

Html Questions and Answers

1. **Question:** What are the differences between html4 and html5?
Answer: Html5 is the latest version and Html4 is an older version. Html5 supports video and audio but Html4 didn't. Html5 has new tags like canvas, SVG, Audio, and Video.
2. **Question:** What are semantic tags in Html? Give me some examples.
Answer: Semantic tags are a little bit different from other normal tags. Because semantic tags tell us the meaning of a webpage. For example, the p tag is semantic and it tells us that the enclosed text is a paragraph.
3. **Question:** What is the purpose of Article, div, section, nav, aside?
Answer: Article tag used for writing a newspaper article and a blog entry etc. We use the nav tag to define the set of the navigation link. Div tag defines a section of an Html document. We use a section tag for writing a group of Html elements together. Aside tag is used to describe the main motive of the webpage shortly.
4. **Question:** Why will you use Meta tag?
Answer: Meta tag is a slice of data that use to tell the search engine and site visitors more information about our webpage and the details it carries.
5. **Question:** What is the difference between inline, inline-block, and block?
Answer: Block elements start with a new line and take the full width of it and we can set height and width on it. The inline element doesn't start with a new line it takes just the width it needed and we can't set width or height on it. An inline-block element is the same as an inline element but we can set width and height on it.
6. **Question:** Difference between strong, b, bold, em, I?
Answer: We use the I and b tag for styling the text. B tag for bold the text and I tag for italic text style. Strong and em tag showing that text has serious importance.
7. **Question:** What are the properties and attributes in HTML?
Answer: Attributes are mentioned extra details about an object. And Properties describe the object.
8. **Question:** What is a Viewport?
Answer: The viewport is ensure that all element is equally displayed correctly in a different size. It's showed all the elements perfectly in different devices with perfect size based on device screen size.
9. **Question:** Are the HTML tags and elements the same thing?
Answer: No. Html tags have just started and closing tags. On the other hand, Html elements are defined by starting tag and have some content then closing tag.
10. **Question:** What is the difference between the 'id' attribute and the 'class' attribute of HTML elements?
Answer: We can use class attributes in multiple Html elements. But id attribute only once.
11. **Question:** Is it possible to change an inline element into a block-level element?
Answer: Yes, it's possible by using the display property and putting the block as a value on it.
12. **Question:** What is the difference between "display: none" and "visibility: hidden", when used as attributes to the HTML element.
Answer: We use both "display: none" and "visibility: hidden" attributes for hiding the Html element from the webpage. But there is a little difference between them. Like

“display: none” attribute hide the element but still takes place on the webpage. And “visibility: hidden” won’t take any place.

13. **Question:** Difference between link tag <link> and anchor tag <a>?

Answer: We use anchor tag <a> to make a hyperlink for going to another webpage and it's a link that is clickable. Oppositely <link> tag is also a link but it's not clickable.

14. **Question:** Difference between SVG and Canvas HTML5 element?

Answer: SVG for the larger surface works better with it and we can modify it via CSS and script. But on the smaller surface Canvas is a good choice and we can modify it via script only.

15. **Question:** What are void elements in HTML?

Answer: Void elements are different from normal elements like they have only starting tag no closing tag.

CSS Questions and Answers

1. **Question:** What Flex layout? Difference Flex and grid layout?

Answer: Flex is a one-dimensional layout. Flex is working on columns or rows at a time. But the grid can work on both rows and columns at a time. Because it's a 2-dimensional layout.

2. **Question:** Explain CSS position property? What are some differences between absolute position and relative position?

Answer: We use position property for set element position in a document. When we set a relative position it moves from his position without changing the layout around it. On the other hand, when we use absolute position it moves from his position and changes the layout around it.

3. **Question:** What is a box model? And what are the different elements of a box model?

Answer: Box model defines different parts of a box. Every box has 4 parts or areas like content, padding, border, and margin.

4. **Question:** What is a Hover effect? What is the purpose of the active class?

Answer: The hover effect is used for showing different graphical interfaces when the mouse is hovering over it. The purpose of the active class is it showed us which element is user currently viewing.

5. **Question:** What are the different types of Selectors in CSS?

Answer: There are different types of selectors in CSS like element, id, class, universal, and group selector.

6. **Question:** What is CSS Specificity?

Answer: Browsers use a process to decide which CSS property values are the most relevant to an element. The process browsers use is CSS specificity.

7. **Question:** What is a CSS Preprocessor? What are some benefits of Sass?

Answer: A CSS preprocessor is a program. Which lets us generate CSS from the preprocessor's syntax. Sass has so many advantages like it contains fewer codes, it's more powerful and stable.

8. **Question:** What is a Pseudo element? What is pseudo-class?

Answer: We use a CSS pseudo-element to style a specific part of the selected elements. And we use pseudo-class for specifies a special state of the selected elements.

