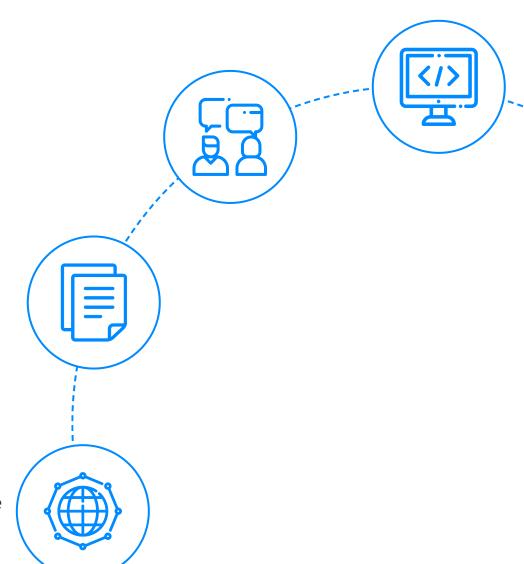
InterviewBit Front End Developer Interview Questions



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Contents

Front End Developer Interview Questions for Freshers

- 1. What skills does a front-end developer need?
- 2. Define HTML meta tags.
- 3. Differentiate between div and span?
- 4. What is React JS?
- 5. Describe the advantages of REST web services?
- 6. How browsers render the UI?
- 7. What is a Grid system in CSS?
- 8. Describe the distinction between Class and Prototypal inheritance in Javascript?

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- 9. Explain user-centered design?
- 10. What is ClickJacking?
- 11. Tell me when and why should I make use of Webpack?
- 12. Mention three ways to decrease page load time?
- **13.** How does the server hanger the page in which content is present in several languages?
- **14.** Why did we utilize the data- the attribute in HTML and why it is now advised not to use?
- **15.** Mention the benefits of CoffeeScript over JavaScript?

Front End Developer Interview Questions for Experienced

- **16.** What is stringify?
- 17. State all the elements of the CSS Box Model.
- 18. What is Progressive Rendering?



Front End Developer Interview Questions for Experienced

(.....Continued)

- 19. In an image tag, what is the benefit of the srcset attribute?
- 20. Mention the difference between MySQL and MongoDB?
- 21. Define the Anonymous function in JS?
- 22. What do you know about the CSS image sprites and why it is utilized?
- 23. Suggest some ways on how to fix the browser-specific styling issue?
- 24. Mention the pitfalls for using a CSS Preprocessor like Sass?
- 25. Suggest how can we optimize our front-end page.
- **26.** What is the difference between attribute and property?
- **27.** State the difference between == and ===?
- 28. Why do we utilize the "use strict"; statement?
- 29. Name the major HTTP requests

Frequently Asked Questions

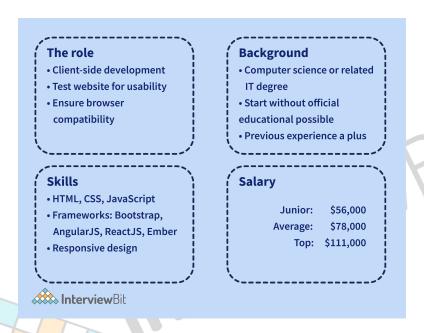
- **30.** How do I prepare for a front-end developer interview?
- **31.** Why should we hire you as frontend developer?
- **32.** What is the most challenging work you have ever done as a front-end developer?
- **33.** How much do front end developers get paid?
- **34.** Is front end developer a good career?
- 35. What is front end and back end web development?
- **36.** Which language is best for front end development?

Let's get Started

Front-end development is regarded as one of the most successful fields, particularly for novices in web development. Owing to the fact that it needs primarily basic skills like HTML, CSS, JavaScript, and a bit of server knowledge, many beginners consider front-end development to be a good way to start a career in full-stack development. Nevertheless, the field of front-end development is comprehensive and encompasses multiple different techniques and tools. Hence, interview questions for the position of front-end developers are diverse in nature and span across different domains.

In the world of technology, a programmer should be devoted to coding and efficient enough to transform the client's requirements into the application. In any front-end developer interview, the interviewer looks for this type of enthusiasm in the candidates. It is a well-known fact that the topmost IT firms are looking to employ front-end developers who are liable to build and manage interactive and responsive applications for all the devices by upholding client convenience and simplicity in mind.





