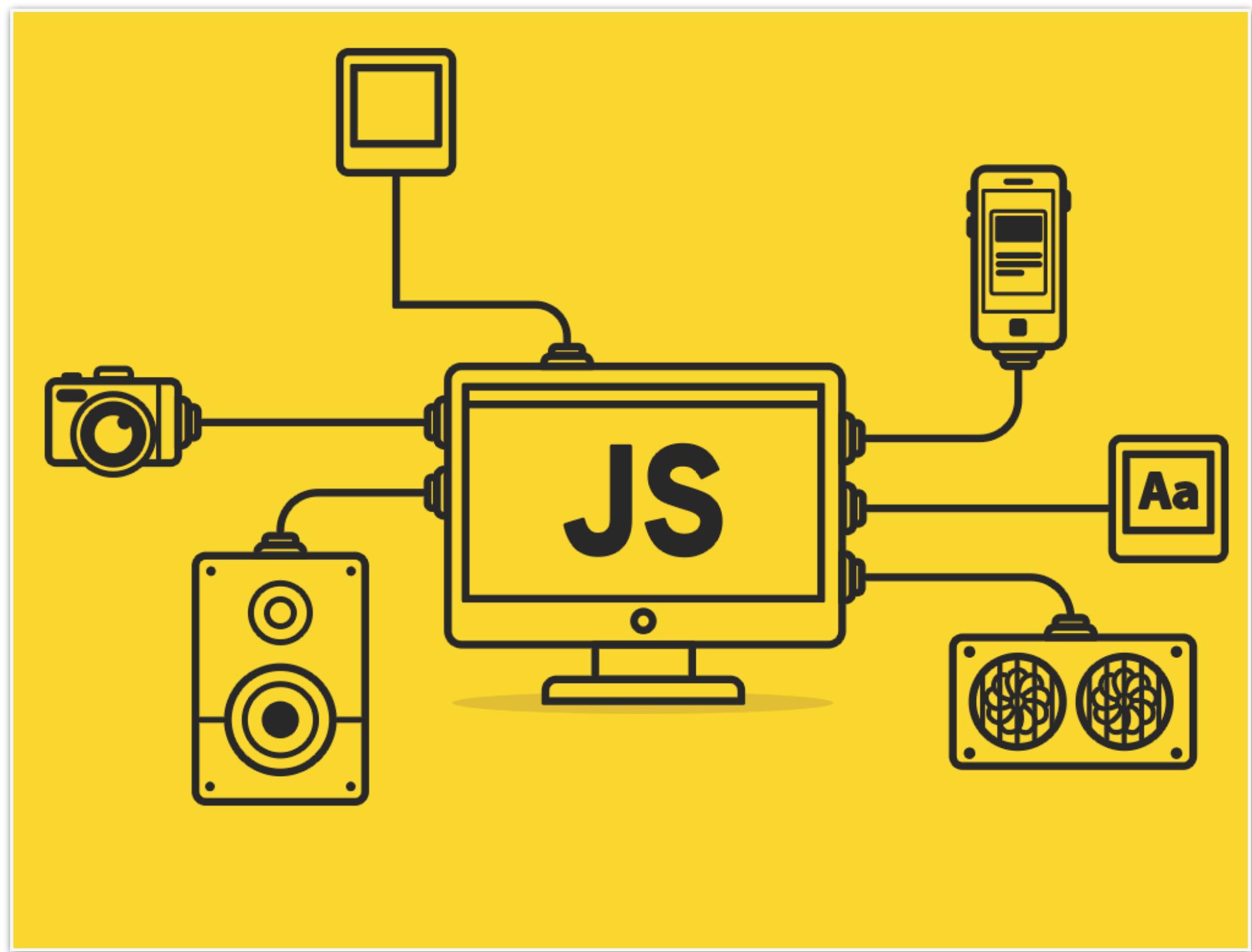
0.3 Avg. exercises completed per week (last 8 weeks)

2 Exercises completed

<https://exercism.org/>

# OUTLINE

- Introduction
- Setup and Hello World
- JavaScript in Browsers



# ONLINE LEARNING

The screenshot shows the Channel 9 website interface. At the top, there is a navigation bar with a logo of a white robot head on a yellow book-like shape, followed by the text "Channel 9". To the right of the logo are links for "all content", "shows", and "events". On the far right of the top bar are a search bar with the placeholder "search channel 9", a magnifying glass icon, and a "sign in" button.

The main content area features a large title "Beginner's Series to: JavaScript" in white text on a dark background. Below the title, there is a thumbnail image for the series, which includes the text "Beginner's Series to: JavaScript" and "51 episodes". To the right of the thumbnail, there is a link to "rss" and a "sign in to subscribe" button.

The main text content starts with "Last episode: Oct 05, 2020 at 8:00AM" and "Beginner's guide to JavaScript on Node.js". It then describes the purpose of the series: "Learning a new framework or development environment is made even more difficult when you don't know the programming language. Fortunately, we're here to help! We've created this series of videos to focus on the core concepts of JavaScript". It also states: "While we don't cover every aspect of JavaScript, we will help you build a foundation from which you can continue to...". At the bottom of this section is a yellow "show more" button.

<https://channel9.msdn.com/Series/Beginners-Series-to-JavaScript>

# ONLINE LEARNING

The screenshot shows the Codecademy website interface. At the top, there is a navigation bar with links: codecademy, My Home, Course Catalog, Resources ▾, Community ▾, and Plans + Pricing ▾. To the right of the navigation are search, notification, and user profile icons, along with a purple "Try Pro For Free" button. Below the navigation is a large teal banner with the text "Learn JavaScript" and a yellow "Resume" button. Underneath the banner, there are two tabs: "Overview" and "Syllabus", with "Syllabus" being underlined. A "Course Progress" section follows, featuring a progress bar that is 0% complete, indicated by a small trophy icon at the end.

codecademy My Home Course Catalog Resources ▾ Community ▾ Plans + Pricing ▾

Try Pro For Free

## Learn JavaScript

Resume

Overview Syllabus

### Course Progress

0%

<https://www.codecademy.com/learn/introduction-to-javascript>

# ONLINE LEARNING

The screenshot shows the homepage of [JavaScript.info](https://javascript.info/). At the top left is the logo "JAVÅSCRIPT.INFO" with "EN" below it. At the top right are buttons for "Buy EPUB/PDF", user profile, and search. The main title "The Modern JavaScript Tutorial" is centered above a subtitle: "How it's done now. From the basics to advanced topics with simple, but detailed explanations." Below this are publication details: "12th December 2020" with a calendar icon, "12570 ★ github", and sharing links for Twitter and Facebook. A search bar at the bottom left contains the placeholder "Search in the tutorial" and an orange "SEARCH" button. A "Table of contents" section is visible at the bottom.

JAVÅSCRIPT.INFO  
EN

Buy EPUB/PDF

The Modern JavaScript Tutorial

How it's done now. From the basics to advanced topics with simple, but detailed explanations.

12th December 2020 12570 ★ github Share: [Twitter](#) [Facebook](#)

Search in the tutorial

SEARCH

Table of contents

Main course contains 2 parts which cover JavaScript as a programming language and working with a browser. There are also additional series of thematic articles.

# ONLINE LEARNING

The screenshot shows a website navigation bar at the top with links for Home, HTML, CSS, JAVASCRIPT (which is highlighted in green), SQL, PYTHON, PHP, BOOTSTRAP, HOW TO, MORE ▾, REFERENCES ▾, and CERTIFI. The main content area has a sidebar on the left titled "JS Tutorial" with a "JS HOME" section containing links to various JavaScript topics: JS Introduction, JS Where To, JS Output, JS Statements, JS Syntax, JS Comments, JS Variables, JS Operators, JS Arithmetic, JS Assignment, JS Data Types, JS Functions, JS Objects, JS Events, and JS Strings. The main content area features a large title "JavaScript Tutorial". Below it are four bullet points: "JavaScript is the world's most popular programming language.", "JavaScript is the programming language of the Web.", "JavaScript is easy to learn.", and "This tutorial will teach you JavaScript from basic to advanced.". A green button at the bottom of this section says "Start learning JavaScript now ➔". At the bottom of the page, the text "Examples in Each Chapter" is displayed.

JS Tutorial

JS HOME

JS Introduction  
JS Where To  
JS Output  
JS Statements  
JS Syntax  
JS Comments  
JS Variables  
JS Operators  
JS Arithmetic  
JS Assignment  
JS Data Types  
JS Functions  
JS Objects  
JS Events  
JS Strings

JavaScript Tutorial

◀ Home

Next ➔

JavaScript is the world's most popular programming language.

JavaScript is the programming language of the Web.

JavaScript is easy to learn.

This tutorial will teach you JavaScript from basic to advanced.

Start learning JavaScript now ➔

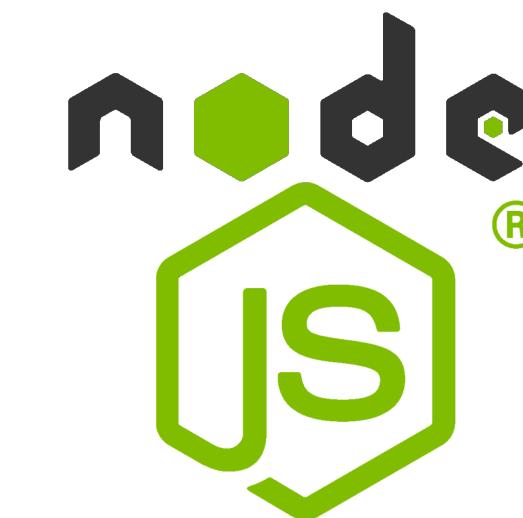
Examples in Each Chapter

# INTRODUCTION

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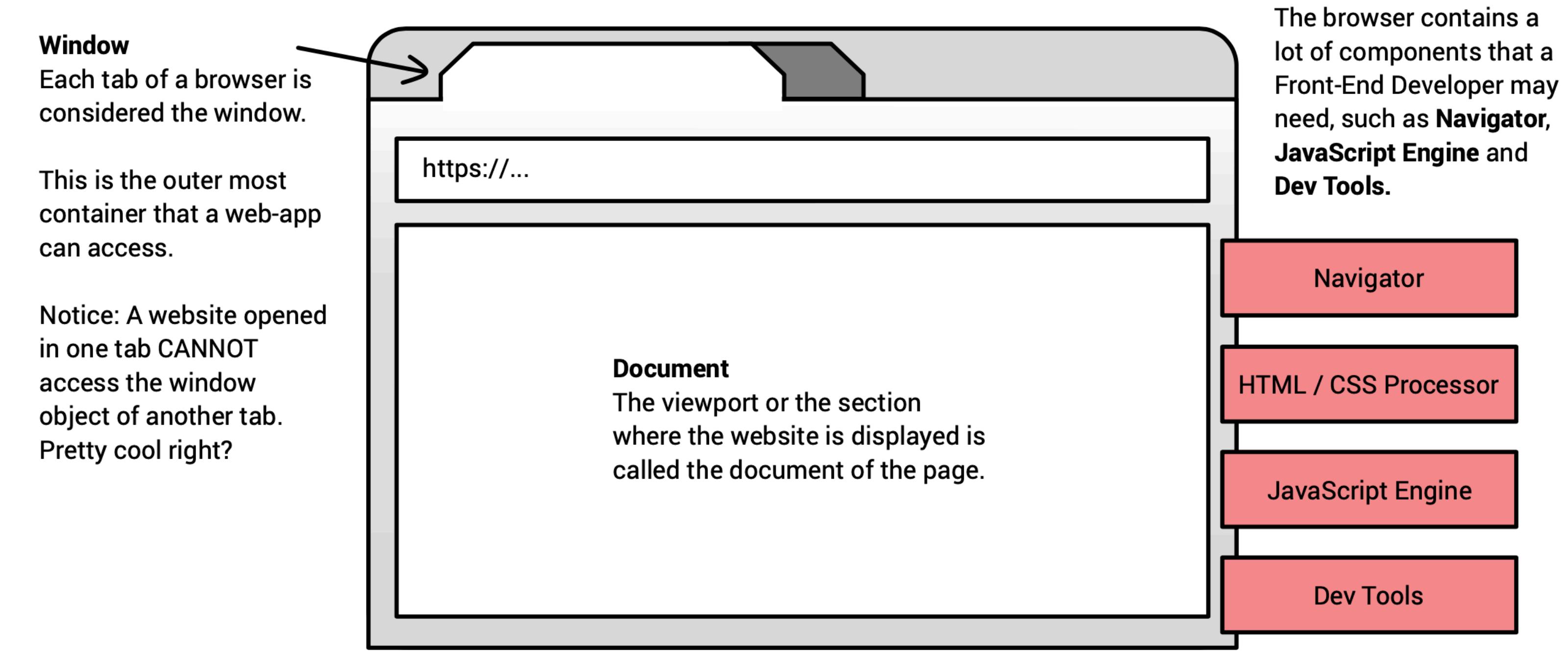
# Netscape



