1. What are variables? Why do we use them? What kind of scope JS comes with a variable that is declared with var keyword?

A)

It can store the data. It comes under local, global scope. If the value is assigned inside the function then it is local variable. If the value is defined outside of the function it is global variable.

1. What is the difference between variable declaration and variable initialization?

A)

Variable declaration : it means we are declaring or fixing a value to it.

Variable initialization : it means we are initiating value.

1. Why does javascript return "undefined" when we invoke a variable before the declaration.

A)

. the variable that is being evaluated does not have an assigned value.

1. What is JavaScript Variable Scope? What are the three variable scopes? What is a scope chain?

A)

Variable scope : it is the part of the program where the variable is accessible.

3 types : local, global, block scopes

Scope chain : it is used to resolve the value of variable names. Without scope chain the javascript engine don’t know what value to take if there are many scopes.

1. What is JavaScript hoisting? Write its usage and an example?

It moves all the declarations to the top before the code execution. It doesn’t matter where the declarations are given it take to the top of the code.

1. Difference between function declaration and function definition?

A)

Function declaration :

It specifies the function name, return types and parameters without the body function.

Indicates the compiler about the function and how to call that function.

Contains function name, parameter list, return type.

Function definition :

It specifies the function name, return types, parameters and with the body function.

Helps to write what the function should perform.

Contains function name, return type, parameters, function body.

1. Why var is accessible from the function's scope?

A)

The var keyword **is limited to function scope**, meaning that new scope can only be created inside functions. Function and block scopes can be nested. In such a situation, with multiple nested scopes, a variable is accessible within its own scope or from inner scope. But outside of its scope, the variable is inaccessible.

1. What is Memory leaks in JS?

Memory leak is defined as the it is the part of memory which is not using or unwanted by an application.

In js we no need an object but js run time will do on that.

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1. What is use strict mode in javascript? List it's usage.

A)

It is used to run the safe and secure code.

It eliminates the silent errors by changing them into throw errors.

“use strict” it is a string lateral expression put it on starting of the code or we have to place it in inside function at starting but it applies only for function.

‘the stict mode is no longer required after the release of es2015.

“but es6 we have to use strict mode almost for all the codes of js.

1. What is variable shadowing?

A)

When a variable is declaired with in a certain scope has the same name as the variable declared in an outer scope.

1. What is global variables?

A)

It is defined as the variable that has declared outside of the function and it is accessbile through out the program.

1. What is local variables?

A)

It is defined as the variable that has declared inside of the function and it accessible to that function only.

1. What is undefined variables?

A)

It is defined as the variable used in a program that was not previously declared in the source code.

1. What is undeclared variables?

A)

When we try to access any variable that is not initialized or declared earlier using var or const keyword.

Undeclared variables is always is global scope.

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1. What are the JavaScript data types give example?

A)

There are two types

1. Primitive data types

* Undefined : var num
* Null
* Number : 37
* String : “bhargav”
* Boolean : true or false
* Symbol

1. Complex data types

* Object : {name:”bhargav”, place:”Chennai”}
* Array : [ 10,20,30,40,50]

1. What  is complex data type?

A)

3) What is typeof undefined?

A)

It is defined as the variable name has given but we didn’t assign the value to it.

Is null==undefined?

null is a special object because typeof null returns 'object'. On the other hand, undefined means that **the variable has not been declared, or has not been given a value**. null becomes 0 when used in arithmetic expressions or numeric comparisons - similarly to false, it is basically just a special kind of "zero".

4)What is typeof null?

A)

It is used to show an empty reference to an object.

Null= undefined; here undefined is object.

5) What is Boolean, number and string? Explore in

Detail?

A)

Number : it represents the integers, decimals(floating point

Numbers).

That are either positive and negative.

The number() function is used to convert data type to

Number.

String : it is the textual content. It must be written in ‘ ’ or

“ “.

It is also called as character index.

Boolean :

It has only two values True or False.

Boolean operators are AND , OR , NOT , AND NOT

It compare the datatype of values and it gives either

True or false.

It is used as a function to get the values of varaibles, expreessions, conditions.

1. What is operating system and kernel means?

A)

Operating system :

It is the most important software that runs on a software.

It is a interface between a computer and user.

It manages the memory and process of its software and

Hardware.

Each device has the operating system.

Types of operating systems :

* Batch os
* Time sharing os
* Multiprocessing os
* Real time os
* Distributed os
* Network os
* Mobile os

Kernel:

It is the central component of an operating system

That manages operations of computers and hardware.

It manages operations of memory and cpu time.

It has complete control on the system.

It always resident in the memory.

It gives interaction between hardware and software.

1. What is memory?

A)

Memory means it is to acquire, store, retain, and later retrive

Information.

It is of 3 types : sensory memory, short-term, long-term.

Sensory memory:

It mean make up your ability to process and recall what u see…..simply we can say if we look at something and we think what have I seen now.

Short-term memory:

It is also known as active or primary memory.

It is ability to store a small amount of information and for short period of time.

Long-term memory :

It can store the data permenantly.

We can see whenever we needed.

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1. What is unary operator, Explain with an example?
2. It works on only one operand.

It is of four types :

Unary plus(+) : convert an operand into number.

Unary minus(-) : convert an operand into number and add the negate value .

Increment operator(++):

Pre increment(++ a ):

It adds +1 to the operand.

Post increment(a++) :

It adds +1 to the operand.

Decrement operator(--) :

Pre decrement (-- a) :

It subracts the -1 from the

Operand.

Post decrement (a --) :

It subracts the -1 from the

Operand.