If you are looking for a **front-end programmer's job** and don't have any idea how to get ready for the interview, you should not be worried as this article throws light on all the complicated and confusing questions that interviewers are more likely to ask you. These questions would give you a better picture of what employers want you to know. The interview questions for both freshers and experienced individuals are discussed here.

What is front-end development?

Frontend development denotes the realm of web development that concentrates on what the users see on their end. It revolves around changing the code created by backend developers into a graphical interface, making sure that the data is delivered in a simple, easy-to-read format. Without frontend development, all one can see on a website or web application would be some undecipherable codes. Because of frontend developers, people having no background in coding can readily understand and utilize web applications and websites. The thing you see when you visit Canva, Facebook, Google Apps, and other web applications are products of both frontend and backend developers working together.





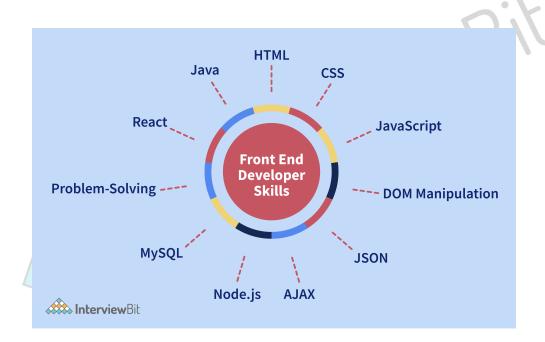
Other than assuring that users can understand and effectively utilize the web application's graphical interface, front-end developers also have many other things on their plates. For instance, frontend developers must look into the fact whether the web application or website is functional across different devices. Take note that systems differ in terms of operating system (OS) and screen size. A user can own a Windows tablet, a MacBook, and an Android mobile phone. Regardless of device type and OS, it is the job of the frontend developer job to make sure that the applications or websites work. Frontend developers are that users may prefer different web browsers. Also, frontend developers must build a website carefully that functions on Mozilla Firefox, Chrome, Safari, Microsoft Edge, Internet Explorer, and Opera.

Front End Developer Interview Questions for Freshers

1. What skills does a front-end developer need?



Frontend developers utilize different web technologies to change coded data into user-friendly interfaces. Many among these are Cascading Style Sheets (CSS), JavaScript, HyperText Markup Language (HTML), etc. Mentioned below are brief explanations of these technologies that <u>frontend developers</u> must be acquainted with.





- **HTML:** HyperText Markup Language depicts the content on the page like buttons, links, headings, paragraphs, and lists. It is the building block of websites and is utilized to define and mark content, so a browser shows it correctly. For instance, on a blog post, an image can be seen as an in HTML code, so browsers will understand that they have to display an image.
- **CSS:** CSS stands for Cascading Style Sheets and is accountable for the style of your web pages such as animations., colours, and layouts. CSS appears more like a group of instructions that gives structure and style to a webpage than a programming language. It enables programmers to control a web application or website's layout, formatting, and presentation. While HTML depicts elements on a page, CSS is accountable for how users see the content. For instance, it handles the border, alignment, size, of an image in a blog post.
- JavaScript: JavaScript is one of three main elements, in front-end web development, that is required to end up with a web page that can be rendered accurately. It is now challenging to visualize websites without JavaScript as it allows programmers to make the sites interactive. This programming language can transform website content on the basis of a user's action. For instance, at the top of the page, when you click on the Menu button, it will display a dropdown list of options or when you click on a button, it will toggle back and forth between closing and opening the Menu. JavaScript is great at figuring out the kind of browser being utilised, and then rendering the page in such a way that it is not only compatible with that page, but that it works the way it is designed. Using plugins is made easier by JavaScript. When complicated dynamic interactions are required for a site, JavaScript can be implemented to design its framework instead of simply depending only on HTML.
- CSS Frameworks, Libraries, and Preprocessors: Once you understand the fundamentals of CSS, then you can begin to work with various libraries and frameworks. These tools were designed as a way to help hasten the development process. Frameworks like Tailwind CSS, and Bootstrap let you incorporate the catalogue of classes into your webpage. Hence, you end up with mobile-friendly and professional designs. There are ample choices on the market and you don't require to know them all. It's often useful to look at related jobs and check what technologies they're employing. Then you can concentrate on the most in-demand skills.
- Testing and Debugging skills: As you are creating your application, there will be
 mistakes in your code that require to be fixed. Debugging is the act of
 recognizing those bugs and resolving them. Another essential skill to know is