- JavaScript ถูกพัฒนาโดยนาย Brendan Eich พนักงานจากบริษัท NetScape โดยชื่อแรกของมันคือ Mocha แต่ถูกเรียกและเปิดตัวอย่างเป็นทางการในชื่อ LiveScript ก่อนจะมาเป็น JavaScript ในปัจจุบัน
- หลาย ๆ คนอาจเข้าใจผิดว่า JavaScript กับ ECMAScript คือภาษาเดียวกัน เพราะชื่อจำพวก ES6, ES7, ES2016 แต่จริง ๆ แล้วมันคนละตัวกัน โดย ECMAScript เป็นมาตรฐานสำหรับภาษา Script ซึ่ง JavaScript นั้นก็ถูกพัฒนาตามมาตรฐานนี้เช่นกัน
- JavaScript เดิมเป็น Engine อยู่ใน Web Browser และได้ถูกถอดออกจากเพื่อให้ทำงานภายนอก Web Browser ได้ในชื่อของ node โดย

# BROWSER

A web browser is a pretty advance piece of software which contains a lot of components. Many of these components are accessible to a web developer, so we can create complex web apps. At the same time a lot of components are kept out of reach of the web developer for security purposes. For instance, we as web developers can get access to the user's location, but we cannot get access to the user's saved passwords or browsing history. **Let's see below how a browser is structured:**



# HTML

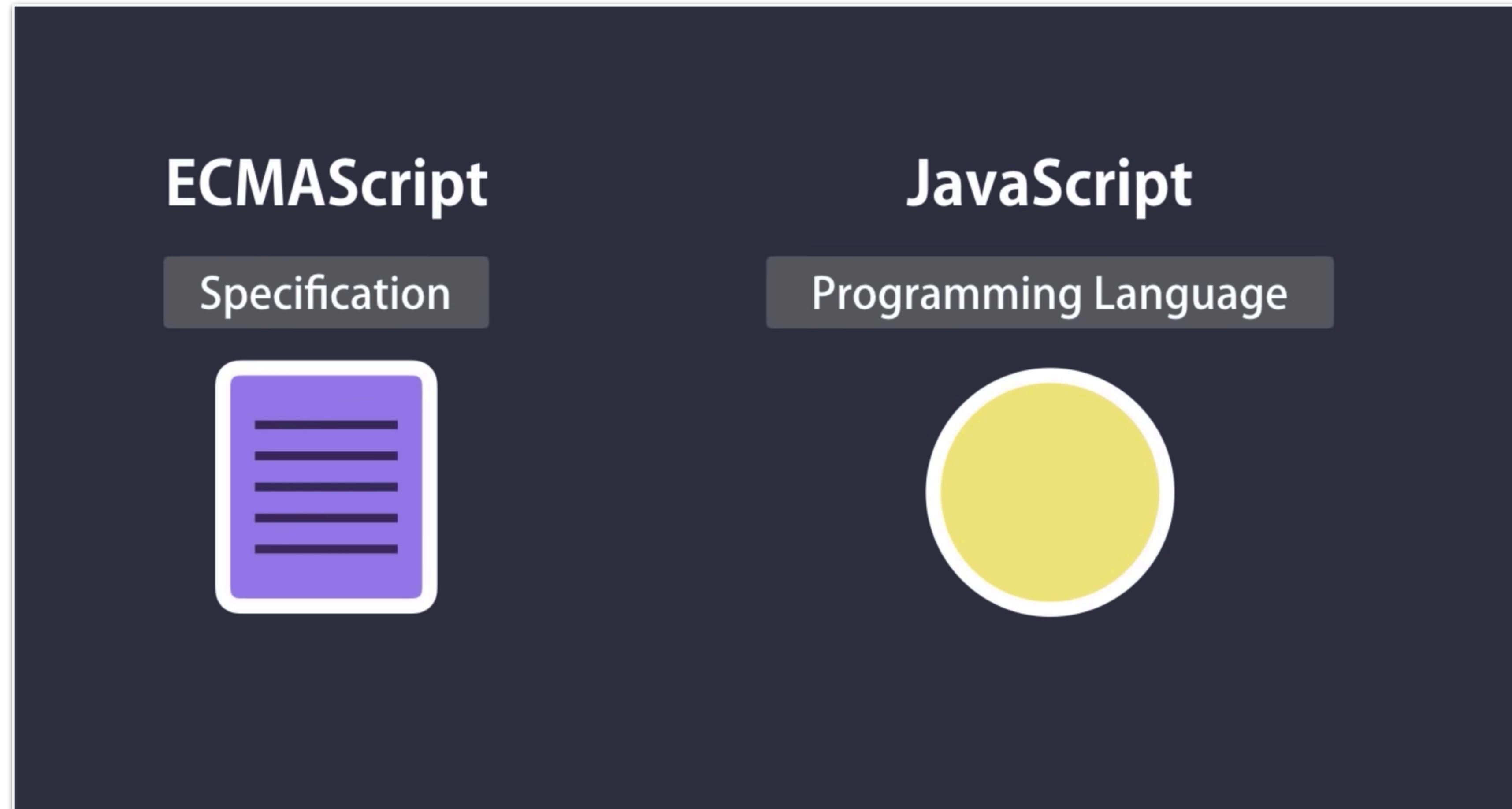
Lecture-01 Introduction > Hello.html > ...

```
1  <!DOCTYPE html>
2  <html>
3  |  <head> </head>
4  |  <body>
5  |  |  <h1>Hello, world!</h1>
6  |  </body>
7  </html>
8
```

