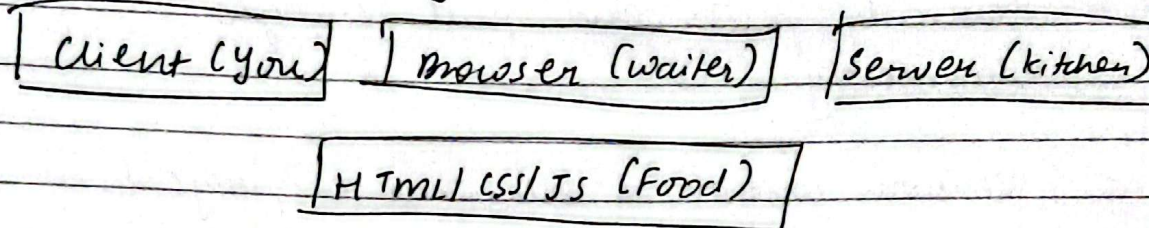


Swo

Video Summary Notes

★ How websites work.

Restaurant analogy



Client requests site via browser, which fetches data from server (Node.js / PHP / Django + database).

Server sends HTML / CSS / JS bundle; browser renders it.

★ Frontend Trio.

HTML (Structure : content and elements)

CSS (Beauty : Colors and layouts)

JS (Brain : Dynamic magic)

[No perfection required. 80% HTML, 50-70% CSS/JS to start projects. Just begin!]

* Git and Github desktop.

- Initialise repositories for source code management.
- Commit, push and pull changes seamlessly.
- Version control of collaborative projects.

* VS code extensions.

- VS code icons: file and folders
- Github theme: dark theme matching Github
- Material theme: beautiful UI customisation.
- Prettier: auto code formatting.
- ES7+ React snippets: React shortcuts.
- Live preview: Real time browser reload.

* Core concepts.

- File structure & linking

index.html.

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <link rel = "stylesheet" href = "style.css">
```

```
  </head>
```

```
<body>  
  <script src = "script.js"> </script>  
</body>  
</html>
```

[Element] accelerates coding:

div: container > p: title $\Rightarrow$ complete the HTML structure instantly.

★ Live preview workflow.

Save file: live preview auto refreshes browser

Real time visual feedback during development.

works with HTML, CSS, JS changes.

★ Practical demo.

$\rightarrow$ Client server interaction flow.

= Scenario: iPhone order on Apple.com.

HTML: Renders order from structure.

CSS: Styles buttons, inputs, product cards.

JS: Handles 'Place Order' click.

AJAX request: Sends data to server

Response: Updates UI without page reload.

⊙ Basic HTML structure explained

- Explanation of the fundamental HTML document outline:

`<!DOCTYPE html>` declaration

`<html>` tag with opening & closing tags

`<head>` section containing metadata such as `<title>`, `<meta>`, `<link>` and `<script>` tags.

`<body>` section which contains the visible content of the webpage.

- Importance of the title tag

Sets the page title displayed in the browser tabs.

Plays a significant role in Search Engine Optimization (SEO).

use of meta tags for describing page content, keywords and SEO metadata (meta description)

• Important insights

HTML structure is foundational.
SEO depends heavily on metadata.
CSS and JS are linked externally.

Headings hierarchy h_1 (largest) $\rightarrow$ h_6 (smallest)
[use semantic hierarchy for SEO and accessibility]

Shortcuts: - Alt + click (multiple cursors)
Alt + shift + ↓ (duplicate line)
lorem50 (dummy text emmet)

• paragraph & inline styling

```
<p style = "background-color : #f1f1e5;">  
lorem ipsum... </p>
```

(Avoid inline CSS for production and use external stylesheets instead)

• Anchor links to open links

(target = "blank" opens links in new tabs).

• HTML images

```
<img src = "cute-cat.png" alt = "kitten"  
width = "100" height = "200">
```

src: image path
alt: accessibility text
width/height: perfect sizing

HTML tables.

<caption> (Heading)		
<thead>		
Name <td>	Occupation	Age
<tr>	John<td>	22
	Sam (colspan = 2)	

Lists.

ul (unordered list)

ol (ordered list)

dl (definition list) <dl>

<dt> </dt>
</dl>

* What is SEO?

Search Engine Optimization ensures websites load quickly and provide excellent user experience.

Google prioritizes fast loading pages with good content when ranking search results.

* Core web vitals metrics

- Cumulative layout shift (CLS) measures unexpected layout shifts during page loading. Elements shifting positions create poor user experience.

Solution (always specify width and height attributes for images)

- Largest contentful paint (LCP) Time taken for the largest page element to load. Target: Under 2.5 seconds for good performance. Critical for user - perceived loading speed.

- First input delay (FID). Time browser takes to process first user interaction (button clicks). Target: under 100 ms for responsive feel.

① Lighthouse tool.

- Built in Chrome DevTools (right click → Inspect → Lighthouse tab)
- Generates performance report for mobile / desktop.
- Provides actionable optimization suggestions.
- Evaluates performance, accessibility, SEO, Best practices.

② SEO Best practices.

Title tags: Reflect page content accurately
Meta description: Concise page summary
Avoid meta keywords: Depreciated and ineffective.

Mobile responsiveness testing via DevTools device preview.