HTML BASICS

(1)What is HTML? Explain its structure.

1. Describe the purpose of HTML tags and provide example of commonly used tags.
2. What are the differences between block-level and inline elements ?Give examples of each.
3. Explain the concept of semantic HTML and why it is important.
4. **ANSWERS**: HTML stands for HyperText Markup Language.it is markup language used to create the structure of web pages.With HTML,we tell the browser what content to display -such as text,image, links,tables etc.

**Basic Structure of HTML**

**<html>**

**<head>**

**<title>My Page</title>**

**</head>**

**<body>**

**<h1>Hello</h1>**

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

**</body>**

**</html>**

**(2)ANSWER:** HTML tags are used to define the elements of a web page. Each tag tells the browser how to display the content.

**Common HTML Tags:**

| **Tag** | **Purpose** |
| --- | --- |
| <h1> | Heading |
| <p> | Paragraph |
| <a> | For creating a link |
| <img> | To display an image |
| <ul>, <li> | To create a list |
| <div> | To divide content or layout |
| <span> | For inline text formatting |

**(3)ANSWER: Block-level elements** start on a new line and take up the full width of the page.  
**Inline elements** appear in the same line and take only the required space.

| **Block-Level Elements** | **Inline Elements** |
| --- | --- |
| <div>, <p>, <h1> | <span>, <a>, <img> |

**Example:**

**<p>Hello</p> appears on a new line.**

**<span>Hi</span>stays in the same line.**

1. ****ANSWER:**Semantic HTML** means using HTML tags that clearly describe the **purpose and meaning** of the content. These tags tell the browser and the developer **what the content is**, not just how it looks.

### 🔹 ****Examples of Semantic HTML Tags:****

| **Tag** | **Purpose** |
| --- | --- |
| <header> | Top section of the page (like title/logo) |
| <nav> | Navigation links or menu |
| <main> | Main content of the webpage |
| <article> | An article, blog post or news section |
| <section> | A group of related content |
| <footer> | Bottom section of the page (contact info, copyright) |

**<html>**

**<head>**

**<title>My Semantic Webpage</title>**

**</head>**

**<body>**

**<header>**

**<h1>My Website</h1>**

**</header>**

**<nav>**

**<a href="#">Home</a> |**

**<a href="#">About</a> |**

**<a href="#">Contact</a>**

**</nav>**

**<main>**

**<article>**

**<h2>Article Title</h2>**

**<p>This is an article about HTML and web development basics.</p>**

**</article>**

**</main>**

**<footer>**

**<p>Thank you for visiting my website</p>**

**</footer>**

**</body>**

**</html>**

**CSS Fundamentals:**

1. ****what is css? how does it differ from HTML?****
2. ****Explain the three ways to apply css to a web page****
3. ****What are selectors ? list and describe the different types of selectors.****
4. ****What is the box model in css?Explain its components.****

****(1)Answers:**** · **CSS** (Cascading Style Sheets) is a **stylesheet language** that controls a document’s **presentation**—color, fonts, layout, spacing, responsiveness—across HTML or XML documents

· **HTML** (HyperText Markup Language) defines the **structure and content** of web pages—headings, paragraphs, images, links, etc.—while CSS handles how that content is **styled and arranged**

1. **Answer:** Ways to Apply CSS
2. **Inline CSS**  
   Use the style attribute directly on an element

**<h1 style="color: blue;">Hello</h1>**

1. ****Internal CSS****Place CSS rules inside a <style> block within the HTML <head>.

**<style>**

**p { color: red; }**

**</style>**

**(3)**

**External CSS**  
Link an external .css file using **<link rel="stylesheet" href="styles.css">.**This method is preferred for maintainability, reuse across pages, and efficient caching.

1. **Answer: CSS selectors** target HTML elements you want to style . The main types include:
2. **Simple selectors**

**. Type selector (element):p{}**

**.**  **.**  **Class selector**: .btn {}

**. ID selector**: #main {}

**(2)Combinator selectors**

·  **Descendant (**A B**)**: selects B inside A, e.g., ul li {}

. · **Child (**A > B**)**: selects direct child, e.g., div > p {}

· ****Adjacent sibling** (**A + B**)**: selects B immediately after A

·  **General sibling (**A ~ B**)**: selects all following siblings B

**Attribute selectors**

· By attribute: input[type="text"] {}

· Variations include [attr^="value"], [attr$="value"], etc.

· By attribute: input[type="text"] {}

· Variations include [attr^="value"], [attr$="value"], etc.

**Pseudo‑class selectors**

·Based on element state, e.g., a:hover, li:first-child

**Pseudo-elements**

· Parts of elements: p::first-line, div::after

**(4)Answere:**

· **Content** – The inner area where text/images appear; controlled by wight/hight.

· **Padding** – Space between content and border; transparent.

· **Border** – The outline around padding/content.

· **Margin** – External space separating elements; transparent.

**RESPONSIVE TABLE**

1. What is responsive web design? Why is it important?
2. Explain the use of media queries in CSS. Provide an example.
3. What are the benefits of using a mobile-first approach in web design?
4. **ANSWERE:** responsive web design (RWD) is a way to build websites so they seamlessly adapt to different screen sizes and devices -desktops, tablets, or mobiles -using techniques like fiuld grids,flexible images, and CSS3 media queries

**Why is it importhant?**

· **Better user experience**: Ensures navigation, readability, and layout work on any device, which keeps visitors engaged .

· **Boosts SEO**: Google prioritizes mobile-friendly sites and avoids duplicate URLS

· **Cost-effective**: You maintain a single site instead of separate mobile and desktop versions

· **Future‑proof**: Adapts to new devices and screen dimensions without major redesigns.

1. **ANSWERE:**

Media queries let you apply styles based on device characteristics (screen width, orientation, resolution). They’re a core tool of responsive design

**Example** – Mobile‑first approach: start with base styles for small screens, then use min-width breakpoints:

**body {**

**font-size: 16px;**

**padding: 10px;**

**}**

**@media (min-width: 768px) {**

**body {**

**font-size: 18px;**

**padding: 20px;**

**}**

**}**

**@media (min-width: 1200px) {**

**body {**

**font-size: 20px;**

**padding: 30px;**

**}**

**}**

1. **ANSWERE: Benefits of Mobile‑First Approach**
2. **Performance optimization**

On mobile, you load only essential assets first, then progressively enhance for larger screens

1. **User-centered design**

Focuses on critical content and touch-friendly UI, improving usability on small devices

1. **SEO & traffic advantages**

Google indexes mobile versions first; better mobile UX improves search ranking

1. **Cost-effective and scalable**

One codebase is cheaper to build and maintain, and scales up cleanly.