2. Define HTML meta tags.

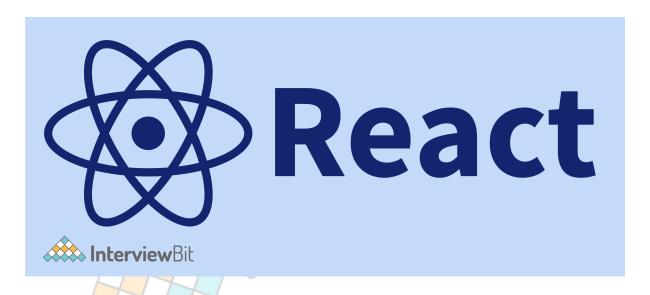
- Meta tags are passed as pairs of name/value.
- Meta tags can include data about encoding, document title, character description, etc,
- Meta tags fit inside the HTML page's head tag.
- Meta tags are not displayed on the page but it is to be shown on the browser.

3. Differentiate between div and span?

DIV	SPAN
It is utilized for separating the elements that are block-line, line break before and after it.	Span is utilized for grouping inline elements in the HTML doc.
It contains global attributes for the certain element in HTML documents.	It includes certain, global and event attributes.
At times para tag <p> is utilised for inner side of the <div> tag.</div></p>	In a paragraph, tag is utilized to use a CSS style for certain words with the selected font sets.
In div tag, we make use of borders with width height with specified color pixels to emphasize the front end document.	In the Span tag, we utilize specified color coding to depict the front-end document.



4. What is React JS?



An open-source front-end JavaScript library, ReactJS is used primarily for building user interfaces, especially for one-page applications. Also, it is utilized for handling the view layer for web and mobile apps. React lets programmers build large web applications that can modify data, without the need to reload the page. The main objective of React is to be quick, scalable, and easy. It functions only on user interfaces in the application and corresponds to the view in the MVC template. It can be utilized with a combination of other JavaScript frameworks or libraries, like Angular JS in MVC.

5. Describe the advantages of REST web services?

Listed below are some of the advantages of **REST** web services:

- The curve of learning is simple since it works on the HTTP protocol.
- No contract clears between server and client, so roughly coupled application.
- REST approaches can be effortlessly tested on the browser.
- It also backs multiple technologies for the transfer of, for instance, image, JSON, XML, text, etc.
- It is a lightweight protocol.

6. How browsers render the UI?



The primary responsibility of the rendering engine is to highlight the requested page on the browser's screen. Rendering engines can show XML and HTML images and documents. If you're utilising additional plugins, the engines can also exhibit various documents like PDF.

- **Receives the requested document:** The contents of the requested document is obtained by the rendering engine from HTML's networking layer.
- Construct the DOM tree: Parsed the HTML to the parsed tree and then set up the DOM tree, making use of it.
- **Construct the CSSOM:** CSSOM stands for CSS Object Model. Post the construction of the DOM tree, it identifies a link tag in the head section, which references the external style.css CSS style sheet. So, it parsed the CSS file in CSSOM tree, something which the Browser can comprehend as the DOM tree.
- Construct the Render tree: Utilise the HTML DOM tree coupled with the styling data of the CSSOM tree to set up a render tree. Render tree is the graphical depiction of the HTML, with the corresponding CSS. This tree enables painting the contents in their right order. Every node in the Render Tree is regarded as a renderer. The Render tree looks like this:
- Layout: When the renderer is developed and incorporated into the tree, it does not have a size or position. Computing these values is defined as layout. We use the coordinates system to position the element, such as the position of the root renderer is 0,0. The layout continues recursively via a part of the entire renderer hierarchy, calculating geometric info for every renderer that needs it. Beginning the layout process implies allowing every node the exact coordinates where it should show up on the screen.
- **Painting of the Render Tree:** The renderer tree is traversed in this stage and the renderer's paint() method is hailed to exhibit the content on the screen. For good UX, the rendering engine will aim to exhibit the contents on the screen as soon as possible. It will not stand by until all the HTML is parsed to develop and layout the render tree.

7. What is a Grid system in CSS?



CSS splits the page into grids and utilizes those grids to handle the HTML content. Utilizing the Grids, CSS can stack and highlight various elements in different parts of the grids.

8. Describe the distinction between Class and Prototypal inheritance in Javascript?

From most other programming languages, Inheritance in JavaScript is different. JavaScript's object system is prototype-based, not class-based. Objects in JavaScript are just a set of value pairs and a name (key). Talking about inheritance, JavaScript just has one construct: objects. Each object has a private property that includes a link to another object named its prototype.