9. **Question:** How will you use media queries to make a website responsive?
Answer: We use media queries to make a website responsive. We should choose the screen size then style the webpage. In this way, we can make the website responsive for any device.
10. **Question:** How will you make font size responsive?
Answer: We can make font size responsive by setting a size via using em or rem.
11. **Question:** Why background and color are separate properties if they should always be set together?
Answer: Because it increases the clarity of style sheets. Color is an inherited property while the background is not.
12. **Question:** Does margin-top or margin-bottom affect inline elements?
Answer: No it's not. Because we can set margin-right and margin-left on inline elements. But we can't set margin-top or margin-bottom on inline elements.
13. **Question:** What are the advantages of using CSS?
Answer: CSS gives us a way to present the same content in multiple devices in multiple formats.
14. **Question:** What do you understand by the universal selector?
Answer: Universal selector is a selector. Which matches the element type's name not a particular type of element.
15. **Question:** What property is used for changing the font face?
Answer: We use the font-family property for changing the font face.
16. **Question:** What are the differences between adaptive design and responsive design?
Answer: When we try to resize the Responsive design website window, the content of the website is dynamically rearranged based on the window.
17. **Question:** What is the default property CSS?
Answer: Default value is the initial value of CSS property. And usage of the initial value depends on the property is inherited or not.
18. **Question:** Compare Grouping and Nesting in CSS?
Answer: Nesting helps us styles multiple selectors at a time. So we declared it once and use it in multiple selectors. And grouping helps us to style the whole group at once.
19. **Question:** What are dimensional elements?
Answer: We usually stored dimensional elements in the database as short character strings to facilitate joins to other tables. Every dimension defines multiple attributes and elements.
20. **Question:** Why is the external style sheet useful?
Answer: We use an external style sheet for styling codes in a single file and use it from anywhere by just connecting the link to the external style sheet file.

JavaScript Questions and Answers

1. **Question:** How does JavaScript work?
Answer: Javascript is a single-threaded programming language. We can implement complex features on web pages via using javascript.
2. **Question:** How does JavaScript code is executed in Browser?

Answer: Every browser has javascript engines to support or enable javascript codes in the browser. Browser engines received javascript codes and execute them via using (JIT) just in time compiler.

3. **Question:** What are the differences between “==” and “===”?

Answer: Difference between “==” and “===” is “==” it checks the only value of two variables but “===” it checks both value and type of variable.

4. **Question:** What is a callback function?

Answer: The callback function is a function. Which passed another function as an argument.

5. **Question:** How will you return more than one value from a function?

Answer: Javascript doesn't allow us to return multiple values from a function. But we can return multiple values wrapped into an array or object and return the array or object as a function value.

6. **Question:** Tell me about bind, call and apply.

Answer: Bind, call and apply methods are used to set “this” keyword independent of how the function is called.

7. **Question:** What is a Closure in JavaScript? How does it work?

Answer: Closure gives us access to in outer function's scope from the inner function. Function and closure both are created at the same time. When the function is created in javascript.

8. **Question:** What does the “this” keyword indicate in JavaScript?

Answer: In javascript “this” keyword refers to the object where it belongs.

9. **Question:** What is Event bubbling in js? Or How does event delegate work in JS?

Answer: Event bubbling is a type of event propagation. Which triggers the first innermost element then periodically triggers his ancestors until they reach the outermost dom element.

10. **Question:** Explain hoisting in JavaScript.

Answer: Hoisting is a behavior in javascript. It permits gives us permission to use a function or a variable before the declaration.

11. **Question:** What is a recursive function?

Answer: Which function repeats or uses its previous term to calculate subsequent terms these functions are recursive functions.

12. **Question:** Difference between undefined and null

Answer: Null means “no value” and it returns an object. On the other hand, undefined means that the variable is not declared or doesn't give any value.

13. **Question:** Primitive data type and non-primitive data type.

Answer: We can define non-primitive data types because it's not defined. But we can't define the primitive data type because it's already defined.

14. **Question:** What is DOM?

Answer: Dom is a short form of the document object model. It's a programming interface that lets us change the document structure, style, and content. Html web pages are referred to as documents and dom represent these web pages in a tree structure.

15. **Question:** Is JavaScript a static type or a dynamic type?

Answer: Javascript is a dynamic type language. Because all of the aspects of it are dynamic.

16. **Question:** What is the use of the isNaN function?

Answer: The isNaN is a function. Which is used to check if a given value is an illegal number or not.

17. **Question:** What are JavaScript Cookies?

Answer: When users visit the website and store any information then the website stores those as cookies.

18. **Question:** What is the use of a type of operator?

Answer: We use the "typeof" operator to return a string description of the type of a variable.