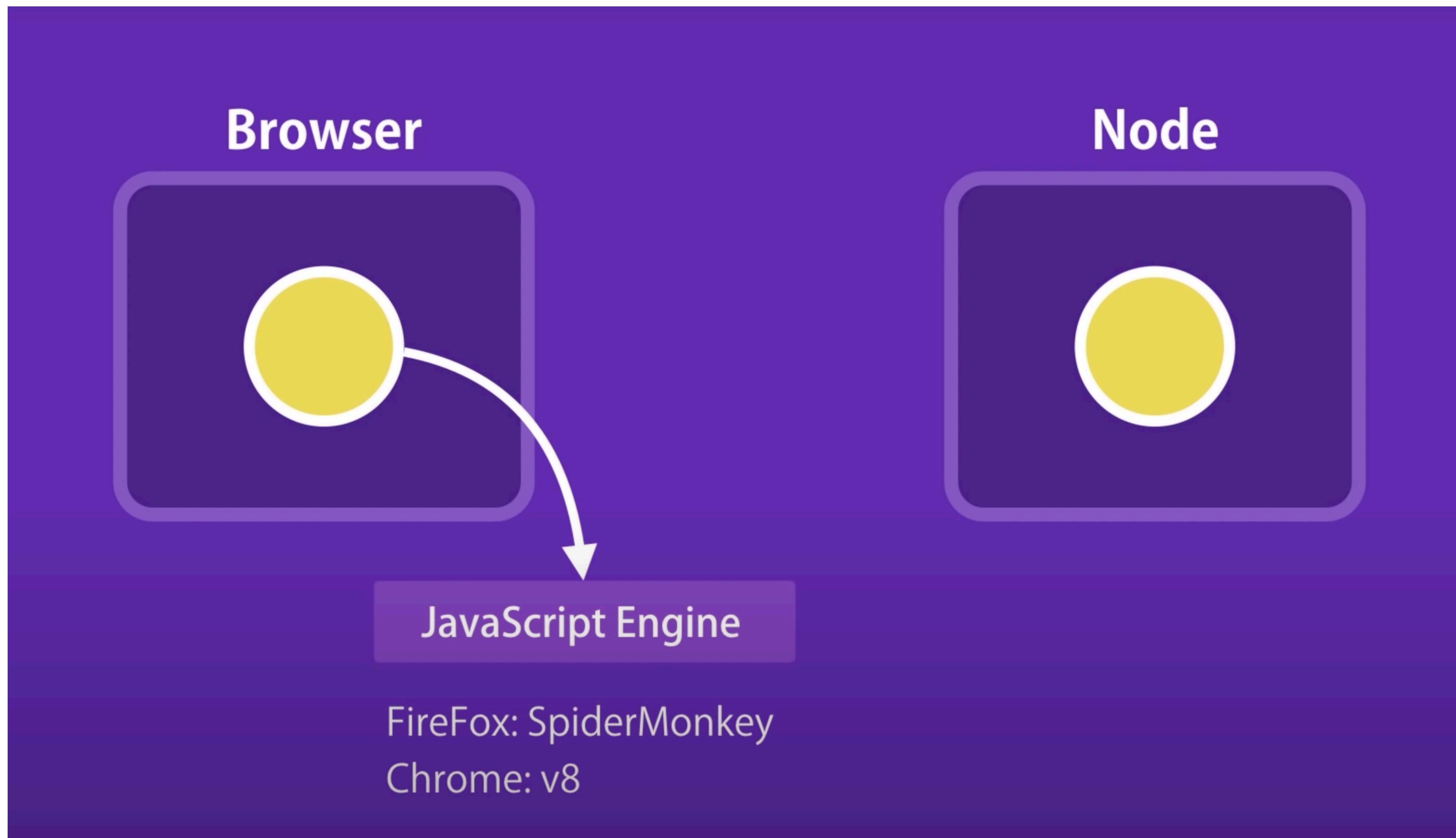
# HTML with JavaScript

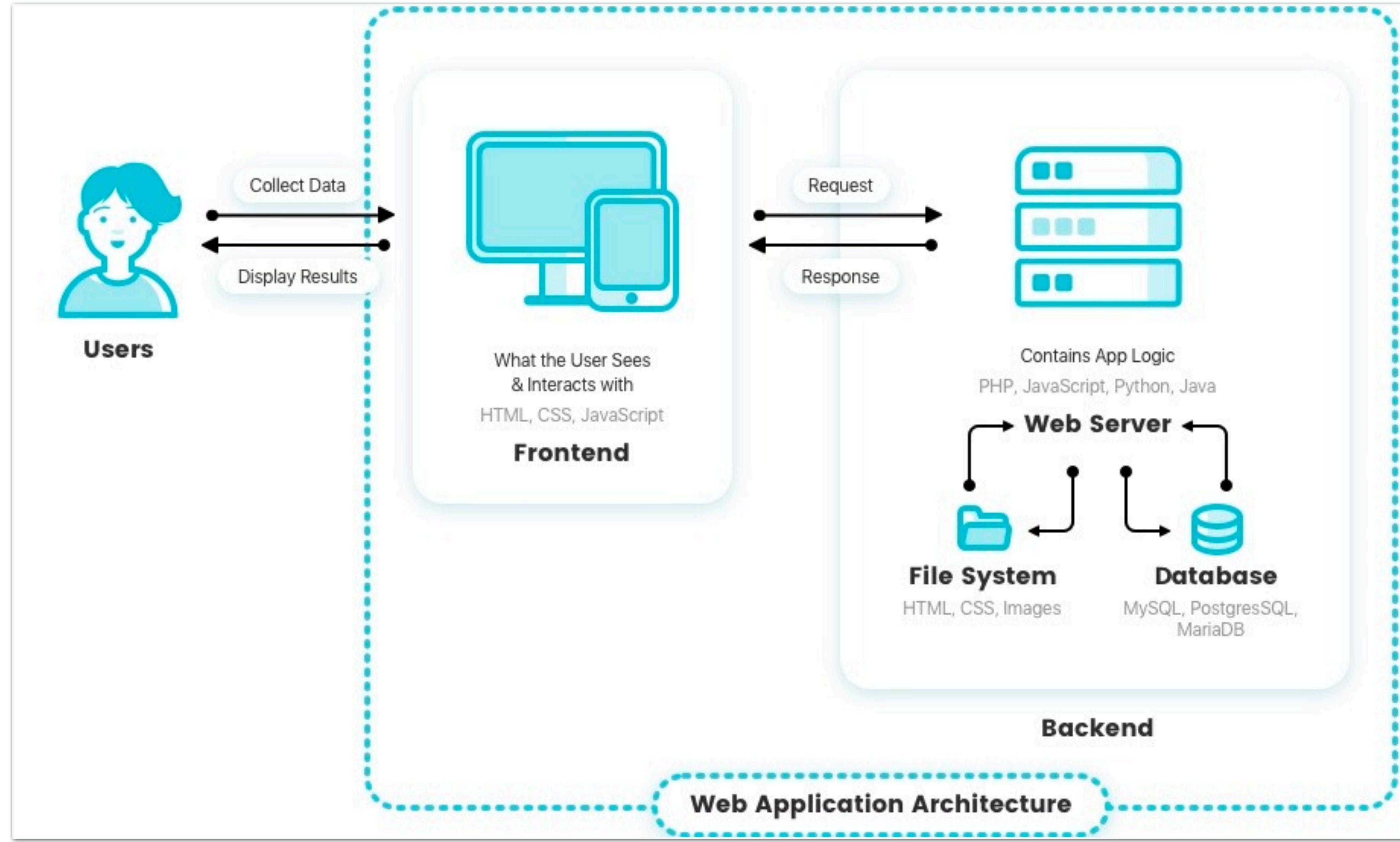
Lecture-01 Introduction > jsHello.html > ...

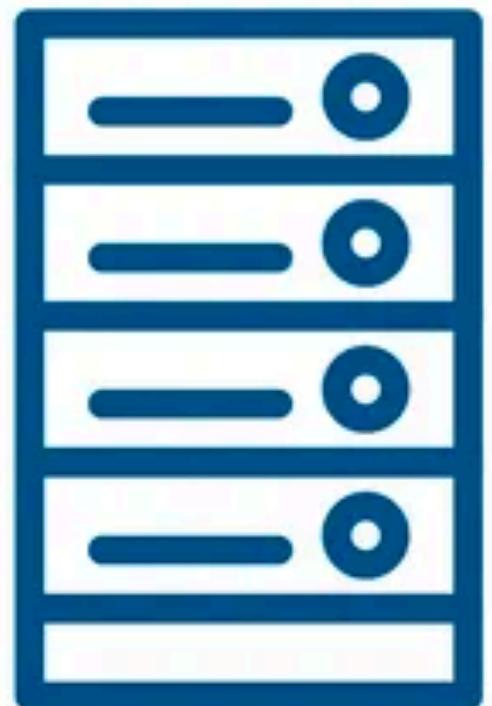
```
1  <!DOCTYPE html>
2  <html>
3  |  <body>
4  |  |  <h1 id="demo"></h1>
5  |  |  <script>
6  |  |  |  function myFunction() {
7  |  |  |  |  document.getElementById("demo").innerHTML = "Hello World!";
8  |  |  |  }
9  |  |  |  myFunction();
10 |  |  </script>
11 |  </body>
12 </html>
13
```



**ECMA : European Computer Manufacturer's Association**





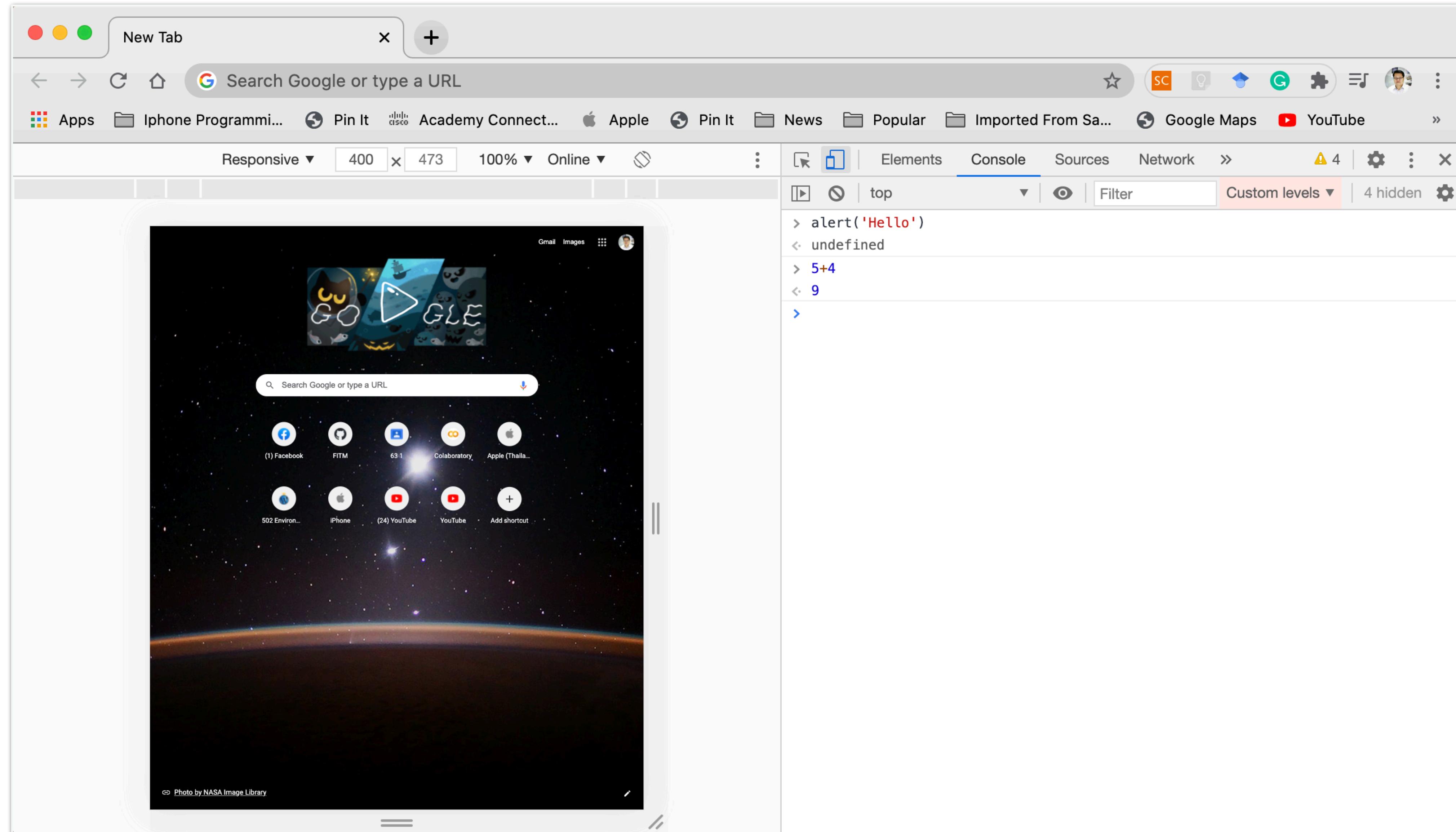


## Front End

- Markup and web languages such as HTML, CSS and Javascript
- Asynchronous requests and Ajax
- Specialized web editing software
- Image editing
- Accessibility
- Cross-browser issues
- Search engine optimisation

## Back End

- Programming and scripting such as Python, Ruby and/or Perl
- Server architecture
- Database administration
- Scalability
- Security
- Data transformation
- Backup



The screenshot shows a browser window displaying a simple HTML page titled "What Can JavaScript Do?". The page contains a paragraph stating "JavaScript can change HTML content." and a button labeled "Click Me!". Below the browser window is the developer tools interface.

**Elements Tab:**

```
<!DOCTYPE html>
...<html> == $0
<head></head>
<body data-new-gr-c-s-check-loaded="14.982.0">
  <h2>What Can JavaScript Do?</h2>
  <p id="demo">JavaScript can change HTML content.</p>
  <button type="button" onclick="document.getElementById("demo").innerHTML = "Hello JavaScript!">
    Click Me!
  </button>
  <!-- Code injected by live-server -->
  ><script type="text/javascript">...</script>
</body>
</html>
```

**Styles Panel:**

The Styles panel displays the following CSS rules:

```
element.style {
}
html {
  display: block;
}
```

A visual representation of the element's bounding box is shown, divided into margin, border, and padding layers. The total dimensions are 980 x 130.812.

The screenshot shows a browser window displaying a simple HTML page titled "What Can JavaScript Do?". The page contains the text "Hello JavaScript!" and a button labeled "Click Me!". Below the browser window is the developer tools interface.

