The <!DOCTYPE> declaration is an instruction to the web browser about what version of HTML the page is written in. It ensures that the browser renders the page correctly. The <!DOCTYPE> declaration must be the very first thing in your HTML document, before the <html> tag.

**Purpose of <!DOCTYPE>**

1. **Document Type Definition:** It tells the browser which HTML specification the document follows.
2. **Rendering Mode:** It triggers the browser to render the content in standards mode (as opposed to quirks mode). Standards mode ensures that the page is rendered according to the HTML and CSS specifications, leading to more consistent rendering across different browsers.

**Example of <!DOCTYPE>**

For HTML5, the <!DOCTYPE> declaration is very simple:

html

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<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Document</title>

</head>

<body>

<h1>HTML5 Document</h1>

<p>This is a paragraph in an HTML5 document.</p>

</body>

</html>

In this example:

* <!DOCTYPE html> declares that the document is an HTML5 document.
* The rest of the document follows the standard HTML5 structure.

**Historical Context**

* **HTML 4.01:** Older versions of HTML had more complex <!DOCTYPE> declarations. For example:

html

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<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">

* **XHTML 1.0:** If you were using XHTML, the declaration would look like this:

html

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<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">

In summary, the <!DOCTYPE> declaration is essential for ensuring that web pages are rendered correctly by modern web browsers, providing a consistent user experience