DAY 1 — HTML, CSS, JavaScript Basics + Introduction to React

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1. HTML – The Structure of a Webpage

What is HTML?

HTML = **H**yper **T**ext **M**arkup **L**anguage
It is used to **structure** web pages (skeleton of a website).

Why HTML?

It gives meaning and structure:

- Headings
- Paragraphs
- Images
- Buttons
- Forms

Simple HTML Example

```
<h1>Hello World</h1><p>This is my first webpage</p><button>Click me</button>
```

⭐ HTML Basic Tags You Must Know

Headings

```
<h1>Main Heading</h1><h2>Sub Heading</h2>
```

Paragraph

```
<p>This is a paragraph.</p>
```

Image

```
<img src="image.jpg" alt="My Image" />
```

Link

```
<a href="https://google.com">Go to Google</a>
```

List

Unordered (Bullets):

```
<ul>  <li>Apple</li>  <li>Orange</li></ul>
```

Ordered (Numbering):

```
<ol>  <li>Item 1</li>  <li>Item 2</li></ol>
```

Input / Form

```
<input type="text" placeholder="Enter name" /><button>Submit</button>
```

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2. CSS – Styling the Webpage

What is CSS?

CSS = **C**ascading **S**tyle **S**heets
CSS is used to **style** the HTML (color, layout, size, position, etc.)

Basic CSS Example

```
<style>  h1 {    color: blue;    font-size: 40px;  }  button {    background:
green;    color: white;    padding: 10px;  }</style>
```

Important CSS Concepts

Colors

```
color: red;background: black;
```

Fonts

```
font-size: 20px;font-weight: bold;
```

Margin & Padding

Margin = outside space
Padding = inside space

```
div {  margin: 20px;  padding: 10px;}
```

Borders

```
border: 2px solid red;
```

Flexbox (Important for React layouts)

```
display: flex;justify-content: center;align-items: center;
```

CSS Classes

```
<div class="box">Hello</div><style>.box {  background: yellow;  padding: 20px;}
</style>
```

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3. JavaScript Basics (Very Important for React)

What is JavaScript?

JS is a **programming language** used to:

- Add logic
- Handle button clicks

- Change UI
- Validate inputs

JavaScript Basics You Must Know Before React

Variables

```
let name = "Munees";const age = 22;
```

Data Types

- String → `"Hello"`
- Number → `25`
- Boolean → `true/false`
- Array → `[1, 2, 3]`
- Object → `{ name: "Munees", age: 22 }`

Functions

```
function greet() {  console.log("Hello!");}greet();
```

Arrow function:

```
const greet = () => console.log("Hello!");
```

Conditions

```
if (age > 18) {  console.log("Adult");}
```

Loops

```
for (let i = 0; i < 5; i++) {  console.log(i);}
```

Arrays (Super Important for React)

`.map()`

Used for looping in React.

```
["A","B","C"].map(x => console.log(x));
```

`.filter()`

```
[1,2,3].filter(n => n > 1)  // [2,3]
```

Objects

```
const user = { name: "Munees", age: 22 };console.log(user.name);
```

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4. Why React After HTML, CSS, JS?

React is like **HTML + CSS + JS combined** but:
✓ Faster
✓ Easier to manage
✓ Reusable
✓ Modern

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5. Introduction to React

What is React?

React is a JavaScript library to build **fast**, **interactive**, **component-based** UIs.

Why React is Better?

Without React

Browser reloads every time → Slow.

With React

Only the changed part updates → Fast.

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6. Key React Concepts (Preview Only on Day 1)

JSX

HTML inside JS.

```
<h1>Hello React</h1>
```

Components

Reusable UI blocks.

```
function Header() {  return <h1>Welcome</h1>;}
```

useState

To change UI dynamically.

```
const [count, setCount] = useState(0);
```

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7. DAY 1 Mini Projects

✓ Number Guessing Game

Concepts:

- Random numbers
- Input handling
- Conditions

✓ Word Scramble Game

Concepts:

- Arrays
- Shuffle
- Updating UI