19. **Question:** What are the different types of errors in JavaScript?

Answer: JavaScript has three types of errors which are load time errors, runtime errors, and logical errors.

20. **Question:** What is the use of the Push method in JavaScript?

Answer: We use the push method to append elements to an array end.

21. **Question:** Is JavaScript case sensitive? Give its example.

Answer: Yes, JavaScript is case sensitive. For example, parseInt and parseint functions are not the same.

22. **Question:** Why should you not use innerHTML in JavaScript?

Answer: innerHTML content is refreshed each time and it thus is slower. In innerHTML it is easy to insert rogue code in the document and destabilize the webpage.

23. **Question:** What is the difference between Java & JavaScript?

Answer: Java applications run in a virtual machine or browser and it needs to compile for compiling their code. On the other hand, JavaScript code runs only on a browser, and JavaScript code is in the form of text.

24. **Question:** What is the difference between Attributes and Property?

Answer: Attributes give us more details on an element like value, id, type, etc. But property is assigned value to the property like type=text, value=name.

25. **Question:** What are the data types supported by JavaScript?

Answer: JavaScript supports undefined, null, boolean, string, symbol, number, and object data types.

Js ES6 Questions and Answers

1. **Question:** Tell me about ES6

Answer: ES6 is the latest version of the ECMA Script programming language. Which makes our code more modern and readable. ES6 has some awesome features which allow us to write less code and do more.

2. **Question:** What are the differences between var, let, and const?

Answer: Var variables allow us to update and re-declare them which const did not. But let allows us to update them not re-declare.

3. **Question:** Why will you use default parameters?

Answer: We use default parameters for calling a function not one or more trailing arguments.

4. **Question:** How does the Spread operator work?

Answer: Spread operator is used for set operators in ES6. It makes codes more clear, short, and readable.

5. **Question:** Difference between class and object

Answer: Class is an example of which you can create and class is used to bind data and methods in a single unit. On the other hand, the object is an example of a class that helps to use variables and methods from inside the class.

6. **Question:** What is a Prototype chain?

Answer: A prototype chain is a link that holds a link to another object. Each private property from an object has a prototype chain.

7. **Question:** Explain Call by value vs call by reference

Answer: While we pass variable values for calling a function. Such functions are known as "Call by values". And when we pass variable address for calling a function that known as "Call by reference".

8. **Question:** What is the scope in JavaScript?

Answer: We use the scope for knowing the current context of code in javascript. And it improves variable accessibility in javascript.

9. **Question:** What is a Higher-order Function?

Answer: while a function takes a function as an argument or returns a function. Such functions are known as Higher-order functions.

10. **Question:** What is API? Difference between get vs post?

Answer: We use the post for changing something. While get for view something without changing.

11. **Question:** Difference between local storage and Session storage

Answer: Local storage and session storage are both similar. But the difference is local storage holds the data until we delete it from local storage. On the other hand, session storage holds the data until we close the tab or browser.

12. **Question:** What are cookies? And why will you use it?

Answer: Cookies are small pieces of data with text files. Which we use to improve the web browsing experience and store user activity on the website.

13. **Question:** What is object-oriented programming?

Answer: We know object-oriented programming as a computer programming model. Which organize software design around data or objects, not functions and logic.

14. **Question:** Difference between Array vs LinkedList.

Answer: When we collect similar data types elements those are an array. But when we collect objects known as a node those are LinkedList collections.

15. **Question:** How will you debug a JavaScript application?

Answer: We can debug javascript applications in various ways. Two of the most famous way are console log the values and another is set a breakpoint in each function and check where is the problem.

16. **Question:** Comparison between ES5 and ES6.

Answer: In ES5 we can use var only to define variables. And use a for loop to run and repeat elements. On the other hand, in ES6 we can use let and const instead of var only. And use a for-of loop to iterate over the values of the iterable objects.

17. **Question:** What is the arrow function?

Answer: ES6 introduced us to the arrow function. Which we can use to create a function more cleanly compared to regular functions.

18. **Question:** What is the generator function?

Answer: Generator is a function which is a special type of function. And it does not return a just single value. It returns the Iterator object with a sequence of values.

19. **Question:** Explain Destructuring in ES6.

Answer: Destructuring is an expression in ES6. Which allows unpacking values from arrays, or properties from objects into independent variables.

20. **Question:** What are Promises in ES6?

Answer: Promises is a way in ES6. Which we use to implement async programming in ES6. And it becomes a container for upcoming values.

21. **Question:** Explain the Rest parameter in ES6.

Answer: We use the rest parameter for allowing functions to accept an indefinite number of arguments as an array.

22. **Question:** What is Export Default and Named Export in ES6?

Answer: When we want to export several values then named export is useful. But when we want to export a single class, function, or primitive from a script file then export default is useful.

