**Web Development**

1. **Q:** How do you ensure cross-browser compatibility in web development?  
   **A:** Use tools like BrowserStack, write standards-compliant code, and leverage polyfills for unsupported features.
2. **Q:** How would you optimize a website for mobile devices?  
   **A:** Use responsive design, optimize images, and minimize HTTP requests.
3. **Q:** What is the difference between HTTP/1.1 and HTTP/2?  
   **A:** HTTP/2 introduces multiplexing, header compression, and server push for faster performance.
4. **Q:** How would you implement lazy loading for images?  
   **A:** Use the loading="lazy" attribute or JavaScript to load images only when they enter the viewport.
5. **Q:** What is the difference between localStorage and sessionStorage?  
   **A:** localStorage persists data until manually cleared, while sessionStorage clears data when the session ends.
6. **Q:** How would you implement a dark mode toggle in a web application?  
   **A:** Use CSS variables and JavaScript to switch between light and dark themes.
7. **Q:** What is the difference between GET and POST requests?  
   **A:** GET retrieves data, while POST submits data to be processed.
8. **Q:** How would you implement a progressive web app (PWA)?  
   **A:** Use a service worker, manifest file, and HTTPS to enable offline functionality and app-like behavior.
9. **Q:** What is the difference between async and defer in script loading?  
   **A:** async loads scripts asynchronously, while defer delays execution until the DOM is ready.
10. **Q:** How would you implement a custom scrollbar in CSS?  
    **A:** Use ::-webkit-scrollbar pseudo-elements to style the scrollbar.
11. **Q:** What is the difference between margin and padding?  
    **A:** margin creates space outside an element, while padding creates space inside.
12. **Q:** How would you implement a sticky header in CSS?  
    **A:** Use position: sticky and define the top offset.
13. **Q:** What is the difference between flexbox and grid?  
    **A:** Flexbox is for one-dimensional layouts, while Grid is for two-dimensional layouts.
14. **Q:** How would you implement a responsive grid layout?  
    **A:** Use CSS Grid with media queries to adjust the layout for different screen sizes.
15. **Q:** What is the difference between em and rem units?  
    **A:** em is relative to the parent’s font size, while rem is relative to the root font size.
16. **Q:** How would you implement a CSS animation?  
    **A:** Use @keyframes to define the animation and apply it with animation properties.
17. **Q:** What is the difference between inline and block elements?  
    **A:** Inline elements flow within text, while block elements create a new line and take full width.
18. **Q:** How would you implement a custom dropdown menu in CSS?  
    **A:** Use :hover or :focus to toggle visibility and style the dropdown.
19. **Q:** What is the difference between position: absolute and position: relative?  
    **A:** absolute positions an element relative to its nearest positioned ancestor, while relative positions it relative to its normal position.
20. **Q:** How would you implement a responsive image gallery?  
    **A:** Use CSS Grid or Flexbox with media queries to adjust the layout for different screen sizes.