Day-1

Task-1 : Introduction to Nimbus Platform .

What is Nimbus Platform?

The Nimbus Platform is a cloud-based environment that helps developers build, deploy, and manage web applications efficiently. It provides tools, services, and frameworks designed to simplify web development.

Key Features of Nimbus

- **Integrated Tools:** Pre-configured tools for coding, debugging, and testing.
- **Cross-Platform Compatibility:** Build applications that run seamlessly across devices.
- **Scalability:** Applications can handle growing user demands without performance loss.
- **Developer-Friendly:** Rich documentation and intuitive workflows to speed up development.

Benefits of Using Nimbus for Web Development

- Streamlines the development process by offering built-in templates and frameworks.
- Reduces the need for extensive infrastructure setup.
- Allows collaboration through cloud-based project management tools.

Task-2 : Web Development and Basics of HTML .

What is Web Development?

Web development involves creating and maintaining websites or web applications. It includes both the front-end (what users see) and the back-end (how data is processed).

Front-End Development

Focuses on the visual aspects of a website:

- **Technologies:** HTML, CSS, JavaScript.
- **Purpose:** Build user interfaces, layouts, and interactive elements.

Back-End Development

Handles the server-side processes and data storage:

- **Technologies:** Python, Node.js, PHP, and databases like MySQL or MongoDB.
- **Purpose:** Manage user requests and database operations.

How Websites Work

- Users interact with a browser (front-end).
- The browser sends a request to the server.
- The server processes the request and returns a response (HTML, JSON, etc.).

What is HTML?

HTML (HyperText Markup Language) is the foundation of all web pages. It structures the content using elements like headings, paragraphs, images, and links.

Structure of an HTML Document

```
<html>
  <head>
    <title>Page Title</title>
  </head>
  <body>
    <h1>Welcome to Nimbus!</h1>
    <p>This is an introductory session.</p>
  </body>
</html>
```

Common HTML Elements

- **Headings:** `<h1>` to `<h6>` for titles.
- **Paragraphs:** `<p>` for blocks of text.
- **Links:** `<a href="url">Text</a>` for navigation.
- **Images:** `<img src="image.jpg" alt="description">` for pictures.

Task-3 : HTML Forms and Semantic HTML .

What Are Forms?

Forms are used to collect input from users (e.g., login, signup, search).

Basic Structure

```
<form action="/submit" method="post">
  <label for="name">Name:</label>
  <input type="text" id="name" name="name" required>
  <button type="submit">Submit</button>
</form>
```

Common Form Elements

- **Text Input:** `<input type="text">`
- **Password Field:** `<input type="password">`
- **Radio Buttons:** `<input type="radio">`
- **Checkboxes:** `<input type="checkbox">`
- **Dropdown:** `<select><option>Option</option></select>`
- **Submit Button:** `<button type="submit">Submit</button>`

Form Attributes

- **action:** URL where form data is sent.
- **method:** `GET` (URL parameters) or `POST` (secure data transmission).
- **required:** Ensures users fill out the field.

What is Semantic HTML?

Semantic HTML uses elements that describe their meaning, making websites easier to read, maintain, and optimize for search engines.

Examples of Semantic HTML

- **Non-Semantic:**

```
<div id="header">Header Content</div>
```

- **Semantic:**

```
<header>Header Content</header>
```

Key Semantic Elements

- `<header>`: Represents the top section of a page.
- `<footer>`: Represents the bottom section of a page.
- `<article>`: Represents an independent piece of content.
- `<section>`: Groups related content.
- `<nav>`: Represents navigation links.

Advantages of Semantic HTML

- Improves accessibility for screen readers.
- Enhances SEO by clearly defining page structure.
- Makes code easier to understand and maintain.