**Elements Tab:**

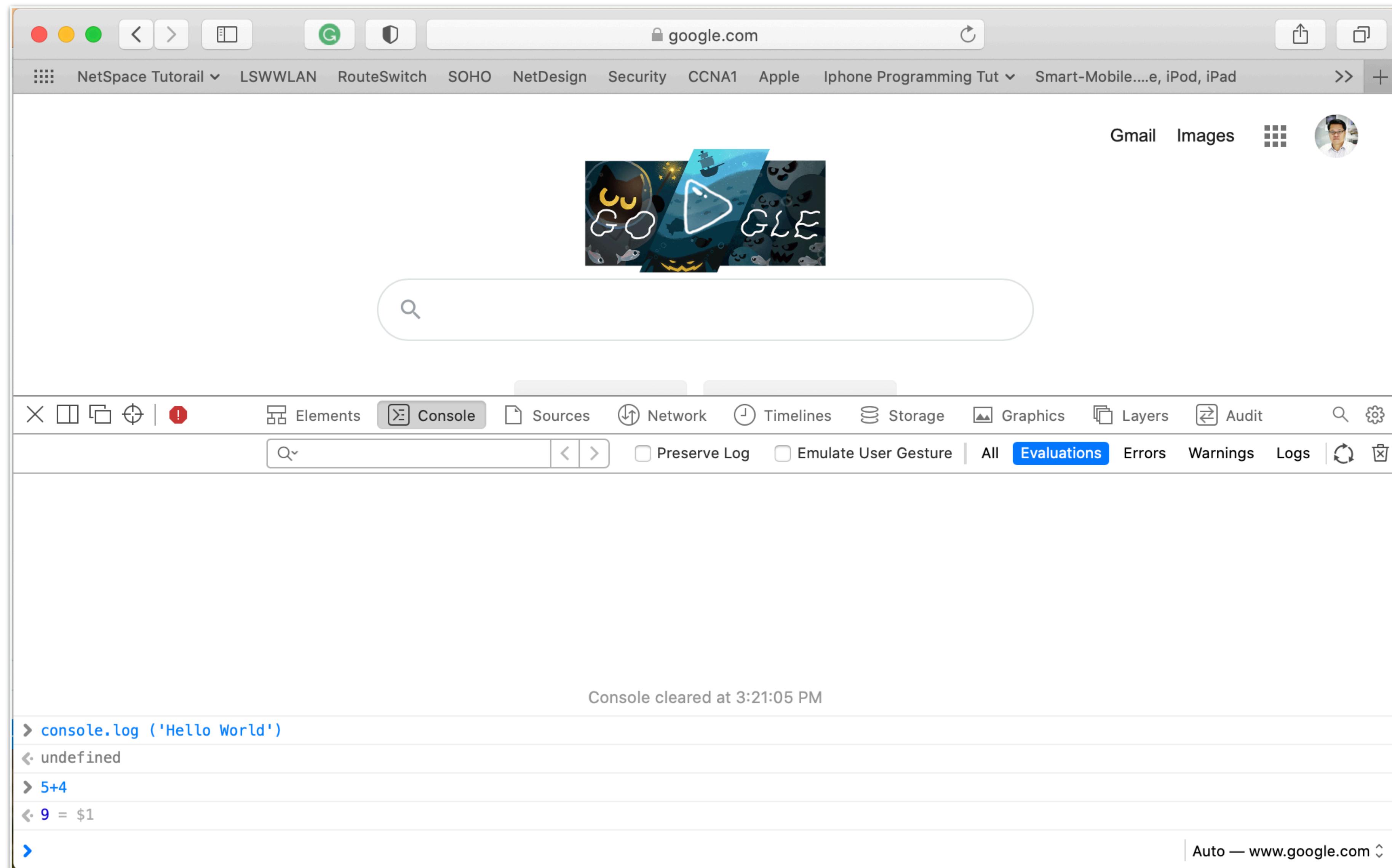
```
<!DOCTYPE html>
...<html> == $0
<head></head>
<body data-new-gr-c-s-check-loaded="14.982.0">
  <h2>What Can JavaScript Do?</h2>
  <p id="demo">Hello JavaScript!</p>
  <button type="button" onclick="document.getElementById("demo").innerHTML = "Hello JavaScript!">
    Click Me!
  </button>
  <!-- Code injected by live-server -->
  ><script type="text/javascript">...</script>
</body>
</html>
```

**Styles Panel:**

The Styles panel displays the CSS rules applied to the page:

```
element.style {
}
html {
  user agent stylesheet
  display: block;
}
```

A visual representation of the element's bounding box is shown at the bottom right, with dimensions of 980 x 130.812.



---

# SETUP AND HELLO WORLD

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Node.js® is a JavaScript runtime built on [Chrome's V8 JavaScript engine](#).

#BlackLivesMatter

## Download for macOS (x64)

**14.15.0 LTS**

Recommended For Most Users

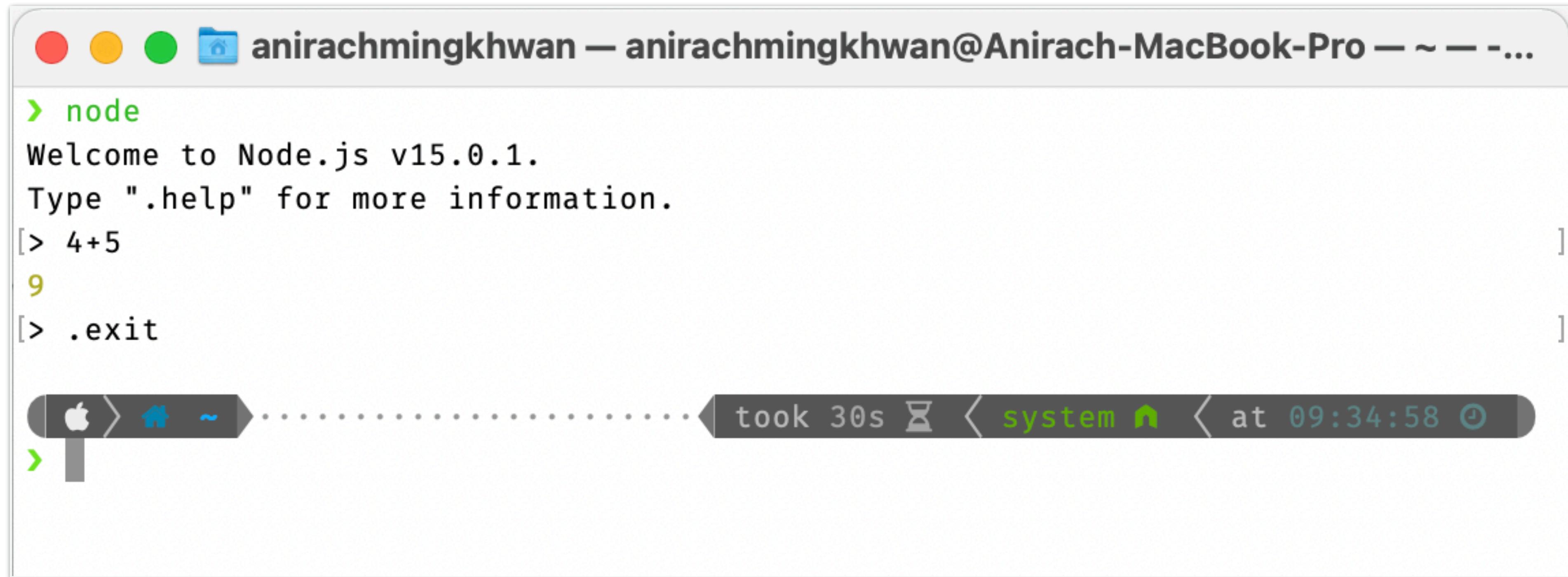
**15.0.1 Current**

Latest Features

[Other Downloads](#) | [Changelog](#) | [API Docs](#)    [Other Downloads](#) | [Changelog](#) | [API Docs](#)

Or have a look at the [Long Term Support \(LTS\) schedule](#).

**<https://nodejs.org/en/>**



The screenshot shows a macOS terminal window with a light gray background. At the top, there are three colored icons (red, yellow, green) followed by the text "anirachmingkhwan — anirachmingkhwan@Anirach-MacBook-Pro — ~ — -...". Below this, the command "node" is run, followed by its welcome message: "Welcome to Node.js v15.0.1. Type ".help" for more information.". A calculation "[> 4+5" is performed, resulting in "9". Finally, ".exit" is typed to exit the Node.js REPL. The bottom status bar of the terminal shows the path ".../Applications/Node.js.app/Contents/Resources/app.asar/unpack...", the duration "took 30s", the system name "system", the date and time "at 09:34:58", and a battery icon.

## Nvm for Mac

```
curl -o- https://raw.githubusercontent.com/nvm-sh/nvm/v0.36.0/install.sh | zsh
```

# GIT INSTALL

The screenshot shows the official Git website at <https://git-scm.com/>. The main navigation bar includes links for About, Documentation, Downloads, and Community. A sidebar on the left promotes the "Pro Git book". The central content area features a large "Downloads" section with links for Mac OS X, Windows, and Linux/Unix. To the right, a prominent iMac monitor displays a teal-colored window for the "Latest source Release 2.29.2" with a "Download 2.27.0 for Mac" button. Below the monitor, sections for "GUI Clients" and "Logos" are visible.

**git** --fast-version-control

**About**

**Documentation**

**Downloads**

GUI Clients  
Logos

**Community**

The entire [Pro Git book](#) written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

## Downloads

[Mac OS X](#)   [Windows](#)  
 [Linux/Unix](#)

Older releases are available and the [Git source repository](#) is on GitHub.

### GUI Clients

Git comes with built-in GUI tools (`git-gui`, `gitk`), but there are several third-party tools for users looking for a platform-specific experience.

[View GUI Clients →](#)

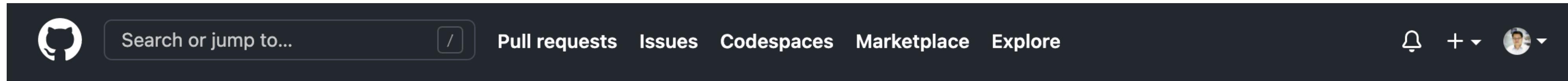
### Logos

Various Git logos in PNG (bitmap) and EPS (vector) formats are available for use in online and print projects.

[View Logos →](#)

<https://git-scm.com/downloads>

The screenshot shows the GitHub sign-up interface. At the top, there's a navigation bar with links for "Why GitHub?", "Team", "Enterprise", "Explore", "Marketplace", and "Pricing". On the right side of the header are "Search GitHub", a search icon, "Sign in", and "Sign up". The main content area features a large, bold heading "Built for developers" followed by a descriptive paragraph: "GitHub is a development platform inspired by the way you work. From open source to business, you can host and review code, manage projects, and build software alongside 50 million developers." To the right of this text is a sign-up form with fields for "Username", "Email", and "Password". Below these fields is a note: "Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more.](#)". A large green button labeled "Sign up for GitHub" is centered below the password field. At the bottom of the sign-up form, there's a small note: "By clicking 'Sign up for GitHub', you agree to our [Terms of Service](#) and [Privacy Statement](#). We'll occasionally send you account related emails." In the bottom right corner of the slide, there's a decorative illustration of three GitHub cat avatars wearing hard hats and safety vests, standing next to a large satellite dish antenna.



## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Owner \*



Repository name \*

JavaXcript



Great repository names are short and memorable. Need inspiration? How about [supreme-happiness](#)?

Description (optional)

To collect all the code of JavaScript Class



Public

Anyone on the internet can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

Add a README file

This is where you can write a long description for your project. [Learn more](#).

The screenshot shows a GitHub repository page for the user 'Anirach' named 'JavaXcript'. The repository has 1 branch and 0 tags. The 'Code' tab is selected. A commit from 'Anirach' titled 'Initial commit' is shown, with the commit hash '5edfc35' and status 'now'. The file 'README.md' is listed under 'Initial commit'. A modal window is open over the repository page, showing the content of the 'README.md' file. The modal title is 'JavaXcript' and the content reads: 'To collect all the code of JavaScript Class'.

Anirach / JavaXcript

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main ▾ 1 branch 0 tags Go to file Add file ▾ Code ▾

Anirach Initial commit 5edfc35 now 1 commit

README.md Initial commit now

README.md

# JavaXcript

To collect all the code of JavaScript Class

About To collect all the code of JavaScript Class

Readme

Releases No releases published Create a new release

Packages No packages published Publish your first package

# GITFLOW



 Visual Studio Code Docs Updates Blog API Extensions FAQ Learn

Version 1.50 is now available! Read about the new features and fixes from September.

