Web Technology Lab Works (Part-1)

1. **Basics of HTML Structure (tags and attributes)**

Create an HTML document with the following tags and contents
[Use important attributes for each tag as necessary.]

- ❖ Add a title for the document using the <title> tag.
- ❖ Use headings (<h1> to <h6>) to display a hierarchy of topics.
- ❖ Create paragraphs (<p>) and divisions ( ) to structure content meaningfully.
- ❖ Add the contents using following tags for spacing and formatting
  - <b> - Bold text
  - - Important text
  - <i> - Italic text
  - - Emphasized text
  - <mark> - Marked text
  - <small> - Smaller text
  - <del> - Deleted text
  - <ins> - Inserted text
  - <sub> - Subscript text
  - <sup> - Superscript
  - Use <pre> to display preformatted text and
 for line breaks.

2. **Working with Images and Links in HTML**

[Use important attributes for each tag as necessary.]

Create an HTML page that:

- Embeds an image using the <img> tag with attributes for alt, width, and height.
- Includes hyperlinks (<a>) to external websites and internal sections within the page.
- Create links using following attributes in <a> tag
  - self - Default. Opens the document in the same window/tab as it was clicked
  - _blank - Opens the document in a new window or tab
  - _parent - Opens the document in the parent frame
  - _top - Opens the document in the full body of the window title - specifies extra information about an element.
- Use another image as a hyperlink

3. **Understanding Lists**

[Use important attributes for each tag as necessary.]

Create a webpage demonstrating:

- An ordered list (<ol>) of your top 5 favorite movies.
- An unordered list (<ul>) of your favorite hobbies.
- A definition/description list (<dl>) with terms (<dt>) and their descriptions(<dd>) (e.g., programming languages and their use).

4. **Working with HTML Table**

[Use important attributes for each tag as necessary]

- ➢ Design a webpage to create a student grade report using an HTML table. Include the following:
  - Columns for Name, Subject, Marks, and Grade.
  - Proper use of <thead>, <tbody>, <th>, and <td> elements.

- Create another table with your own assumption including following tags
  - <caption>: Defines a table caption
  - <colgroup>: Specifies a group of one or more columns in a table for formatting
  - <col>: Specifies column properties for each column within a <colgroup> element
  - <thead>: Groups the header content in a table
  - <tbody>: Groups the body content in a table
  - <tfoot>: Groups the footer content in a table
  - Also demonstrate the effect of rowspan and colspan

5. HTML Forms and Attributes

[Use important attributes for each tag as necessary.] ✞ Build an HTML form with the following fields:

- Text input for name, email, and phone number.
- Dropdown for selecting a country.
- Radio buttons for gender selection.
- A checkbox for terms and conditions.
- Include id and class attributes for styling form elements.

❖ Create another form using following form elements and necessary attributes:

<input>, <label>, <select>, <textarea>, <button>, <fieldset>, <legend>, <datalist>, <output>, <option> and <optgroup>

❖ Create a form using <input> tag with different values for 'type' attributes including *text, password, email, number, tel, url, date, time, datetime-local, month, week, color, range, file, checkbox, radio, submit, reset, button, hidden, image, and search*

6. Media Elements

[Use important attributes for each tag as necessary.] Create an HTML page that embeds:

✓ An audio file with controls.
✓ A video file with controls, autoplay, and loop functionality.
✓ Use <figure> and <figcaption> to describe the media elements.

7. Semantic HTML

❖ Design a webpage for some application/website (for eg., blog article) using the following tags:

- <main>, <section>, <article>, <header>, <footer>, <nav>, <details>, <figure>,
- <figcaption>, <mark>, <time>, <aside> and <summary>
- Add appropriate headings and paragraphs to structure the content.

8. Canvas and SVG in HTML

❖ Create a web page using <canvas> and <svg> tags with necessary nested tags and attributes.

9. Implementing Multi-Section Layout Using <iframe>

- Create an HTML file named index.html with the following structure:
  - A header (e.g., "My Website")
  - A navigation menu with links to different pages ○ An <iframe> that loads different pages dynamically. The <iframe> should have:
    - A fixed width (100%) and height (500px)

- A default page (home.html) that loads initially

- Create three separate HTML files:
  - home.html → Displays "Welcome to the Home Page"
  - about.html → Displays "This is the About Page"
  - contact.html → Displays "Get in touch with us"
  - Each file should contain a heading and some descriptive text.
- Modify index.html to include:
  - A navigation bar with links to load pages into the <iframe>.
  - Use the target attribute (target="content-frame") or iframe name to control loading.

10. Using Meta Tags

- Create an HTML file (meta_example.html) that includes the following:
  - A well-structured HTML document with <!DOCTYPE html>, <html>, <head>, and <body> elements.
  - A <title> tag inside the <head> section.
  - The following meta tags inside the <head> section:
    - Charset meta tag for UTF-8
    - A meta description with a brief summary of the page ○ A meta keyword tag with at least five relevant keywords
    - A meta-author tag with your name ○ A viewport meta tag for responsive design ○ A refresh meta tag to reload the page every 10 seconds
    - A simple heading (<h1>) and paragraph (<p>) inside the <body> section.
- Open the file in a web browser and inspect the page source (Right-click > View Page Source).
- Use the browser's developer tools (F12 > Elements) to verify the meta tags.
- Take a screenshot of your browser window displaying the HTML file and attach it as output.