1. What is logical operators, Explain with an example?

A)

Logical operators operates on Boolean expressions and combine the results of the Boolean expression into a single Boolean value.

Logical AND operator (&&) :

It is when the both operands are non-zero then this condition is apply and the value is true.

Ex: a=10, b=10

(a&&b)=true

Logical OR operator (||) :

If any of the two operands is non-zero then condition becomes true.

Logical NOT operator (!) :

It is used to reverse the condition if a condition is true when we use NOT operator then the condition become false.

1. What is difference between === And !==? Where do we use it!

A)

(===) : strict equal , (!==) not strict equal

Not strict equal does not convert an operand before comparision

=== is used for comparing for two variables. It checks the data type also.

2 August 2021

1. What is a DOM?

A)

DOm – Document Object Model

When the browser tries to render a HTML document it creates an object based on the HTML document called DOM using DOM we can manipulate various elements inside the HTML document.

1. What is the difference between Real DOM and Virtual DOM?

A)

|  |  |
| --- | --- |
| Real Dom | Virtual Dom |
| 1. It updates slow | 1. it updates fast |
| 1. Can Directly Update Html | 2)Can Not Directly Update Html |
| 3)Creates A New DOM If Element Updates. | 3) Updates The JSX If Element Updates |
| 4)dom Manipulation Is Very Expensive. | 4)DOM Manipulation Is Very Easy. |
| 5)Too Much Of Memory Wastage. | 5)No Memory Wastage. |

1. What is single and multi page applications?
2. Single page application:

It is a web application that interacts with user by dynamically rewriting the current page. It means it can avoid loading entire new pages from the server.

Multi page application:

It is a web application that reload the entire page and display the new one when a user interacts with the web. A new page is requested from the server to display in the web browser.

1. What are the traditional way of client and server architecture?

A)

The client/server architecture involves two levels a client level and server level.

Client and server architecture:

Architecture of a computer network in which many clients requests and receive service from a centralized server.

1. How does the client and server works with single and multi page applications?

A)

1. What is server side rendering and client side rendering?

A)

Rendering:

It is a process used in web development that turns website code into the interactive pages users see when they visit a website.

Server-side rendering:

It is the ability of an application to contribute by displaying the web-page on the server instead of rendering it in the browser.

Client-side rendering:

It allows the developers to make their websites entirely rendered in the browser with javascript. Without having a different HTML page per route a CSR website creates each route dynamically directly in the browser.

Difference is in CSR the browser downloads a minimal HTML page. Ot renders to the javascript and fills the content to it. SSR renders the react components on the server. The output is HTML content.

1. Difference between CSS and CSS3?

A)

|  |  |
| --- | --- |
| CSS | CSS3 |
| CSS is the basic version with the basic formatting functionality. | CSS3 is the latest iteration of the CSS language that extends the functionality of CSS2 |
| It does not support responsive design and cannot handle media queries. | It supports responsive design and can handle media queries quite well. |
| CSS is relatively slower than CSS3 | CSS3 is faster than the old versions. |
| It does not support 3D transformations and animations. | It performs the 3D animations, transitions, transformations. |
| It cannot be split into varied modules. | It can be split into modules. |
| It has old and standard colours. | It offers new ways to use colours. |

1. Difference between HTML and HTML5?

A)

|  |  |
| --- | --- |
| HTML | HTML5 |
| Major markup language used to display web pages on the internet. | Major revision of HTML for describing the content and appearance of web pages. |
| Works well in older browsers. | Works well new and older browsers |
| Supports vector graphics using other technologies or plugins. | Vector graphics are an integral part. |
| Difficult to include and handle multimedia. | Easy to include and handle multimedia. |
| Does not support geolocation. | It supports geolocation. |
| It does not allow javascript run in the browser. | It allows javascript to run in the browser. |
| Web sockets are not available. | Web sockets are available and provide full duplex communication. |

9) Is that possible to use material UI without any framework?

A)

Yes. It is possible. We can use the CSS classes from material UI and native html types it renders.

10)Why we use html? what are other features add to html?

A)

HTML is the combination of Hypertext and Markup language. It is used the browser to manipulate text, images, other content to display in correct format.

New features:

Audio and video, Nav tag, Progress tag, Email attribute, Placeholder attribute, storage.

11) what is MVC architecture?

A)

MVC – Model - View – Controller

It is an architectural pattern that separates an application into three parts Model, View, Controller. Each of these components are built to handle specific development aspects of an application.

12) On which concept React js works?

A)

It works on virtual DOM. Rendering the virtual DOM is faster it will never render to the user it will only live in memory.

13) what is Application logic and Business logic?

A)

Application logic: it is mostly workflow logic.

It is the application specific coordination of domain and infrastructure components according to the requirements of that particular application.

Business logic:

It is the custom rules or algorithms that handle the exchange of information between a database and user interface.

14) Difference between Authentication and Authorization?

A)

Authentication:

It verifies whether it is you?

Methods:

Login form

HTTP authentication

Authorization:

It gives permission to access.

Methods:

Access controls for URLs

Secure object and methods

15) Difference between Nodejs and V8 engine?

A)

V8 is the javascript engine inside of nodejs that parses and runs the javascript.

The same v8 engine is used in the chrome to run the js in the chrome browser.

V8 is an independently C++ library, that is used by node to run the js code. V8 exposes an API that other code can use.

16) what are CDNs?

A)

CDN – content delivery network.

It is a distributed group of servers that work together to provide fast delivery of internet content.

It helps minimize delays in loading web page content by reducing the physical distance between server and user.