9. Explain user-centered design?

An iterative design procedure, User-centred design lets the designers focus on the clients and their needs in every design process phase. The user-centered design calls for linking users in the design process via a variability of design and research techniques to make usable and highly accessible products. User-centered design demands that designers should utilize a combination of generative (such as brainstorming) and investigative (interviews and surveys) methods and instruments to create an understanding of user requirements.

10. What is ClickJacking?

ClickJacking is a security attack where the user is fooled to click on something while they assume they are clicking another thing. The attack mostly happens by the HTML frames. ClickJacking is also regarded as the user interface redressing. It lets the user think that they are utilising a normal UI in the web page, but in actuality, there is an unseen UI in control; you can think of it as the user interface being redressed. When users click on one thing, assuming it to be secure and safe, the hidden UI executes another action.

11. Tell me when and why should I make use of Webpack?



While creating a complicated front-end application with tons of non-code static possessions, for instance, CSS, fonts, images, etc, then, of course, you should make use of Webpack since it has a lot of amazing benefits.

If you have a small application that doesn't have a lot of static resources and you only have to create one file of JavaScript to help the customers, then Webpack should be more overhead than needed.

12. Mention three ways to decrease page load time?

There are numerous things accountable for lowering page load time. Let us look at the three best ways to reduce its loading time:

- **Image Optimization:** It is always advised to scale your videos and pictures before uploading them to a page.
- **Browser Cache:** The utilization of cache will boost speed for pages that you have visited already.
- Optimize and compress content: Compressing the content of a website decreases the load time of a page to a great extent.
- **StyleSheet Reference on Top:** Setting stylesheet reference to the header of a doc allows your page to load quickly.

13. How does the server hanger the page in which content is present in several languages?

When an HTTP request is sent to the server by the user, the user browser also sends a chunk of additional information regarding the language preference as the Accept-Language header. Then the server reads the HTTP request with the Accept-Language header and sends the document version back along with the right language and declares the language attribute Lang in the HTML tag.

Example:



14. Why did we utilize the data- the attribute in HTML and why it is now advised not to use?

Generally, Data-* attributes of HTML are utilized to accumulate the custom data, which is private to the web application or page. This custom data is for personalizing the JavaScript of the user as per the user action on the web page.

These days, Data-*attributes are not advised to utilize as the user can change the attribute easily just by utilizing the browser inspect console.

Example:

```
        data-car-type="GTC">Ferrari
        data-car-type="X5">BMW
        data-car-type="Benz E-Class">Mercedes

        InterviewBit
```

15. Mention the benefits of CoffeeScript over JavaScript?







- **Write less do more** For a huge code in JavaScript, we require comparatively a very less number of lines of CoffeeScript.
- **Easily understandable** The shorthand form of JavaScript is CoffeeScript, its syntax is quite simple as compared to JavaScript. Making use of CoffeeScript, we can document clean, clear, and easily discernible codes.
- **Reliable** CoffeeScript is a secure and reliable programming language to create dynamic programs.
- **Readable and maintainable** CoffeeScript offers aliases for most of the operators, making the code readable. Also maintaining the programs written in CoffeeScript is effortless.
- Class-based inheritance JavaScript does not have classes, in place of them, it
 offers powerful but complicated prototypes. Unlike JavaScript, in CoffeeScript,
 we can make classes and inherit them. Additionally, it also provides instant and
 static properties along with mixins. It utilizes JavaScript's native prototype to
 construct classes.
- **No var keyword** There is no requirement to utilize the var keyword to form a variable in CoffeeScript, hence we can evade accidental or undesirable scope deceleration.
- Avoids problematic symbols There is no requirement to utilize the
 problematic parenthesis and semicolons in CoffeeScript. In place of curly braces,
 we can utilize whitespaces to distinguish the block codes such as functions,
 loops, etc.
- **Extensive library support** In CoffeeScript, we can utilize the JavaScript libraries and vice versa. Thus, we have access to a myriad set of libraries while operating with CoffeeScript.

Front End Developer Interview Questions for Experienced

16. What is stringify?



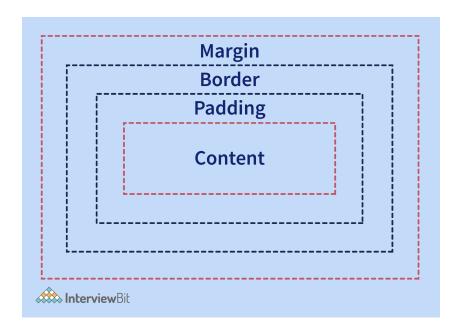
IN a JSON method, stringify is used to transform a JavaScript object into a string. JSON is a common structure to receive and send data between the web server and the client, and when we wish to send data to the webserver, the object ought to be a string.

