

# Basic HTML Structure in detail

## 1. The `<!DOCTYPE html>` Declaration:

- **Purpose:**
  - The `<!DOCTYPE html>` declaration is the very first line of code in an HTML document.
  - It informs the web browser about the version of HTML that the document is written in.
  - This helps the browser to render the page correctly and avoid quirks mode.
- **HTML5 Standard:**
  - For HTML5, the most current version, the declaration is simple: `<!DOCTYPE html>`.
  - This declaration is not an HTML tag itself; it's a declaration.
- **Importance:**
  - Without a proper doctype, browsers might interpret the HTML in "quirks mode," which can lead to inconsistencies in how the page is displayed.
  - Using the correct doctype ensures that the browser renders the page in "standards mode," following the HTML5 specifications.

## 2. The `<html>` Element:

- **Purpose:**
  - The `<html>` element is the root element of an HTML document.
  - It encapsulates all other elements on the page, except for the `<!DOCTYPE>` declaration.
- **Structure:**
  - It starts with an opening tag: `<html>`.
  - It ends with a closing tag: `</html>`.
  - All other HTML elements are placed within these tags.
- **lang Attribute:**
  - It's best practice to include the lang attribute in the `<html>` tag.
  - This attribute specifies the language of the document (e.g., `<html lang="en">` for English, `<html lang="es">` for Spanish).
  - This helps assistive technologies (like screen readers) and search engines to understand the language of the content.

## 3. The `<head>` Element:

- **Purpose:**
  - The `<head>` element contains metadata about the HTML document.
  - Metadata is information about the page that is not directly displayed to the user.

- It provides information to the browser, search engines, and other services.
- **Structure:**
  - It starts with an opening tag: `<head>`.
  - It ends with a closing tag: `</head>`.
  - It contains elements like `<title>`, `<meta>`, `<link>`, and `<script>`.
- **Key Elements within `<head>`:**
  - **`<title>`:**
    - Specifies the title of the webpage, which is displayed in the browser's title bar or tab.
    - It's also used by search engines for indexing.
    - Example: `<title>My Webpage</title>`.
  - **`<meta>`:**
    - Provides various metadata about the document.
    - Common meta attributes:
      - **`charset`**: Specifies the character encoding (e.g., `<meta charset="UTF-8">`). UTF-8 is recommended.
      - **`name="viewport"`**: Controls the viewport for responsive design (e.g., `<meta name="viewport" content="width=device-width, initial-scale=1.0">`).
      - **`name="description"`**: Provides a brief description of the page for search engines.
      - **`name="keywords"`**: Provides keywords for search engines.
  - **`<link>`:**
    - Links to external resources, such as CSS stylesheets or favicons.
    - Example: `<link rel="stylesheet" href="style.css">`.
    - Example: `<link rel="icon" href="favicon.ico" type="image/x-icon">`
  - **`<script>`:**
    - Links to external JavaScript files or includes inline JavaScript code.
    - Example: `<script src="script.js"></script>`

## 4. The `<body>` Element:

- **Purpose:**
  - The `<body>` element contains the visible content of the HTML document.
  - This is where you place all the content that users will see in their browsers.
- **Structure:**
  - It starts with an opening tag: `<body>`.
  - It ends with a closing tag: `</body>`.
  - It contains elements like headings, paragraphs, images, links, lists, tables, and forms.

- **Content:**
  - All the text, images, videos, and other elements that make up the webpage's content are placed within the <body> element.

## Example of Basic Structure:

HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>My Simple Webpage</title>
  <link rel="stylesheet" href="style.css">
  <link rel="icon" href="favicon.ico" type="image/x-icon">
</head>
<body>
  <h1>Welcome to My Webpage!</h1>
  <p>This is a simple paragraph of text.</p>
  
  <script src="script.js"></script>
</body>
</html>
```

**Output:**

# Welcome to My Webpage!

This is a simple paragraph of text.