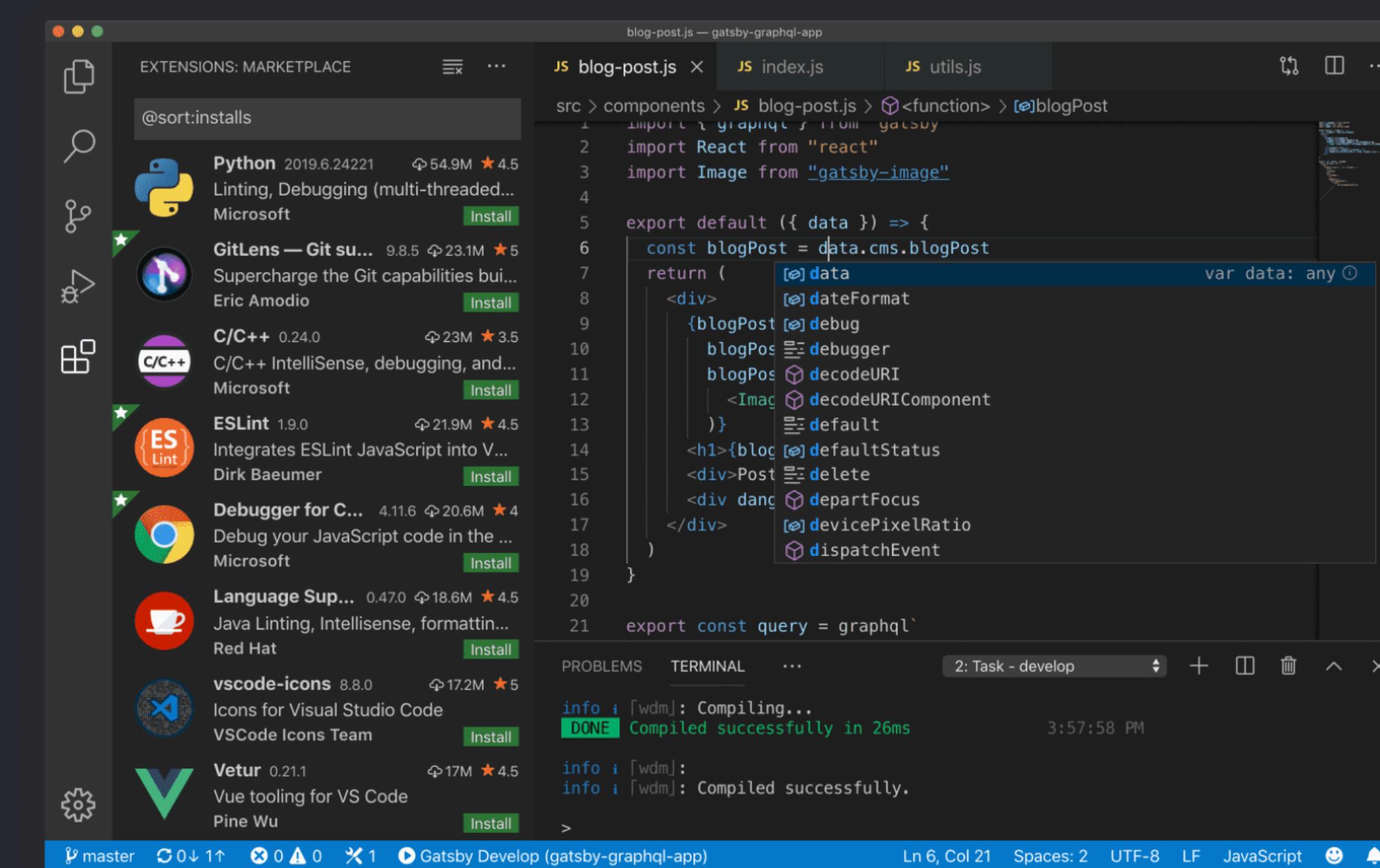
# Code editing. Redefined.

Free. Built on open source. Runs everywhere.

[Download for Mac](#) Stable Build

Other platforms and Insiders Edition

By using VS Code, you agree to its license and privacy statement.



The screenshot shows the Visual Studio Code interface. On the left, there's a sidebar with icons for file operations like copy, search, and share. The main area has tabs for 'blog-post.js', 'index.js', and 'utils.js'. The code editor displays a snippet of JavaScript related to a blog post. Below the editor is a 'PROBLEMS' panel showing compilation logs. At the bottom, there's a status bar with information like 'master', 'Gatsby Develop (gatsby-graphql-app)', and various status icons.

**IntelliSense**

**Run and Debug**

**Built-in Git**

**Extensions**

Extension: GitHub Pull Requests and Issues — JavaScript

E. ⌂ ⌂ ⌂ ⌂ ⌂

github

**GitHub Pull Re...** 0.22.0  
Pull Request and Issue...  
GitHub

**GitHub Theme** 1.1.5  
GitHub theme for VS C...  
GitHub

**GitHub** 0.30.4  
Integrates github and i...  
KnisterPeter

**Markdown Prev...** 0.1.6  
Changes VS Code's bu...  
Matt Bierner

**GitHub Plus Th...** 1.2.1  
A GitHub inspired colo...  
thenikso

**Github Theme** 1.0.1  
GitHub Theme for Visu...  
Thomas Pink

**Github Light T...** 7.14.2  
Try this theme if others...

**Extension: GitHub Pull Requests and Issues**

GitHub Pull Requests and Issues

GitHub | 1,260,204 | ★★★★☆☆ | Repository | License | v0.22.0

Pull Request and Issue Provider for GitHub

[Disable](#) | [Uninstall](#) | This extension is enabled globally.

This extension is recommended because of the current workspace configuration

[Details](#) [Feature Contributions](#) [Changelog](#)

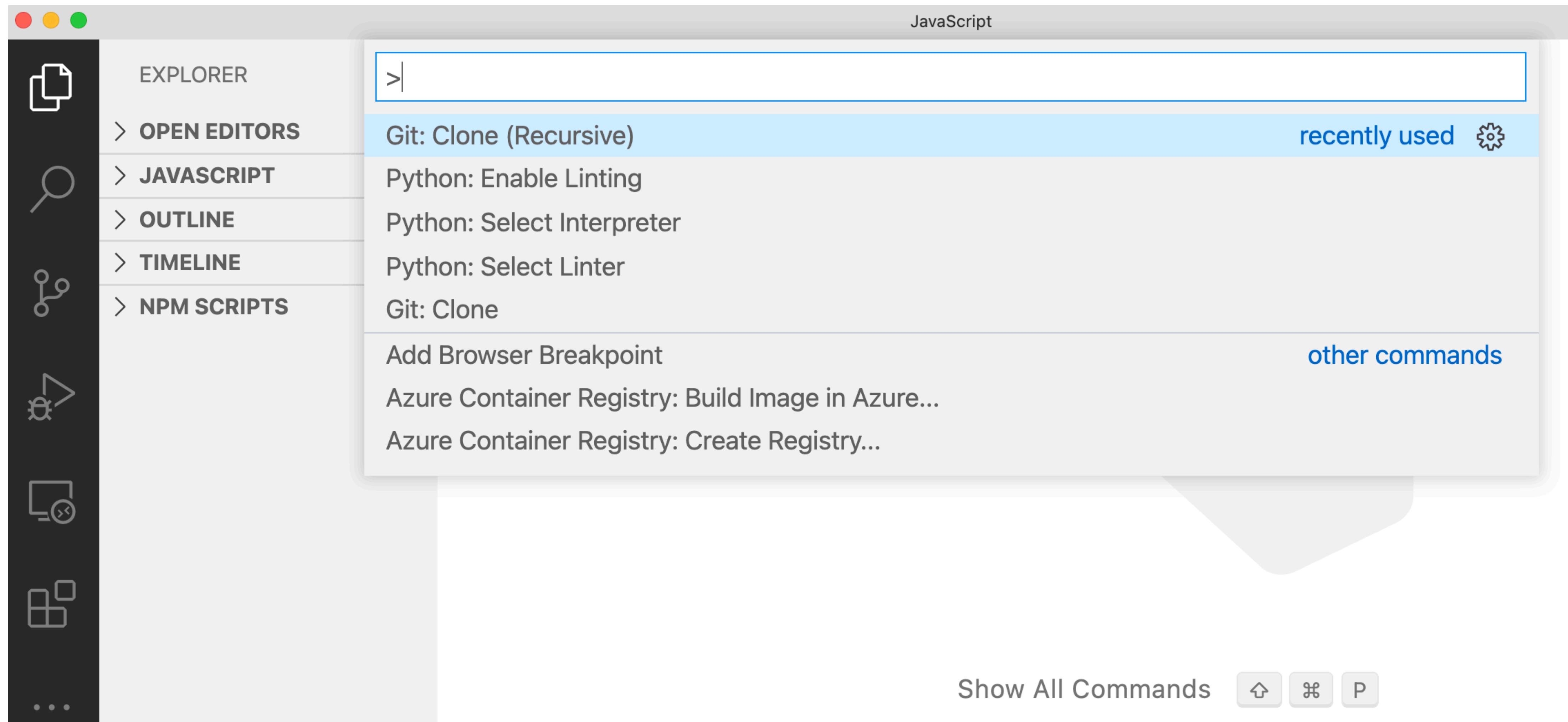
Azure Pipelines succeeded

Review and manage your GitHub pull requests and issues directly in VS Code

This extension allows you to review and manage GitHub pull requests and issues in Visual Studio Code. The support includes:

- Authenticating and connecting VS Code to GitHub.
- Listing and browsing PRs from within VS Code.
- Reviewing PRs from within VS Code with in-editor commenting.
- Validating PRs from within VS Code with easy checkouts.
- Terminal integration that enables UI and CLIs to co-exist.

^



The screenshot shows a GitHub repository page for the user 'Anirach' named 'JavaXcript'. The repository has 1 branch and 0 tags. The 'Code' tab is selected. A context menu is open over the repository name, showing options like 'Clone', 'Open with Codespaces', 'Open with GitHub Desktop', and 'Download ZIP'. The 'Clone' section displays the HTTPS URL: <https://github.com/Anirach/JavaXcri>. The repository description is 'To collect all the code of JavaScript Class'. The page also includes sections for 'About', 'Readme', 'Releases', and 'Packages'.

Anirach / JavaXcript

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags

Anirach Initial commit

README.md Initial commit

**JavaXcript**

To collect all the code of JavaScript Class

Clone  
HTTPS SSH GitHub CLI  
<https://github.com/Anirach/JavaXcri>

Use Git or checkout with SVN using the web URL.

Open with Codespaces

Open with GitHub Desktop

Download ZIP

About

To collect all the code of JavaScript Class

Readme

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

The screenshot shows the Visual Studio Code (VS Code) interface. The left sidebar (Explorer) lists files and folders. The main area (Editor) displays a JavaScript file named 'test.js'.

