



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)

COIMBATORE-641 035, TAMIL NADU



DEPARTMENT OF COMPUTER APPLICATIONS

CLASS: II MCA

COURSE: FULL STACK DEVELOPMENT

UNIT: I

INTRODUCTION TO CSS and JAVASCRIPT

1. What is the client-server model in web development?

- The client-server model is a network architecture where the client requests resources or services, and the server provides those resources or services.

2. What is HTTP, and why is it important?

- HTTP (HyperText Transfer Protocol) is the protocol used for transferring data over the web. It's important because it defines how messages are formatted and transmitted between clients (browsers) and servers.

3. What is the difference between HTTP and HTTPS?

- HTTPS is HTTP with encryption. HTTPS uses SSL/TLS to encrypt data, ensuring secure communication between the client and server.

4. What does a request-response cycle in HTTP mean?

- The request-response cycle refers to how a client makes an HTTP request (e.g., GET, POST) to the server, and the server responds with the requested data or an appropriate status code.

5. What is a status code in HTTP?

- A status code is a part of an HTTP response from a server that indicates whether the request was successful or if there was an issue (e.g., 200 for OK, 404 for Not Found, 500 for Internal Server Error).



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6. What are the basic parts of an HTML document?

- The basic parts of an HTML document include: `<!DOCTYPE html>`, `<html>`, `<head>`, `<title>`, and `<body>`.

7. What is the role of the `<head>` tag in an HTML document?

- The `<head>` tag contains metadata, such as the title of the document, linked stylesheets, scripts, and other meta information like charset and viewport settings.

8. What is the purpose of the `DOCTYPE` declaration in HTML?

- The `DOCTYPE` declaration informs the browser about the version of HTML being used, helping it render the page correctly.

9. What is the function of the `<meta>` tag in HTML?

- The `<meta>` tag provides metadata about the HTML document, such as character encoding, author, description, and viewport settings.

10. What is the `<a>` tag used for in HTML?

- The `<a>` tag creates hyperlinks to navigate between pages or different sections of the same page.

11. What is the `<div>` tag, and how is it used in HTML?

- The `<div>` tag is a block-level container used to group HTML elements together for styling or scripting purposes.

12. How is the `` tag used in HTML?

- The `` tag is used to embed images into a web page. The `src` attribute specifies the image source, and the `alt` attribute provides alternative text.

13. How do you center an element horizontally using CSS?

- To center a block-level element, you can set `margin: 0 auto;`. For inline elements, `text-align: center;` can be used inside a parent container.

14. What is the difference between padding and margin in CSS?

- Padding is the space between the content and its border, while margin is the space outside the border between the element and neighboring elements.



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15. What is the purpose of the `alt` attribute in the `` tag?

- The `alt` attribute provides alternative text for an image if the image cannot be displayed, which is important for accessibility and SEO.

16. What is a class selector in CSS?

- A class selector in CSS is defined with a `.` prefix (e.g., `.classname`) and is used to apply styles to any HTML element with the corresponding `class` attribute.

17. What is an ID selector in CSS, and how is it used?

- An ID selector is defined with a `#` prefix (e.g., `#idname`) and is used to style a single, unique element with the corresponding `id` attribute.

18. What is Flexbox in CSS?

- Flexbox is a CSS layout module that allows for easy and efficient arrangement of items in a container, with support for aligning and distributing space dynamically within a container.

19. Identify the role of a web server in a client-server architecture.

A web server in a client-server architecture serves as an intermediary that processes client requests (typically from a browser) and delivers the appropriate web pages, files, or data. It handles HTTP/HTTPS requests and manages the communication between the client and the backend services.

20. Prepare a CSS rule to style a paragraph with a red background color and a font size of 18px.

```
p { background-color: red; font-size: 18px; }
```

21. Create a simple HTML document that displays a heading, a paragraph, and an image.

```
<!DOCTYPE html>
<html>
<head>
  <title>Simple HTML Page</title>
</head>
<body>
  <h1>Welcome to My Page</h1>
  <p>This is a simple paragraph.</p>
  
</body> </html>
```



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22. What is the `justify-content` property in Flexbox used for?

- The `justify-content` property is used to align flex items along the main axis, controlling how space is distributed between them (e.g., `flex-start`, `center`, `space-between`).

23. What are the basic data types in JavaScript?

- The basic data types in JavaScript include `Number`, `String`, `Boolean`, `Object`, `Null`, `Undefined`, and `Symbol`.

24. State the purpose of the <head> section in an HTML document.

The <head> section of an HTML document contains metadata about the webpage, such as the title, character set, links to stylesheets, scripts, and other resources that do not appear directly on the page but are essential for the document's functionality and SEO.

25. Apply the Flexbox layout to create a simple two-column grid.

HTML

```
<div class="container">
  <div class="column">Column 1</div>
  <div class="column">Column 2</div>
</div>
```

CSS

```
.container {
  display: flex;
}
```

```
.column {
  flex: 1;
}
```

26. Analyze the impact of using CSS preprocessors like Sass or Less on web development workflow.

CSS preprocessors like Sass or Less streamline the web development workflow by enabling features such as variables, nesting, and mixins, which make CSS more modular and maintainable. This leads to faster development, easier code management, and better scalability in large projects.



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27. Identify the purpose of Node.js.

Node.js is a JavaScript runtime that allows developers to run JavaScript on the server side. It is used to build scalable, high-performance network applications, offering non-blocking, event-driven architecture for handling multiple connections efficiently.

28. Configure a Node.js web server to listen on a specific port and address.

```
const http = require('http');

const server = http.createServer((req, res) => {
  res.statusCode = 200;
  res.setHeader('Content-Type', 'text/plain');
  res.end('Hello, World!\n');
});

const port = 3000;
const host = '127.0.0.1';

server.listen(port, host, () => {
  console.log(`Server running at http://${host}:${port}/`);
});
```