Example:

```
var data = { ID:1, First_name: "sam", Second_name: "will"};
var send_data = JSON.stringify(data);
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```

17. State all the elements of the CSS Box Model.

In its BOX model, CSS comprises 4 elements:





- **Content** Displays the main content and the text of the web page.
- Padding This area encircles the content.
- Border The border is the padding's outer layer.
- Margin Margin is the area outside the border.

18. What is Progressive Rendering?

Progressive rendering is a process that is utilized generally to boost the web page's rendering content process. Now the rendering process is utilized in modern web development to enhance the mobile data uses of the user, async HTML fragments, prioritizing visible content, and lazy loading of images.

19. In an image tag, what is the benefit of the srcset attribute?

srcset is utilized when we wish to generate several resolutions of the exact image on several devices. This improves the UI. The browser will display low resolution on lowend devices, and high resolution of an image on high-end devices.

Example:

20. Mention the difference between MySQL and MongoDB?

- **MySQL:** It is a Relational Database Management System (RDBMS), which makes use of SQL as a standard language to handle its database. Like different relational database management systems, MySQL makes use of a table-like structure to stow data.
- MongoDB: MongoDB is a NoSQL database that utilizes the JSON-like structure to stow data elements. To modify and access data in MongoDB, the programmer ought to make use of the MongoDB Query Language (MQL).

21. Define the Anonymous function in JS?



Generally, the function name is defined when we define the function itself, in normal user-defined functions, but in the case of an anonymous function, the function name is not defined. Here we make use of an assignment operator and variable to stow the function as an object, then utilizing that variable, we will be capable to invoke the function itself.

Example:

```
var add = function(a,b){ consol.log(a+b)}
add(4,5);  //9
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```

22. What do you know about the CSS image sprites and why it is utilized?

CSS image sprites assist to render numerous images in a single line image. In a nutshell, the CSS sprites merge numerous photos into a single large image. If a web page comprises different images, then it would raise its loading time as for every image the browser has to send a distinct HTTP request, but with the help of sprites, we have a single image to request.

23. Suggest some ways on how to fix the browser-specific styling issue?

- We can make a distinctive stylesheet for various browsers making use of serverside rendering.
- Another method is utilizing a library such as Bootstrap, which already has the code to manage the browser-specific styling issue.
- Reset or Normalize CSS can also be utilized. Multiple 3rd party plugins equip libraries for browser styling issues.

24. Mention the pitfalls for using a CSS Preprocessor like Sass?



- An extra tool for the preprocessor is required.
- Preprocessor files can not be performed directly on the browser.
- Slow re-compilation of the preprocessor.
- For the preprocessor, you ought to know extra tools, which improve the learning curve of CSS.

25. Suggest how can we optimize our front-end page.

- The consumption of resources can be reduced by the pages by enhancing the server response.
- Utilize JavaScript and External CSS instead of internal or in-line.
- Utilize the framework to ensure the front-end becomes more responsive to different devices.
- Open-source libraries can be used to manage the browser-specific styling issue.
- Make use of progressive loading like Lazy Loading to enhance the rendering of heavy elements, like videos and images.
- Connect the style sheet in the header and script at the top of the HTML's body tag.
- Utilize browser storage to keep user-specific private data.

26. What is the difference between attribute and property?

Attributes are an element of an HTML document while properties are a part of the Document Object Model (DOM).

Example: <input type="text" value="Tech">

Here, value and type are the attributes of HTML, but when the statement is read by the browser and parses this code it will make a DOM with different properties, like accept, autofocus, accessKey, baseURI, checked, childElementCount, align, alt, childNodes, children, classList, className, attributes, and clientHeight.

Example:

var data = document.querySelector(input); // here we created a document object of input console.log(input.getAttribute('value')); // tech // getting the attribute value console.log(input.value); // tech // getting the property of the input object



27. State the difference between == and ===?

== denotes abstract equality operator, and it inspects if two values are equal or not apart from their data types. Automatically, it transforms the type of both the operands and compares them.

Example:

```
1=='1'; //true
1==1; // true
```

=== denotes identity equality operator, and it inspects the values of both the operands and their data type. The outcome of the operation will be true considering both the operands are equal and have the same data type, or else it returns false.