**EXPLORER**

- > OPEN EDITORS
- < JAV... ...
- < Lecture-01-Intr... 1
  - <> Hello.html
  - <> index.html
  - JS** index.js
  - <> jscan.html
  - <> jsHello.html
  - pic\_bulboff.gif
  - pic\_bulbon.gif
  - JS** test.js M
  - <> tryjs\_lightbulb.html
  - <> xx.html
- > Lecture-02-DataTypes

**test.js — JavaScript**

**JS** test.js X

Lecture-01-Introduction > **JS** test.js

```
1 | console.log("Hello World")
2 | 
```

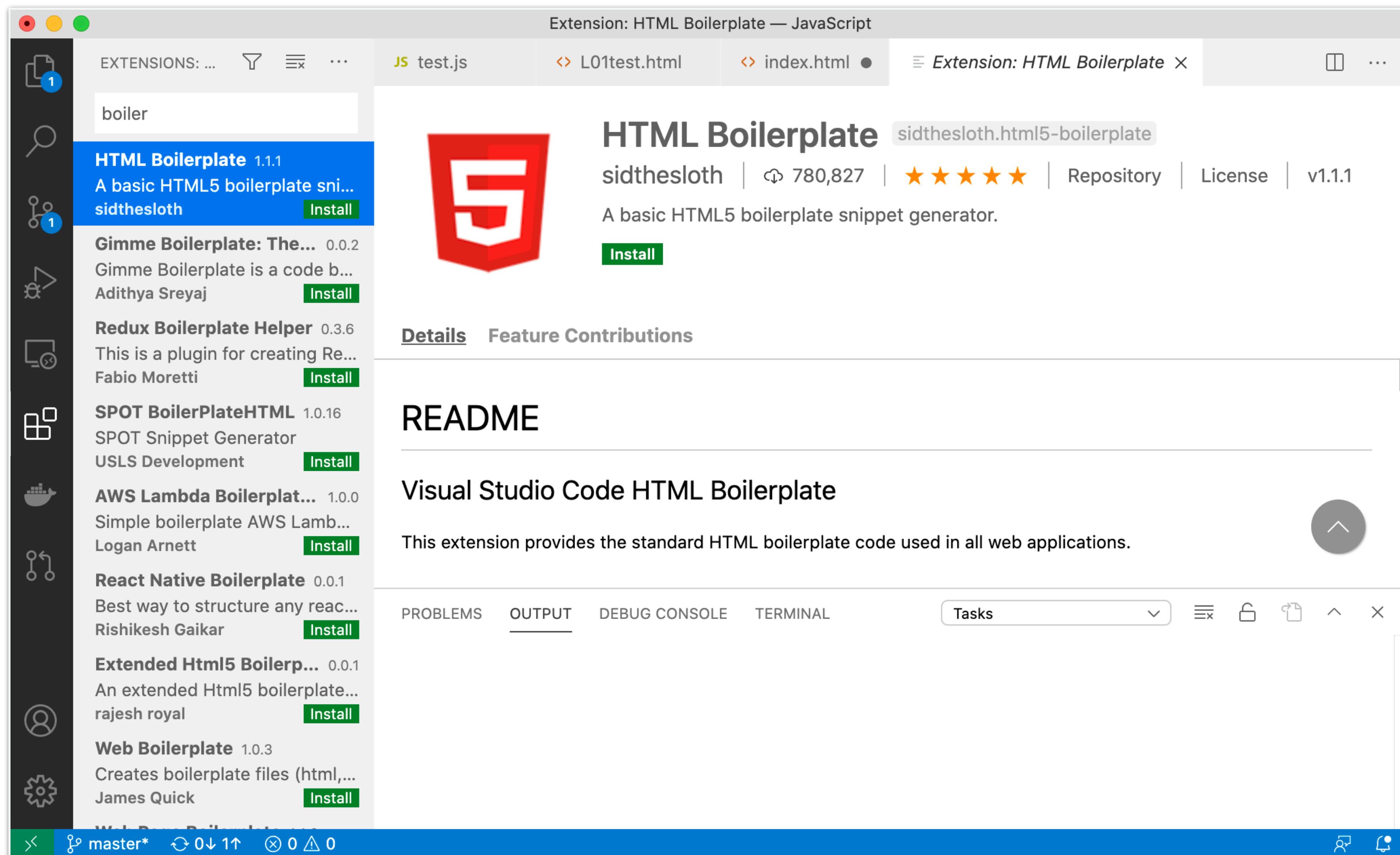
The screenshot shows the Visual Studio Code (VS Code) interface. The left sidebar has a dark theme with icons for Explorer, Search, Problems, Outline, and Timeline. The main area shows an 'EXPLORER' view with 'OPEN EDITORS' and a 'JAVASCRIPT' folder containing 'Lecture-01 Intro...', 'index.html', and 'test.js'. The 'test.js' file is open in the editor, displaying the following code:

```
1 console.log('Hello World')
```

The terminal at the bottom shows the output of running the script:

```
(base) anirachmingkhwan@Anirach-MacBook-Pro Lecture-01 Introduction % node --version  
v15.0.1  
(base) anirachmingkhwan@Anirach-MacBook-Pro Lecture-01 Introduction % node test.js  
Hello World  
(base) anirachmingkhwan@Anirach-MacBook-Pro Lecture-01 Introduction %
```

The status bar at the bottom indicates the file is 'master\*' with 0 changes, and the editor is set to 'JavaScript' with a port of 5500.



The screenshot shows the Visual Studio Code (VS Code) interface. The title bar reads "index.html — JavaScript". The left sidebar has a dark theme with various icons for file operations like Source Control, Search, and Issues. The main editor area displays the following HTML code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Document</title>
7 </head>
8 <body>
9
10 </body>
11 </html>
12
```

The status bar at the bottom shows "master" in the bottom-left corner and "Ln 12, Col 1" along with other file details in the bottom-right corner.

The screenshot shows the Visual Studio Code interface with the extension marketplace open. The left sidebar lists various extensions, and the main area displays the details for the 'Prettier - Code formatter' extension.

**Prettier - Code formatter** by esbenp.prettier-vscode

**Prettier** | 9,075,321 | ★★★★☆ | Repository | License | v5.7.1

Code formatter using prettier

**Details** Feature Contributions Changelog

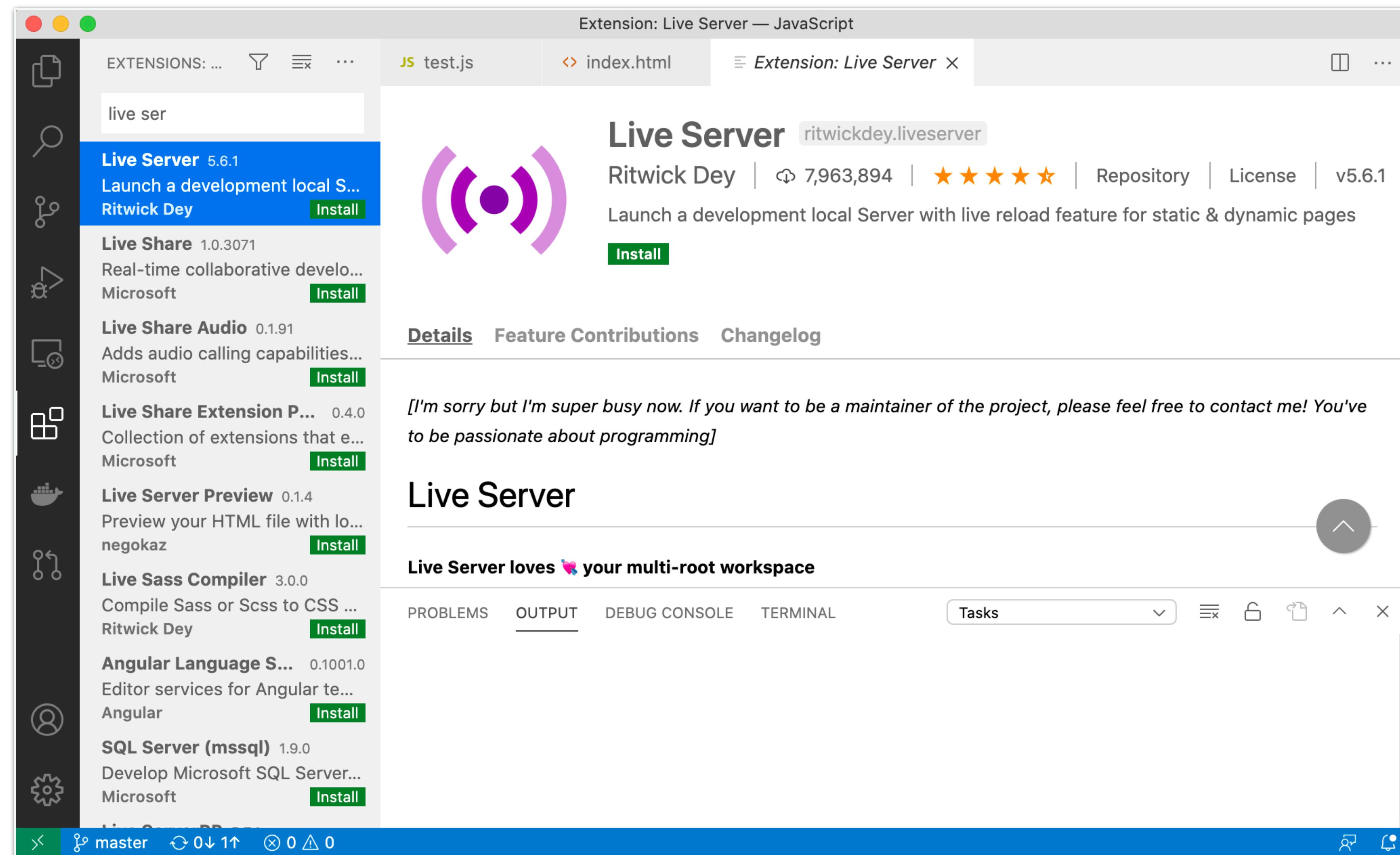
## Prettier Formatter for Visual Studio Code

Prettier is an opinionated code formatter. It enforces a consistent style by parsing your code and re-printing it with its own rules that take the maximum line length into account, wrapping code when necessary.

JavaScript · TypeScript · Flow · JSX · JSON  
CSS · SCSS · Less  
HTML · Vue · Angular  
GraphQL · Markdown · YAML  
Your favorite language?

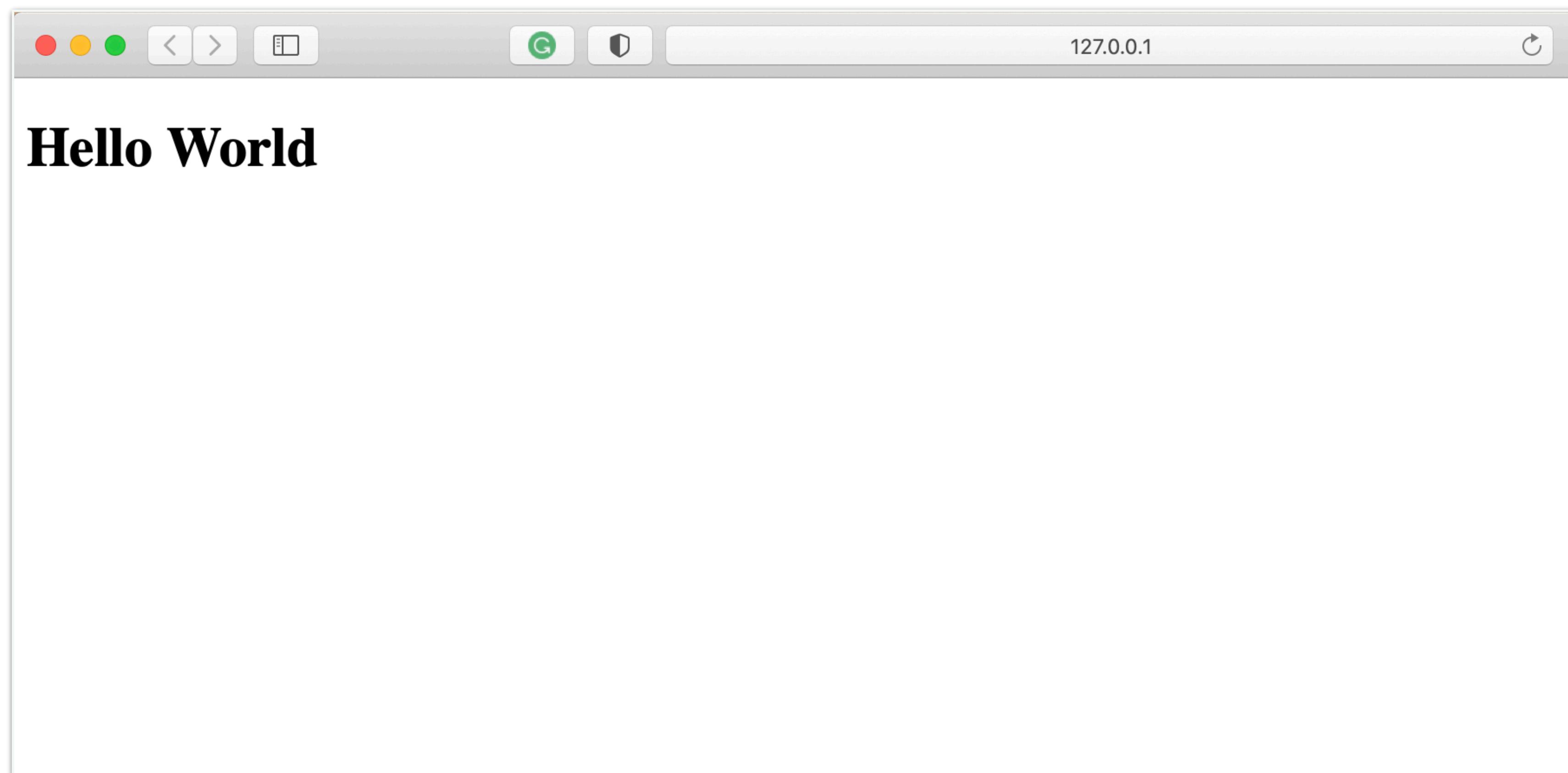
Main passing downloads 70M installs 9.1M code style prettier follow prettier 16k

### Installation



Lecture-01 Introduction >  index.html > ...

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  |   <meta charset="UTF-8">
5  |   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6  |   <title>Document</title>
7  </head>
8  <body>
9  |   <h1> Hello World</h1>
10 </body>
11 </html>
12 
```



