**CAT II -Assignment 3–DOM & JSON & JQuery**

**Q1: Discuss about JavaScript DOM Structure and Event handling with an example.**

The Document Object Model (DOM) is a programming interface for HTML documents. It defines the logical structure of documents and the way a document is accessed and manipulated.

DOM is a way to represent the webpage in the structured hierarchical way so that it will become easier for programmers and users to glide through the document. With DOM, we can easily access and manipulate tags, IDs, classes, Attributes or Elements using commands or methods provided by Document object.

**DOM Structure:**

DOM can be thought of as Tree or Forest (more than one tree). The term structure model is sometimes used to describe the tree-like representation of a document. One important property of DOM structure models is structural isomorphism: if any two DOM implementations are used to create a representation of the same document, they will create the same structure model, with precisely the same objects and relationships.

https://media.geeksforgeeks.org/wp-content/uploads/DOM.png

For example:-

<Table>

   <ROWS>

      <TR>

         <TD>Car</TD>

         <TD>Scooter</TD>

      </TR>

      <TR>

         <TD>Motorbike</TD>

         <TD>Bus</TD>

      </TR>

   </ROWS>

</Table>

https://media.geeksforgeeks.org/wp-content/uploads/DOM_table_example.png

**Event Handling:**

Event handler is a block of code (usually a JavaScript function that you as a programmer create) that runs when the event fires. When such a block of code is defined to run in response to an event, we say we are registering an event handler.

In the following example, we have a single <button>, which when pressed, makes the background change to a random color:

<button>Change color</button>

The JavaScript looks like so:

const btn = document.querySelector('button');

function random(number) {

return Math.floor(Math.random() \* (number+1));

}

btn.onclick = function() {

const rndCol = 'rgb(' + random(255) + ',' + random(255) + ',' + random(255) + ')';

document.body.style.backgroundColor = rndCol;

}

We are listening for the click event firing, by setting the onclick event handler property to equal an anonymous function containing code that generates a random RGB color and sets the <body> background-color equal to it.