

Dive into development

The Amazing World of HTML

PART 3



EP-10

Web development

Charlies' last day on HTML

Charlie learns that **HTML5** is the latest version of HTML, bringing new features and enhancements



- **HTML5** introduces **new elements**, **APIs**, and **improved multimedia support**.



What is HTML5

- The first working draft of **HTML5** was published in **January 2008**
- **HTML5** was finally issued as a **W3C Recommendation** in **2014**
- It's **not** a **programming language** but a **markup language** used to structure content on the web

HTML5 new features

1. **<Semantic>** Elements:

- It introduced new semantic tags for structuring web content
- They help **search engines** better understand the structure and content of your web page
- most of them are **<header>**, **<nav>**, **<section>**, **<article>**, and **<footer>**



HTML5 new features

1. <Semantic Elements:

- It introduced new semantic tags for structuring web content
- They help **search engines** better understand the structure and content of your web page
- those are **<article>**, **<aside>**, **<details>**, **<figcaption>**, **<figure>**, **<footer>**, **<header>**, **<main>**, **<mark>**, **<nav>**, **<section>**, **<summary>**, **<time>**

```
<header>
  <h1>Welcome to Web development series</h1>
</header>
<nav>
  <ul>
    <li><a href="#">Home</a></li>
    <li><a href="#">About</a></li>
  </ul>
</nav>
<footer>
  <p>© 2023 @mule_tech</p>
</footer>
```

←!—Mulualem Eshetu—→



Cont...

2. `<video>` and `<audio>`:

- allow you to **embed multimedia** content on your web pages
- **supporting** video and audio **playback** with optional controls

```
<video controls>
  <source src="video.mp4" type="video/mp4">
</video>
<audio controls>
  <source src="audio.mp3" type="audio/mpeg">
</audio>
```

←!—Mulualem Eshetu—→

3. **Canvas for Graphics:**

- allows you to **draw 2D graphics dynamically** with JavaScript
- making it suitable for creating interactive games and data visualizations



Cont...

```
<canvas id="myCanvas" width="200" height="100"></canvas>
<script>
  var canvas = document.getElementById('myCanvas');
  var ctx = canvas.getContext('2d');
  ctx.fillStyle = 'red';
  ctx.fillRect(10, 10, 150, 80);
</script>
```

←!—Mulualet Eshetu—→

4. Local Storage:

- allows you to **store key-value pairs on the client-side**
- making it useful for **caching, saving user preferences, or maintaining application state**

```
<script>
  localStorage.setItem('username', 'JohnDoe');
  var storedValue = localStorage.getItem('username');
</script>
```

←!—Mulualet Eshetu—→



Cont...

5. Geolocation:

- geolocation API permits you to access a user's location

```
<script>
  if ("geolocation" in navigator) {
    navigator.geolocation.getCurrentPosition(function(position) {
      var latitude = position.coords.latitude;
      var longitude = position.coords.longitude;
    });
  }
</script>
```

←!—Mulualet Eshetu—→

6. WebSockets:

- offer real-time communication between a client and server
- ideal for apps requiring instant updates and chat functionality

```
<script>
  var socket = new WebSocket("ws://example.com/socket");
  socket.onmessage = function(event) {
    var message = event.data;
  };
</script>
```

←!—Mulualet Eshetu—→



Cont...

7. Form Enhancements:

- HTML5 introduced **new input types** and **attributes**
- those are :-

```
<input type="date">  
<input type="email">  
<input type="number">  
<input type="range">  
<input type="color">
```

←!—Mulualet Eshetu—→

8. Scalable Vector Graphics (SVG):

- SVG allows you to **create resolution-independent vector graphics** for logos, icons, and illustrations

```
<svg width="100" height="100">  
  <circle cx="50" cy="50" r="40" stroke="black" stroke-width="3" fill="red" />  
</svg>
```

←!—Mulualet Eshetu—→



Cont...

9. Accessibility:

- HTML5 promotes accessibility through ARIA(Accessible Rich Internet Applications) roles and attributes
- It will help screen readers and assistive technologies interpret web content more accurately

```
<button role="button" aria-label="Close">@mule_tech</button>
```

←!—Mulualet Eshetu—→

10. Web Workers:

- allow for multi-threading in web applications
- improving performance by running scripts concurrently in the background

```
<script>  
  var worker = new Worker('myworker.js');  
</script>
```

←!—Mulualet Eshetu—→



Cont...

11. Drag and Drop:

- providing a **user-friendly way** to move and organize content within your web apps



```
<div id="dragElement" draggable="true">  
  Drag me!  
</div>
```

←!—Mulualet Eshetu—→

12. Data Attributes (data-*) :

- allow you to **store custom data** within **HTML elements**, which can be **accessed** and **manipulated** with JavaScript



```
<div data-user-id="123" data-role="admin"></div>
```

←!—Mulualet Eshetu—→



Key point's charli take from his journey

- Utilize **semantic tags** to create **well-structured** and **accessible** web pages, **improving SEO** and **user experience**
- Leverage **multimedia** elements for **richer content** and **better user engagement**
- Take advantage of HTML5's form **enhancements** for **user-friendly** input forms
- Implement the Geolocation API for **location-based** services
- Ensure **accessibility** with **ARIA roles**, **broadening** your user base and **improving SEO**
- **Enhance user interactions** with drag-and-drop and **improve performance** with Web Workers



Thanks for reading, hope you enjoyed it!

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