15 JavaScript interview questions and answers

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Q   What are the advantages of using JavaScript?

A   You want a developer who really knows how to play to the strengths of your chosen platform. Some key advantages of JavaScript are listed below for your convenience.

> **Lightweight**: JavaScript can be executed within the user's browser without having to communicate with the server, saving on bandwidth.

> **Versatile**: JavaScript supports multiple programming paradigms—object-oriented, imperative, and functional programming and can be used on both front-end and server-side technologies.

> **Sleek Interactivity**: Because tasks can be completed within the browser without communicating with the server, JavaScript can create a smooth "desktop-like" experience for the end user.

Rich Interfaces: From drag-and-drop blocks to stylized sliders, there are numerous ways that JavaScript can be used to enhance a website's UI/UX.

Prototypal Inheritance: Objects can inherit from other objects, which makes JavaScript so simple, powerful, and great for dynamic applications.

HIDE THE ANSWER

Q   What are the disadvantages of using JavaScript?

A   Experienced coders won't just be able to rave about their favorite language's strengths—they will also be able to talk about its weaknesses. JavaScript's main weakness is security. Look for answers on how it can be exploited. A secondary weakness is JavaScript's ubiquity and versatility—it can be a double-edged sword in that there's a lot of room for programming quirks that can lead to inconsistent performance across different platforms.

HIDE THE ANSWER

Q   Explain the difference between classical inheritance and prototypal inheritance.

A   The great thing about JavaScript is the ability to do away with the rigid rules of classical inheritance and let objects inherit properties from other objects.

Classical Inheritance: A constructor function instantiates an instance via the "new" keyword. This new instance inherits properties from a parent class.

Prototypal Inheritance: An instance is created by cloning an existing object that serves as a prototype. This instance—often instantiated using a factory function or "Object.create()"—can benefit from selective inheritance from many different objects.

HIDE THE ANSWER

Q Give an example of a time that you used functional programming in JavaScript.

A Functional programming is one of the key paradigms that makes JavaScript stand out from other languages. Look for examples of functional purity, first-class functions, higher-order functions, or using functions as arguments and values. It's also a good sign if they have past experience working with functional languages like Lisp, Haskell, Erlang, or Clojure.

HIDE THE ANSWER

Q Give an example of a time that you used Prototypal OO in JavaScript.

A Prototypal OO is the other major programming paradigm that really lets JavaScript shine—objects linked to other objects (OLOO). You're looking for knowledge of when and where to use prototypes, liberal use of "Object.assign()" or mixins, and a solid grasp of concepts like delegation and concatenative inheritance.

HIDE THE ANSWER

Q What is a RESTful Web Service?

A REST stands for Representational State Transfer, an architectural style that has largely been adopted as a best practice for building web and mobile applications. RESTful services are designed to be lightweight, easy to maintain, and scaleable. They are typically based on the HTTP protocol, make explicit use of HTTP methods (GET, POST, PUT, DELETE), are stateless, use intuitive URIs, and transfer XML/JSON data between the server and the client.

HIDE THE ANSWER

Q Which frameworks are you most familiar with?

A You can tell a lot about a programmer from the frameworks they're familiar with—AngularJS, React, jQuery, Backbone, Aurelia, and Meteor are just some of the more popular ones available. The key here is to make sure the developer you're engaging has experience with the framework you've chosen for your project.

HIDE THE ANSWER

Q How experienced are you with MEAN?

A The MEAN (MongoDB, Express, AngularJS, and Node.js) stack is the most popular open-source JavaScript software stack available for building dynamic web apps—the primary advantage being that you can write both the server-side and client-side halves of the web project entirely in JavaScript. Even if you aren't intending to use MEAN for your project, you can still learn a lot about the developer when they recount their experiences using JavaScript for different aspects of web development.

HIDE THE ANSWER

Q Explain the differences between one-way data flow and two-way data binding.

A This question may seem self-explanatory, but what you're looking for is a developer who can demonstrate solid understanding of how data flows throughout the application. In two-way data binding, changes to the UI and changes to the model occur asynchronously—a change on one end is reflected on the other. In one-way data binding, data only flows one way, and any changes that the user makes to the view will not be reflected in the model until the two are synced. Angular makes implementing two-way binding a snap, whereas React would be your framework of choice for deterministic one-way data flow.

HIDE THE ANSWER

Q   Determine the output of the code below. Explain your answer.

A

```
1   console.log(0.1 + 0.2);
2   console.log(0.4 + 0.1 == 0.5);
```

This is a trick question in that at first glance, you might expect the console to print out "0.3" and "true." The correct answer is that you can't know for sure, because of how JavaScript treats floating point values. In fact, in the above example, it will print out:

```
1   0.30000000000000004
2   false
```

HIDE THE ANSWER

Q   Determine the output of the code below. Explain your answer.

