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Ques① A) Liste in XHTML

There are three types of lists in XHTML

- (i) Unordered lists
- (ii) Ordered lists
- (iii) Definition lists

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Unordered lists : A group of items can be displayed using an unordered list when the order or sequence of items to be listed is not important. Bullets are used in ordered lists which can be "disc", "square" or "circle".

```
<ul>
  <li> X </li>
  <li> Y </li>
  <li> Z </li>
</ul>
```

- X
- Y
- Z

Ordered lists : It is used when a group of items is to be numbered. The numbering can be either numerical or alphabetical.

```
<ol>
  <li> X </li>
  <li> Y </li>
  <li> Z </li>
</ol>
```

1. X
2. Y
3. Z

Definition lists : Definition is usually used to present a list of terms and their meaning, description or definition. It is commonly used for glossary.

```
<dl>
  <dt> X </dt> <dd> This is X </dd>
  <dt> Y </dt> <dd> This is Y </dd>
  <dt> Z </dt> <dd> This is Z </dd>
</dl>
```

B) • cellspacing & cell padding

cellpadding is used to specify the spacing between content & inner wall of cell border whereas cellspacing is used to specify the spacing between two cells.

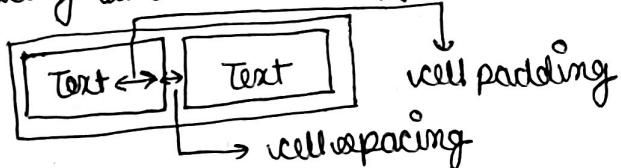


image as hyperlink

To use image as hyperlink it needs to be embedded in the anchor tag.

```
<a href = "Target url"> <img src = "image.jpg" /> </a>
```

Ques 2 (A)

Blood Donation Camp

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```
<?xml version="1.0" encoding="utf-8"?>
<!DOCTYPE html>
<html>
    <head> <title> Blood Donation Form </title> </head>
    <body>
        <h1> Graphic Era organises </h1> <br/>
        <h2> Blood Donation Camp </h2>
        <form action="#" method="post">
            Name : <input type="text" name="name"/> <br/>
            Gender : <input type="radio" name="male"/> male <br/>
                    <input type="radio" name="female"/> female <br/>
            Reason to Donate : <textarea name="reason"></textarea> <br/>
            Course : <select name="course">
                <option value="BCA"> BCA </option>
                <option value="MCA"> MCA </option>
            </select>
            <br/>
            <input type="checkbox" id="agreement"/>
            I agree to all terms associated with blood donation.
            <input type="submit" value="Submit"/>
            <input type="Reset" value="Reset"/>
        </form>
    </body>
</html>
```

B) CSS Selectors

The various types of CSS Selectors are :

- (i) Element selector (ii) ID selector (iii) class selector
- (iv) Descendent selector (v) child selector

Element selector : selects the HTML element based on their element type
eg. `P { color: blue; }`

ID selector : selects the HTML based on their element id.
eg. `#id { color: green; }`

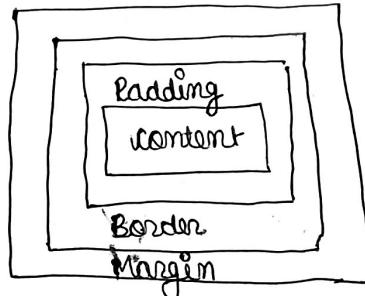
Ques 5) A) CSS Box Model

The CSS box model is a fundamental concept in web design and layout that defines the structure and behaviour of HTML elements in relation to their content, padding, border and margin. It essentially describes how each element is represented as a rectangular box on a webpage.

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Components of a CSS Box Model

Content: Content is the actual content/text of an element. It is like the text, image or media stored or to be rendered.



Padding: Padding is the space between the content area and the border of the element.

Border: The border surrounds the padding & content, providing a visible boundary to the element.

Margin: Margin is the space outside border which separates it from other element.

B) Javascript Methods

Javascript provides several methods for interacting with user or displaying output on screen.

prompt(): displays a dialog box which prompts user for input.
`let name = prompt("Enter your name: ")`

confirm(): displays a dialog box with OK and cancel buttons.
`confirm("Do you want to continue? ")`

alert(): displays a dialog box with a message.
`alert("This is awesome");`

console.log(): displays a message in terminal/web console.
`console.log("Great. --")`

document.write(): renders an HTML document.
`document.write("Surprise")`

Ques ④

A)

Accessing Elements in Javascript

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There are several ways of accessing elements in Javascript:

① getElementById()

This method retrieves the element from DOM using its id.

```
<div id="greet">Graphic Era</div>
```

//js

```
var element = document.getElementById("greet");
console.log(element);
```

② querySelector()

This method returns the first element within the document that matches specified CSS selector.

```
<p class="example">This is paragraph </p>
```

```
//js
var element = document.querySelector(".example");
console.log(element);
```

③ getElementsByClassName()

This method returns the collection of all elements in the document with the specified class name.

```
var element = document.getElementsByClassName("example");
```

B) Events and Event Handler

Event in Javascript is any action that is detected by the browser. An event handler is a code that executes, or fires a function call whenever an event occurs.

Events can be handled using Event listeners.

```
<button id="b">
    Click Me
</button>
```

```
var button = document.getElementById("b");
button.addEventListener("click", function() {
```

```
    console.log(
```

```
        "Button is clicked!");
```

```
} );
```

Ques ② A)

MERN stack

MERN stack is a popular JavaScript framework for building full stack web applications.

It consists of four main components:

- ① MongoDB: It is a NoSQL database which stores data in JSON like formats. It offers flexibility in schema & scalability making it suitable for large volumes of data with dynamic structure changes.
- ② Express.js: Express.js is minimal & flexible Node.js web app. framework. It simplifies the server side logic & handling HTTP requests & responses.
- ③ React.js: React.js is JS framework for building user interfaces. It is used for UI & frontend design.
- ④ Node.js: It is the JS runtime allowing JavaScript to run on serverside. It is used for backend development.

B) Features of React JS

React JS comes with rich set of features:

- ① Component Based Architecture: allows developers to break UI into small reusable components.
- ② Virtual DOM: uses virtual DOM and improves performance resulting in faster rendering.
- ③ JSX: uses syntax extension of JS, allowing developers to write HTML code within JS.
- ④ Unidirectional Content Flow: simplifies the data management.

Advantages and Disadvantages of React JS

Advantages

- ① Reusable components save a lot of time & effort.
- ② JSX increases development & code readability.
- ③ Virtual DOM provides faster performance.

Disadvantages

- ① Learning JSX is bit complex & tricky task itself for developers.
- ② Complex tooling & development tools required like webpack, Babel etc.
- ③ Lacks features of other better frameworks like Next.js

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