Practical Workbook

CT-362

WEB ENGINEERING

 

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**Department: Computer Science and Information Technology**

Practical Workbook

**Lab # 3**

**Introduction to HTML5**

1. Write down the advantages and disadvantages of HTML5.

**Advantages:**

* **Rich Multimedia Suppor**t: HTML5 provides native support for audio and video elements, eliminating the need for third-party plugins like Flash. This enables developers to create multimedia-rich content more seamlessly.
* **Enhanced Semantics**: HTML5 has new semantic elements like <header>, <footer>, <nav>, <article>, etc., which improve the structure and readability of web documents. and are helpful in search engines and accessibility tools
* **Improved Forms**: HTML5 offers new input types (<input type="date">, <input type="email">, etc.) and attributes (placeholder, required, pattern, etc.) that enhance form usability and validation, leading to better user experiences.
* **Offline Application Cache**: HTML5 provides the ability to create web applications that can work offline through the use of the Application Cache API. This enables users to continue using web apps even when they're not connected to the internet.
* **Canvas and SVG Support**: HTML5 introduces the <canvas> element for dynamic, scriptable rendering of 2D shapes and bitmap images, and native support for Scalable Vector Graphics (SVG), allowing for richer graphical content without relying on external plugins.

**Disadvantages:**

* **Browser Compatibility**: Although HTML5 is widely supported by modern browsers, older browsers may not fully support all features
* **Security Concerns**: As HTML5 introduces new features and APIs, it also introduces new security vulnerabilities.
* **Complexity**: While HTML5 offers many powerful features, it also increases the complexity of web development. Developers need to invest time in learning new APIs, elements, and best practices,
* **Performance**: Certain HTML5 features, such as animations and complex graphical rendering using <canvas>, can impact performance, especially on lower-powered devices or older browsers.
* **Accessibility**: While HTML5's semantic elements improve accessibility in many ways, ensuring full accessibility compliance still requires attention to detail and testing across different assistive technologies and devices.

**Lab # 4**

**Exploring HTML5 elements**

1. Create the form shown in the figure below.

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

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

<title>Form</title>

</head>

<body>

<form autocomplete="on">

<label for="name">Name:</label><br>

<input type="text" id="name" name="name" autofocus placeholder="Enter your name" required><br><br>

<label for="telephone">Telephone:</label><br>

<input type="tel" id="telephone" name="telephone" placeholder="Enter telephone number"

pattern="[0-9]{3}-[0-9]{3}-[0-9]{4}" required><br><br>

<label for="email">Email address:</label><br>

<input type="email" id="email" name="email" placeholder="Enter email address" multiple required><br><br>

<label for="books">Books:</label><br>

<input list="booklist" id="books" name="books">

<datalist id="booklist">

<option value="Book 1">

<option value="Book 2">

<option value="Book 3">

</datalist><br><br>

<label for="quantity">Quantity (Maximum 5):</label><br>

<input type="number" id="quantity" name="quantity" min="1" max="5"><br><br>

<input type="submit" value="Submit">

</form>

</body>

</html>