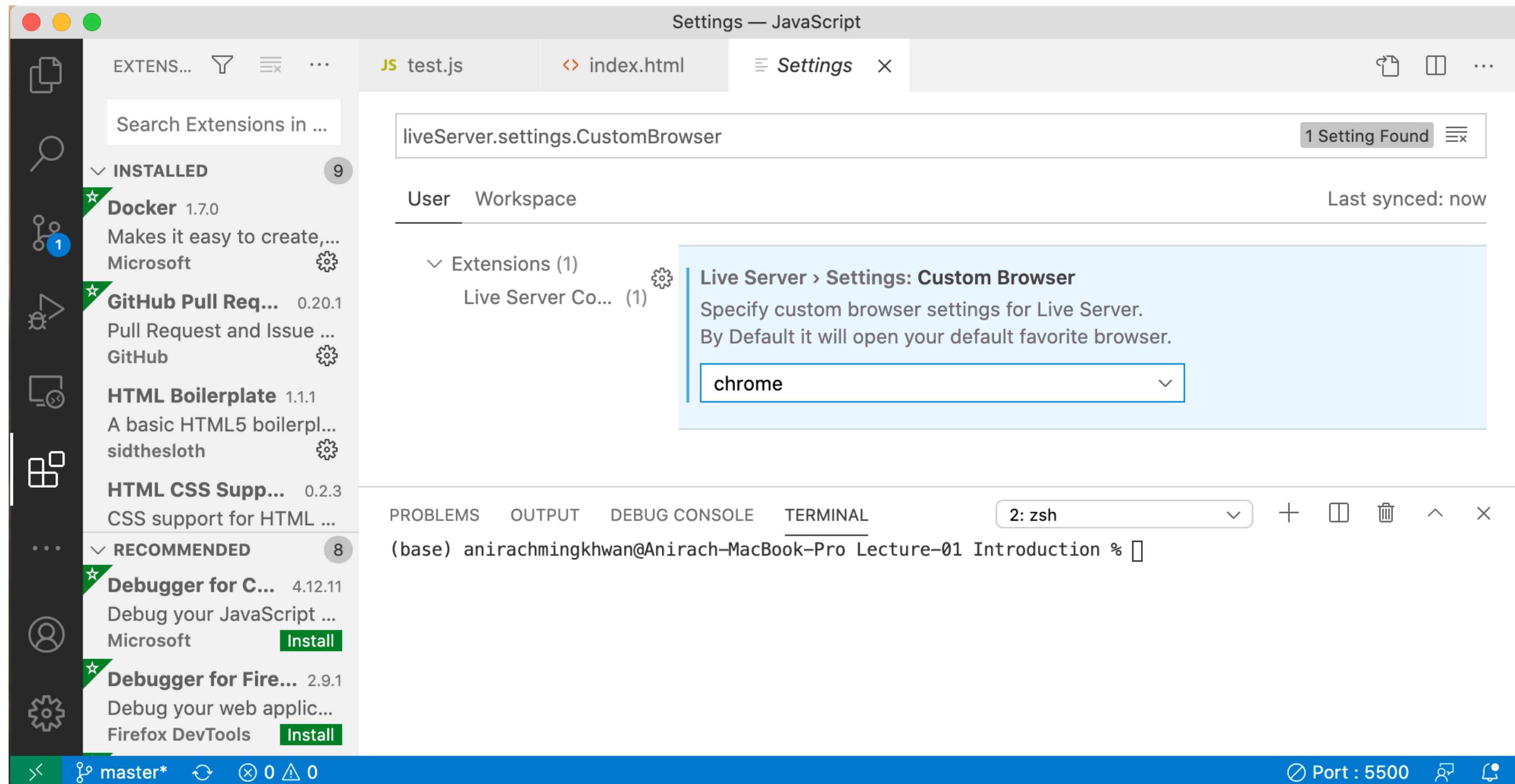
The screenshot shows a code editor interface with the following details:

- Explorer:** Shows a tree view of files under "Lecture-01 Introduction". The "index.html" file is selected.
- JavaScript Editor:** The "index.html" tab is active, displaying the following HTML code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Document</title>
7   </head>
8   <body>
9     <h1> Hello World Anirach Yippee</h1>
10  </body>
11 </html>
```
- Terminal:** The terminal window shows the command "anirachmingkhwan@Anirach-MacBook-Pro Lecture-01 Introduction %".
- Status Bar:** Shows "Ln 12, Col 1" and "Port : 5500".

A browser window is also visible in the background, showing the rendered HTML content: "Hello World Anirach Yippee".

**Code Save and See the changing....**



---

# JAVASCRIPT IN BROWSERS

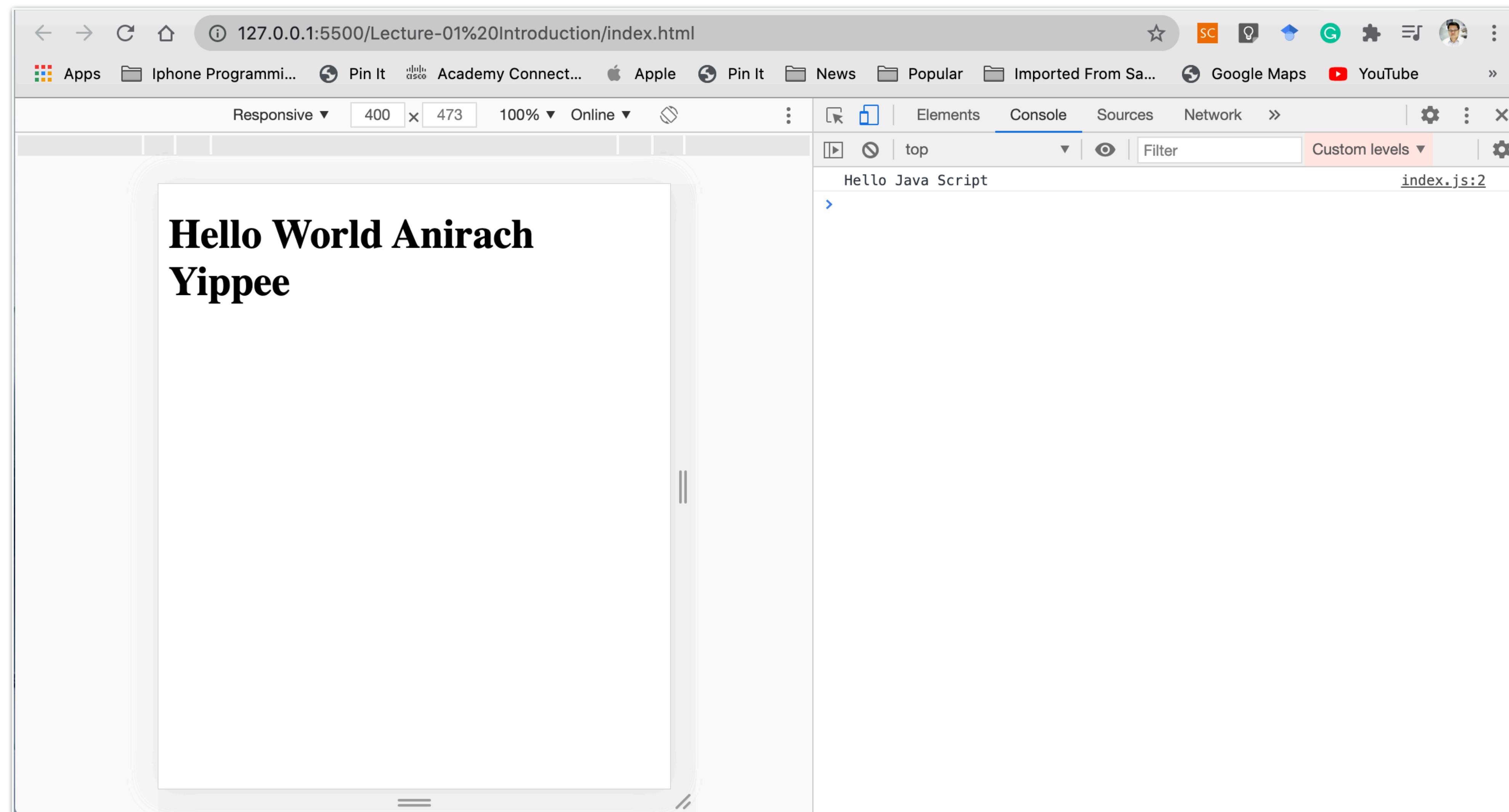
---

The screenshot shows the Visual Studio Code (VS Code) interface. The title bar reads "index.html — JavaScript". The left sidebar has icons for Explorer, Open Editors, Search, Issues (with 1), and Outline/Timeline. The "OPEN EDITORS" section shows "test.js" and "index.html" under "Lecture-01 Intro...". The main editor area displays the following code:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Document</title>
7  </head>
8  <body>
9      <h1> Hello World Anirach Yippee</h1>
10     <script>
11         //My First JavaScript
12         console.log('Hello Java Script');
13     </script>
14  </body>
15  </html>
16
```

The terminal at the bottom shows the command prompt: "(base) anirachmingkhwan@Anirach-MacBook-Pro Lecture-01 Introduction %". The status bar at the bottom indicates the file is "master\*" with 0 changes, and the code is at "Ln 12, Col 42" with "Spaces: 4" and "UTF-8" encoding.