A

```
1   var myObject = {
2       egg: "plant",
3       func: function() {
4           var self = this;
5           console.log("outer func: this.egg = " + this.egg);
6           console.log("outer func: self.egg = " + self.egg);
7           (function() {
8               console.log("inner func: this.egg = " + this.egg);
9               console.log("inner func: self.egg = " + self.egg);
10          }());
11      }
12  };
13  myObject.func();
```

This question is designed to test the interviewee's understanding of scope and the "this" keyword. In the outer function, both "this" and "self" correctly refer to "myObject" and can subsequently access "egg." In the inner function, "self" remains within scope while "this" can no longer refer to "myObject"—resulting in the output below:

```
1   outer func:  this.egg = plant
2   outer func:  self.egg = plant
3   inner func:  this.egg = undefined
4   inner func:  self.egg = plant
```

HIDE THE ANSWER

Q   Write a function that can determine whether a string is a palindrome in under 100 characters.

A   A palindrome is a word, phrase, or sequence of letters that reads the same backwards or forwards. It also makes a great test for checking their ability to handle strings.

```
1   function isPalindrome(str) {
2       str = str.replace(/s/g, '').toLowerCase();
3       return (str == str.split('').reverse().join(''));
4   }
```

HIDE THE ANSWER

Q   How would you empty the array below?

A
```
1   Var emptyArray = ['this', 'array', 'is', 'full'];
```

This deceptively simple question is designed to test your prospective coder's awareness of mitigating potential bugs when solving problems. The easiest method would be to set "emptyArray" equal to "[ ]"—which creates a new empty array. However, if the array is referenced anywhere else, the original array will remain unchanged. A more robust method would be "emptyArray.length – 0;"—which not only clears the array but updates all reference variables that point to this original array. Some possible solutions are listed below:

```
1   emptyArray.length = 0;

2

3

4   emptyArray.splice(0, emptyArray.length);

5

6

7   while(emptyArray.length){

8       emptyArray.pop();

9   }

10

11

12  emptyArray = []
```

HIDE THE ANSWER

Q Determine the output of the code below. Explain your answer.

A
```
1   var lorem = { ipsum : 1};
2   var output = (function(){
3       delete lorem.ipsum;
4       return lorem.ipsum;
5   })();
6
7   console.log(output);
```

The output would be undefined, because the delete operator removed the property "ipsum" from the object "lorem" before the object was returned. When you reference a deleted property, the result is undefined.

HIDE THE ANSWER

Q Are you a team player? Give an example of a time when you had to resolve a conflict with another member on your team.

A   There are many jobs associated with putting together an application, and chances are high that your new JavaScript developer will at the very least have to interface with a designer. You're looking for a developer who can communicate effectively when they need to, responds to emails, and knows how to coordinate with other branches of a project.

HIDE THE ANSWER

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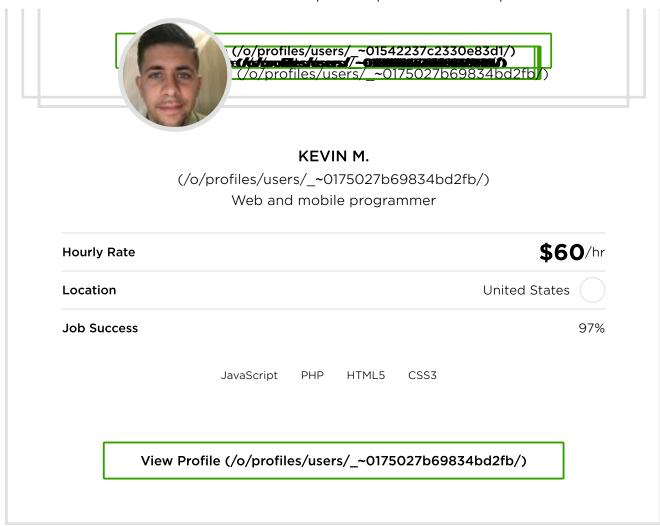
Answer

> Answer

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At a glance: JavaScript Developers

JavaScript is the lightweight, interpreted programming language of choice for creating dynamic and interactive content on the web. Whether you're looking for a server-side developer to help you kickstart the backend of your new app or a front-end developer to spruce up the shopping cart of your ecommerce site, a JavaScript programmer can help you bring your web projects to life.

How do you find the right JavaScript developer? It all depends on what you are trying to build. JavaScript is a versatile language that has spawned numerous frameworks, libraries, APIs, and other web technologies. The skills and experiences of the developers you'll find on Upwork will be just as varied. You'll need a JavaScript developer who's familiar with the particular set of web technologies you've chosen to support your project. That said, you can still quiz prospective developers on higher-level programming concepts to ensure they have the coding experience necessary to pick up the architectural quirks and syntax specific to your project. Here are some interview questions you can use to help you find the right JavaScript developer for your needs.

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