Assignment 1

1. What are the popup boxes in JavaScript?

 JavaScript popup boxes are small windows that appear on top of the current window. They can be used to display messages, get user input, or confirm actions.

There are three types of popup boxes in JavaScript:

 Alert box: Displays a message and requires the user to click OK to continue.

 Confirm box: Displays a message and asks the user to confirm an action. The user can click OK or Cancel.

 Prompt box: Displays a message and asks the user to enter input. The user can enter text and then click OK or Cancel.

 Popup boxes can be used to improve the user experience by providing feedback or getting user input. However, they can also be used to annoy users or to trick them into doing something they don't want to do. It is important to use popup boxes sparingly and only when they are necessary.

Here are some examples of how popup boxes can be used in JavaScript:

 Display a message: You can use an alert box to display a message to the user. For example, you could use an alert box to tell the user that they have entered invalid data.

 Get user input: You can use a prompt box to get user input. For example, you could use a prompt box to ask the user for their name or their age.

 Confirm an action: You can use a confirm box to confirm an action. For example, you could use a confirm box to ask the user if they are sure they want to delete a file.

Popup boxes are a powerful tool that can be used to improve the user experience or to annoy users. It is important to use popup boxes sparingly and only when they are necessary.

2. What is JavaScript engine for Safari?

**The JavaScript Engine for Safari is** Core Webkit.

4. Do some changes and observe

a. Give some wrong file name while import and observe the messages in console window

 Wrong file name doesn’t provide a message in console window.

b. Is Filename case sensitive check practically?

 Filename : Is not Case-sensitive

5. What are the key differences between Java and JavaScript?

 Here are some differences between Java and JavaScript:

o Type:

Java is a compiled language, while JavaScript is an interpreted language. This means that Java code is converted to machine code before it is executed, while JavaScript code is interpreted line by line.

o Platform:

Java is a cross-platform language, while JavaScript is a client-side language. This means that Java code can run on any platform that has a Java Virtual Machine (JVM), while JavaScript code can only run in a web browser.

o Purpose:

Java is primarily used for developing applications, while JavaScript is primarily used for developing web pages.

o Syntax:

Java has a more complex syntax than JavaScript. This is because Java is a class-based language, while JavaScript is a prototype-based language.

o Scope:

Java is a statically typed language, while JavaScript is a dynamically typed language. This means that the types of variables and expressions must be declared in Java, while they can be inferred from the context in JavaScript.

o Memory management:

Java uses automatic memory management, while JavaScript uses manual memory management. This means that Java garbage collector automatically deallocates memory that is no longer being used, while JavaScript developers must explicitly deallocate memory that is no longer being used.

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| --- | --- |
| SUMMARY: Java | JavaScript |
| Code must be compiled | The code is all text |
| Slightly more complex | Easier in comparison |
| Used to perform complex tasks | Complex tasks cannot be executed |

Assignment 2

1. Is it possible to disable JavaScript in browser? If yes, how to disable JavaScript in browser?

Yes, it is possible to disable JavaScript in your browser. Here are the steps on how to do it in Google Chrome:

 Open Google Chrome.

 Click on the three dots icon in the top right corner of the browser window.

 Select "Settings" from the drop-down menu.

 In the Privacy and Security section, click on "Site Settings".

 Under Permissions, click on "JavaScript".

 To the right of the Allowed option, click the toggle to the off position.

 Once you have disabled JavaScript, you will need to restart Chrome. Keep in mind that disabling JavaScript can impact your browsing experience and may prevent certain websites from working properly.

Here are the steps on how to disable JavaScript in other browsers:

 Mozilla Firefox: Open Firefox and go to "About:config". Search for "javascript.enabled" and double-click on the preference to change its value to "false".

 Safari: Open Safari and go to "Preferences > Privacy > Security". Under "Website Permissions", select "Never Allow JavaScript".

 Edge: Open Edge and go to "Settings > Privacy & Security > Site Permissions". Under "JavaScript", select "Allow sites to ask to run JavaScript".

ALSO: Open DevTools (F12) or use the “Inspect Element” option in the right-click menu. Click the Settings icon, the small gray cog wheel in the top right corner. On the “Preferences” tab, find the “Debugger” section. Check the option to “Disable JavaScript”

2. What is the difference between undefined and not defined in JavaScript?

o "Undefined" is a value that is assigned to a variable that has been declared but has not been assigned a value.

o For example:

 let x;

 console.log(x); // undefined

In this example, the variable x has been declared, but it has not been assigned a value. Therefore, when we log the value of x, we get undefined.

o "Not defined", on the other hand, refers to a variable that has not been declared at all.

o For example:

 console.log(y); // Uncaught Reference Error: y is not defined

In this example, the variable y has not been declared, so when we try to log its value, we get an error.

In general, "undefined" is a more specific error message than "not defined". When we see an "undefined" error, it means that we have declared a variable, but we have not assigned it a value. When we see a "not defined" error, it means that we have not declared a variable at all.

3. Difference between == and ===?

 In JavaScript, == is used to compare two variables, while === is used to compare two variables and check the data type.

4. What does the isNaN() function?

 The isNaN() function in JavaScript returns true if the given value is NaN (Not-a-Number), otherwise false. If the parameter to the isNaN() function is not of type Number, it is first converted to a number before testing whether it is NaN or not.

For example, the following code will return true:

 isNaN("hello world"); // true

5. Difference between Client-side JavaScript and Server-side JavaScript?

Client side

 It runs on the user's web browser.

 The browser must download the script before it can be executed.

 This can make the page slower to load.

 The script can be accessed and modified by the user.

 This can be a security risk.

Server side

 It runs on a web server.

 The browser does not need to download the script before it can be executed.

 This can make the page faster to load.

 The script is not accessible to the user.

 This makes it more secure.

 It can be used to generate dynamic content.

 This can make it more interactive.

 It can be used to process user input.