## Embedded JavaScript



---

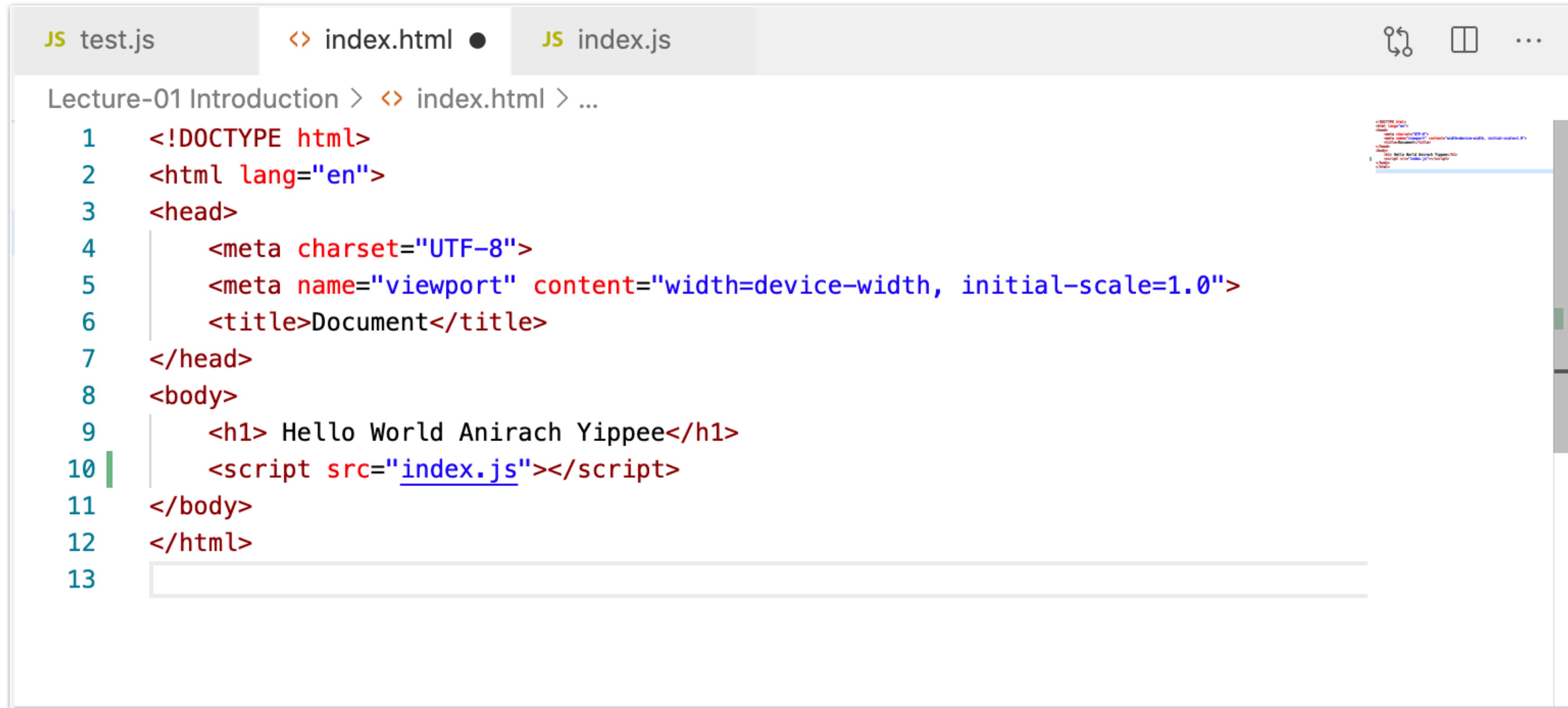
# SEPARATION OF CONCERNS

---

The screenshot shows the Visual Studio Code (VS Code) interface. The title bar indicates the file is "index.js — JavaScript". The left sidebar has icons for Explorer, Search, Files, and others, with "OPEN EDITORS" and "JAVASCRIPT" sections. The "JAVASCRIPT" section shows a folder "Lecture-01 Intro..." containing "index.html" and "index.js" (which is currently selected). The main editor area displays the following code:

```
//My First JavaScript
console.log('Hello Java Script');
```

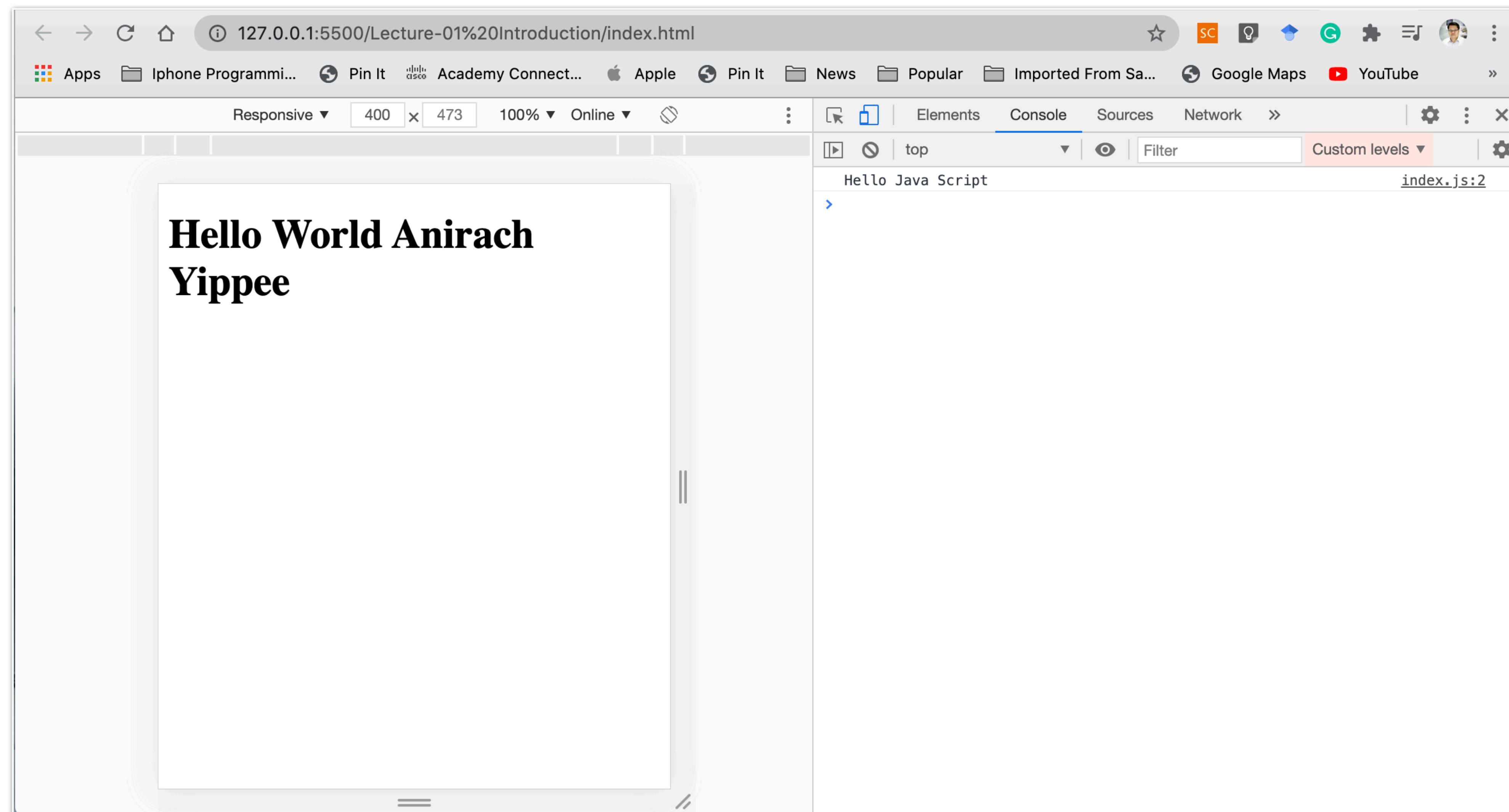
The bottom right corner of the editor area has a small tooltip "My First JavaScript". Below the editor are tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, and TERMINAL. The TERMINAL tab is active, showing the command line prompt "(base) anirachmingkhwan@Anirach-MacBook-Pro Lecture-01 Introduction %". The status bar at the bottom shows the file path "Ln 2, Col 34", encoding "Spaces: 4", character set "UTF-8", line separator "LF", language "JavaScript", port "Port : 5500", and icons for file operations.



The screenshot shows a code editor interface with three tabs at the top: 'JS test.js' (disabled), 'index.html' (selected, indicated by a blue dot), and 'JS index.js'. Below the tabs, the file structure is shown as 'Lecture-01 Introduction > index.html > ...'. The code editor displays the following HTML content:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Document</title>
7  </head>
8  <body>
9      <h1> Hello World Anirach Yippee</h1>
10     <script src="index.js"></script>
11  </body>
12  </html>
13 
```

## External JavaScript .js file



The screenshot shows a development environment with the following components:

- Explorer View:** Shows a tree structure under "JAVASCRIPT" for the project "Lecture-01 Intro...". It includes files: "index.html" (marked with a "M" icon), "index.js" (marked with a "U" icon), and "test.js".
- Editor View:** The active editor is "index.html — JavaScript". The code is as follows:

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Document</title>
7  </head>
8  <body>
9      <h1> Hello World Anirach</h1>
10     <script src="index.js"></script>
11 </body>
12 </html>
13 
```

- Browser Preview:** A separate window shows the rendered HTML output: "Hello World Anirach".
- Developer Tools:** The bottom right corner shows the browser's developer tools with the "Console" tab selected. The output in the console is:

```
Hello Java Script
index.js:2
```

---

# JAVASCRIPT CAN DO !

---

Lecture-01 Introduction > [tryjs\\_lightbulb.html](#) > ...

```
1  <!DOCTYPE html>
2  <html>
3  |  <body>
4  |  |  <h2>What Can JavaScript Do?</h2>
5  |
6  |  <p>JavaScript can change HTML attribute values.</p>
7  |
8  |  <p>
9  |  |  In this case JavaScript changes the value of the src (source) attribute of
10 |  |  an image.
11 |  </p>
12 |
13 <button onclick="document.getElementById('myImage').src='pic_bulbon.gif'>
14 |  Turn on the light
15 </button>
16 |
17 
18 |
19 <button onclick="document.getElementById('myImage').src='pic_bulboff.gif'>
20 |  Turn off the light
21 </button>
22 </body>
23 </html>
24 
```

The screenshot shows a web browser window with the URL `127.0.0.1:5500/Lecture-01 Intro`. The main content area displays the heading **What Can JavaScript Do?** followed by the text: "JavaScript can change HTML attribute values. In this case JavaScript changes the value of the src (source) attribute of an image." Below the text is a large, semi-transparent image of a lit lightbulb. At the bottom of the slide, there are two rectangular buttons: "Turn on the light" on the left and "Turn off the light" on the right.

---

# THANK YOU

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- Introduction to JavaScript
- Setting up Coding Environment
- JavaScript in Browsers