23. **Question:** Discuss the template literals in ES6.

Answer: Template literal is one of the best features to which ES6 introduced us. We can create multiple strings and perform string interpolation via using it. Because it provides an easy way to do that.

24. **Question:** What is a class expression?

Answer: Class expression is one of the ways which defines a class in ES6. It's similar to function expression.

25. **Question:** What is the difference between for..of and for..in?

Answer: For-in loop is used to repeat the overall countable property keys of an object. But the for-of loop is used to repeat over the values on a repeatable object.

React Questions and Answers

1. **Question:** Why will you select ReactJS?

Answer: I select react js because it's the best javascript framework for me. It gives me the best-rendering performance, clean code, and rich user interface, etc. ReactJs build single-page applications and for this reason, reactjs is the best option for building web applications nowadays.

2. **Question:** What is JSX? How does it work?

Answer: JSX is a short form for javascript XML. It's a javascript syntax extension. JSX convert HTML into react component for writing HTML in React.

3. **Question:** what is the diff algorithm? How does it work?

Answer: The diff algorithm is a command utility. Which we use to compare two files line by line.

4. **Question:** Differences between props and state?

Answer: Component control state and it's internal. While props are controlled by whatever renders the component and its external.

5. **Question:** What is the purpose of useState? When and why will you use it?

Answer: useState is a hook. Which allows setting state variables in functional components. We use useState when it requires dynamically manipulating something in the dom.

6. **Question:** What is a context API? How does it work?

Answer: Context API is a structure. Which store information in a central place and allows us to share that information with any component that requests it.

7. **Question:** Difference between useEffect and useState?

Answer: We use `useState` for set state variables in functional components. But we use `useEffect` to tell the react that your component needs to do something after render. And it manages side effects in the functional component.

8. **Question:** What other hooks have you used other than `useState` and `useEffect`?

Answer: I use more 2 hooks which are `useHistory` to get access to the react-router history. And another `useParams` to get access to the parameters of the current route.

9. **Question:** Tell us about React Component lifecycle

Answer: Every react component has a lifecycle and we can monitor them during their three main phases. The three phases are mounting, updating, and unmounting.

10. **Question:** What is the purpose of a custom hook? How will you create a custom hook? Give us an example.

Answer: The custom hook allows us to reuse certain parts in our project. We can create a custom hook by the import hook from react which is needed.

11. **Question:** What is the most challenging task you have accomplished using react?

Answer: I have faced so many challenging tasks using react which I accomplished later. One of the most challenging tasks is While I was trying to implement the dashboard panel in one of my projects.

12. **Question:** What is Redux and its uses?

Answer: Redux is a state management tool. Which allows react components to read data from a redux store.

13. **Question:** Do you know about React native?

Answer: Yes, react native is a javascript based mobile app framework. Which we use to build applications for android and ios.

14. **Question:** What is a Higher-order component? Give us an example.

Answer: Higher-order is a function and advanced technique in react. Which we use for reuse component logic. It takes a component and returns a new component.

15. **Question:** How would you optimize a react js application?

Answer: We can optimize a react js application via using an immutable data structure, stateless components, multiple chunk files and avoid using the index as a key for map, etc.

16. **Question:** What are the major features of React?

Answer: React has so many features. Some of the major features are it has virtual dom, supports server-side rendering, follows unidirectional data flow, and reusable components.

17. **Question:** What is the difference between Element and Component?

Answer: When we want to appear something on the screen then we use an element. Which is a plain object. On the other hand, we can declare components in so many ways like function or class with render method.

18. **Question:** What is a state in React?

Answer: When some information needs to change over the lifetime then we use state. Because the state of a component is an object.

19. **Question:** What is the difference between HTML and React event handling?

Answer: Event name usually represents in lowercase as a convention in HTML. And it can return false to prevent the default behavior. On the other hand, react uses camelcase convention and it calls `preventDefault`.

20. **Question:** What is the use of refs?

Answer: While we want to return a reference to the element then we use `ref`.

21. **Question:** What is React Fiber?

Answer: Fiber is a new reimplementation of the core algorithm in react. It makes animation, layout, and gestures suitable.

22. **Question:** What is the difference between createElement and cloneElement?

Answer: createElement function used for object representation of UI. Oppositely cloneElement clone an element and pass it new props.

23. **Question:** What is Lifting State Up in React?

Answer: While we get the same data from the parent component via the two-child component and move the state to parent in both of the child component systems called lifting state up.

24. **Question:** What is reconciliation?

Answer: When we change a component's props or state. Then react compare the new component with the old component. And if they are not equal then react update the component. This process is called reconciliation.

25. **Question:** Why does React use className over class attribute?

Answer: React uses className over class attribute. Because class is the main word in javascript but JSX is one of the extensions of javascript.