Example:

```
1===1 //true
1==='1' // false
```

28. Why do we utilize the "use strict"; statement?

The 'use strict' statement sets a few restrictions in the script. Typically, it is utilized to facilitate the strict mode of the script, making sure there could be no loose coupling like undeclared variables.

29. Name the major HTTP requests



HTTP Requests	Description
GET	It is sent when we wish to recover data from the server. GET request is the most typically used HTTP request.
HEAD	The HEAD is a reaction that is the same as the GET request but doesn't possess a message-body in the response. The HEAD request method is beneficial in retrieving meta-data that is documented as per the headers, without transferring the entire content. The method is commonly utilised when testing hypertext links for recent change, accessibility, and validity.
TRACE	TRACE requests are implemented to invoke a remote, application loop-back test along the path to the target resource. The TRACE method lets users to witness whatever message is being received at the other end of the request chain so that they can utilise the data for testing or diagnostic functions.
POST	This request is utilized to transmit data from the user to the server. By submitting web forms, these requests can be made. The POST request is generally utilized to build data in the database. For instance, when we build a new account on any webpage, we make use of the POST request.



HTTP Status codes	Description
HTTP Status Code 301 - Permanent Redirect	Any time one URL needs to be redirected to another permanently, a 301 redirect should be used. A 301 redirect implies that bots and visitors that come on that page will be taken to the new URL. Link equity is also passed to the new URL via a 301 redirect.
HTTP Status Code 302 - Temporary Redirect	302 redirect is just like a 30, where it passes visitors and bots to the new page, but it may not pass along link equity. It is not recommended using 302 redirects for permanent changes.
HTTP Status Code 404 - Not Found	This implies the server did not find the file or page that the browser is requesting. 404s don't show whether the missing resource or pages are missing temporarily or permanently. You can check what this appears to be on your site by writing in a URL that doesn't exist. Every site will have some pages that display the 404 status codes.
HTTP Status Code 200 - OK	This is the ideal status code for a properly functioning page.
HTTP Status Code 410 - Gone	A 410 implies the page is no longer available from the server and they have set no forwarding address. Any links you present on your site that are directed to a 410 page are sending visitors and bots to a dead resource.



Additional Useful Resources

- Front End Developer Salary in India For Freshers & Experienced
- Front-End Developer Resume Sample (PDF): Full Guide and Example
- Best Front End Frameworks
- Difference Between Frontend and Backend Frontend Vs Backend

Frequently Asked Questions

30. How do I prepare for a front-end developer interview?

When you're preparing for your Front-end developer interview, try to code most of your layout without taking a glance at the result till the end. If CSS, HTMLare the most important aspect of front-end development, then JavaScript tops the list of important skills to own. Organisations will spend a lot of time during your interview to test your understanding of Javascript.

31. Why should we hire you as frontend developer?

- Freshers: While interviewing for front-end developer jobs for freshers you can come across this question. The best answer would be, "I have just begun my career, and do not have practical achievements, but I wish to explore and experience my potential by giving the best services to the company. It will be my privilege to work with your organization."
- Experienced: The best answer would be, "You should hire me for the role of front-end developer owing to my proven ability to create effective front-end user interfaces in line with contemporary best practices. I have experience working with JavaScript, along with the React framework, to create front-end applications."

32. What is the most challenging work you have ever done as a front-end developer?

The biggest challenges faced as a front-end developer are:



- Make sure each UI element like button, link navigation, works as planned despite the user having JavaScript or cookies disabled.
- Make sure everything looks similar across all browsers.
- HTML tables.
- Debugging JavaScript code.

33. How much do front end developers get paid?

As per the payscale, freshes, front-end developer gets an average of ₹305,498 per annum. An intermediate developer's salary is ₹452,073 on average. A senior developer can earn an average of ₹806,231.

34. Is front end developer a good career?

Yes, a front-end developer is regarded as a good career choice. It is in demand by toptier players like Deloitte, Amazon, HCL, etc. Furthermore, the annual pay for a frontend developer is lucrative. In a nutshell, it is an in-demand position, good pay, and new learning each day.

35. What is front end and back end web development?

Front-end development is considered as the programming which concentrates on the visual elements of an app or website that a user will interact with. Back end development concentrates on the side of a website that the user can't see, meaning the server-side.

36. Which language is best for front end development?

The languages best for front-end development are HyperText Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, React, Angular, Vue.

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