**WD – JavaScript Basic & DOM (Module – 4)**

**Q-1. What is JavaScript. How to use it?**

**Ans.**

* + JavaScript is a powerful programming language primarily used to create interactive features on web pages. It’s one of the core technologies of the web, alongside HTML and CSS. With JavaScript, you can implement dynamic content updates, control multimedia, animate images, and much more.
  + To use JavaScript, you can start by including it in your web pages through a <script> tag.

**Q-2. How many type of Variable in JavaScript?**

**Ans.** In JavaScript, there are three main types of variables you can use:

* + var: This is the oldest keyword used to declare a variable. It has function scope and can be re-declared and updated.
  + let: Introduced in ES6 (ECMAScript 2015), let allows you to declare block-scoped variables that can be updated but not re-declared within the same scope.
  + const: Also introduced in ES6, const is used to declare block-scoped variables that cannot be updated or re-declared. It’s important to note that while the variable itself is immutable, the contents of a const object can still be altered.

**Q-3. Define a Data Types in js?**

**Ans**.In JavaScript, data types are used to classify the kind of data that can be stored and manipulated within the language. Here are the main data types available in JavaScript:

1. **Primitive Types**:
   * **Undefined**: Indicates a variable that has not been assigned a value.
   * **Null**: Represents the intentional absence of any object value.
   * **Boolean**: Represents a logical entity and can have two values: true or false.
   * **Number**: Represents both integer and floating-point numbers.
   * **String**: Represents textual data, enclosed within quotes.
   * **Symbol**: A unique and immutable primitive introduced in ES6 for unique property keys.
   * **BigInt**: Represents numbers larger than the maximum limit for a Number.
2. **Structural Types**:
   * **Object**: The most complex data type. An object can be a collection of properties, where each property is defined as a key-value pair. Functions, Arrays, Dates, and Regular Expressions are all special types of objects.
   * **Function**: A callable object that executes a block of code.
3. **Structural Root Primitive**:
   * **Object.prototype**: It’s the root from which all objects inherit properties and methods.

JavaScript is a dynamically typed language, meaning that variables are not bound to a specific data type, and the same variable can hold values of different types at different times.

**Q-5. What the deference between undefined and undeclare in JavaScript?**

* Ans.
  + **Undefined**: This occurs when a variable has been declared but has not yet been assigned a value. It is actually a value that represents the absence of a value.
  + **Undeclared**: This refers to a variable that has not been declared at all, meaning it does not exist in the program and is not recognized by the JavaScript interpreter. If you try to reference an undeclared variable, JavaScript will throw a ReferenceError.

Q-7.