**PREPLACEMENT TRAINING – JAVASCRIPT – ASSIGNMENT 4**

1. **Explain Hoisting in JavaScript.**

Ans:

Hoisting is a JavaScript mechanism where variables and function declarations are moved to the top of their respective scopes before the code is executed.

1. **Explain Temporal Dead Zone?**

Ans:

A **temporal dead zone (TDZ)** is the block where a variable is inaccessible until the moment the computer initializes it with a value.

* A block can be defined as a pair of braces ({...}) used to accumulate multiple statements.
* Initialization occurs when one assigns an initial value to a variable.

1. **Difference between var & let?**

Ans:

In JavaScript, both the keywords var and let are used to declare variables.

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| --- | --- |
| **let** | **var** |
| let is block-scoped. | var is function scoped. |
| let does not allow to redeclare variables. | var allows to redeclare variables. |
| Hoisting does not occur in let. | Hoisting occurs in var. |

1. **What are the major features introduced in ECMAScript 6?**

Ans:

* Default Parameters
* Template Literals
* Multi-line Strings
* Destructuring Assignment
* Enhanced Object Literals in
* Arrow Functions in
* Promises in
* Block-Scoped Constructs Let and Const
* Classes
* Modules

1. **What is the difference between let and const ?**

| **var** | **const** |
| --- | --- |
| The scope of a [*var*](https://www.geeksforgeeks.org/javascript-var/)variable is functional scope. | The scope of a *[const](https://www.geeksforgeeks.org/javascript-const/)* variable is block scope. |
| It can be updated and re-declared into the scope. | It cannot be updated or re-declared into the scope. |
| It can be declared without initialization. | It cannot be declared without initialization. |
| It can be accessed without initialization as its default value is “undefined”. | It cannot be accessed without initialization, as it cannot be declared without initialization. |
| hoisting done, with initializing as ‘default’ value | Hoisting is done, but not initialized (this is the reason for the error when we access the const variable before declaration/initialization |

1. **What is template literals in ES6 and how do you use them?**

Ans:

* **Template literals** are a new feature that was introduced in ECMAScript6, which offers a simple method for performing string interpolation and multiline string creation.
* The **template literals** were called template strings before the introduction of ES6.
* we have Template Literals which are indicated by the **backtick (` `)** character. Template literals can also be used to hold the placeholders, that are indicated by the **‘$’** sign and the **{}** braces such as **(${expression}).**

1. **What’s difference between map & forEach?**

|  |  |
| --- | --- |
| **forEach()** | **map()** |
| The forEach() method does not returns a  new array based on the given array. | The map() method returns an entirely new array. |
| The forEach() method returns “*undefined*“. | The map() method returns the newly created array according to the provided callback function. |
| The forEach() method doesn’t return anything hence the method chaining technique cannot be applied here. | With the map() method, we can chain other methods like, reduce(),sort() etc. |
| It is not executed for empty elements. | It does not change the original array. |

1. **How can you destructure objects and arrays in ES6?**

Ans:

* Destructuring arrays or objects is the process of taking values from objects or arrays and assigning them to local variables using the destructuring syntax.
* With **array destructuring**, you can create new variables using an item in the array as a value.
* For objects destructing declare variables on the left hand side, and match them to the properties of the object on the right hand side.

1. **How can you define default parameter values in ES6 functions?**

Ans:

Function parameters with default values are initialized with default values if they contain no value or are undefined. JavaScript function parameters are defined as undefined by default. However, it may be useful to set a different default value. That is where default parameters come into play.

*Syntax:*

function name(parameter=value,...parameters)

{

}

1. **What is the purpose of the spread operator (...) in ES6?**

Ans:

The JavaScript spread operator is denoted by **three dots** **(…)**.The spread operator helps the iterable objects to expand into individual elements. Iterable objects are those on which we can use a loop, for example, Array, Map, Set, etc. In other words, the spread operator allows us to copy all elements from the existing array or object into another array or object.