

Module 24-How JavaScript Works & DOM

24-1 Module Introduction and what is JavaScript

Javascript (JS) is a scripting languages, primarily used on the Web. It is used to enhance HTML pages and is commonly found embedded in HTML code. JavaScript is an interpreted language. Thus, it doesn't need to be compiled. JavaScript renders web pages in an interactive and dynamic fashion. This allowing the pages to react to events, exhibit special effects, accept variable text, validate data, create cookies, detect a user's browser, etc.

24-2 Create Script tag and connect external Script file

HTML script:

The <script> HTML element is **used to embed executable code or data**; this is typically used to embed or refer to JavaScript code. The <script> element can also be used with other languages, such as WebGL's GLSL shader programming language and JSON.

JS connect in html:

```
<body>
  <h1>Hello JavaScript</h1>

  <!-- <script src="script.js"></script> -->
  <script>
    console.log(25);
    for(let i=0;i<10;i++)
    {
      console.log(i);
    }
  </script>

  <script src="script.js"></script>
  <script src="js/first.js"></script>
  <script src="js/second.js"></script>
  <script src="js/third.js"></script>

</body>
```

24-3 What is DOM (Document Object Model)

DOM: Document Object Model-> HTML and JS Interactive.

24-4 Get different HTML elements in JS by using tag name

```
<!-- script section----- -->
<script>
    const student={name:"Hamid",age:21,height:60};

    // console.log(document.body);
    // const blogTitles=['h3','h3','h3','h3','h3']
    const blogTitles=document.getElementsByTagName('h2');

    for(const h3 of blogTitles)
    {
        console.log(h3);
        console.log(h3.innerText);
    }

    const blogDetails=document.getElementsByTagName("p");

    for(const blog of blogDetails)
    {
        console.log(blog);
        console.log(blog.innerText);
    }
</script>
```

24-5 Capture and change Element by using getElementById

.innerText =>Text change

```
const title1=document.getElementById("title-section1");
    title1.style.color="red";

    const p1=document.getElementById("p1-section1");

    p1.innerText="Lorem ipsum dolor sit amet consectetur
adipiscing elit. Doloremque at accusantium aliquam soluta aspernatur
sapiente officia animi quas! Vero nulla assumenda quisquam aperiam
dolor consequuntur ipsum, placeat culpa voluptas ad?Lorem ipsum dolor
sit amet consectetur adipiscing elit. Doloremque at accusantium
```

aliquam soluta aspernatur sapiente officia animi quas! Vero nulla assumenda quisquam aperiam dolor consequuntur ipsum, placeat culpa voluptas ad?";

```
p1.style.backgroundColor="salmon";
p1.style.padding="15px";
p1.style.borderRadius="5px";
```

24-6 Explore `getElementsByClassName` and `querySelectorAll`

1. `getElementsByName`
2. `getElementById`
3. `getElementsByClassName`
4. `querySelector`
5. `querySelectorAll`

```
// -----getElementsByClassName-----
const blogs=document.getElementsByClassName('blog');

for(const blog of blogs)
{
    console.log(blog);
    blog.style.border="2px solid red";
    blog.style.margin="10px";
    blog.style.padding="5px";
    blog.style.borderRadius='5px';
}

// -----querySelectorAll-----
const blog_1=document.querySelector('div');
blog_1.style.backgroundColor='red';

const blog_2=document.querySelector('.blog p');
blog_2.style.backgroundColor='green';
```

24-7 `NodeList`, `htmlcollection`, `setAttribute`, `parentNode`, `childNodes`

```
const title=document.getElementById('title-section1');
console.log(title.getAttribute('id'));
console.log(title.getAttribute('style'));
console.log(title.setAttribute('title',"Hamid Hosen"));
```

```

        console.log(title.parentElement);
        console.log(title.childNodes);
        console.log(title.parentNode);
        console.log(title.parentNode.parentNode.parentNode.parentNode.parentNode.parentNode);
    }
    console.log(ode.parentNode);

```

24-8 Create HTML elements using Javascript and appendChild

```

// -----Create HTML elements using Javascript and appendChild----

```

```

    // 1-create and add element by using js
    const li=document.createElement('li');
    li.innerText='Blog-5';

    // 2-Where to add
    const ul=document.getElementById('blog-list');

    // append new element
    ul.appendChild(li);

    // --add div
    const div=document.createElement('div');
    div.classList.add('blog');

    // const h2=document.createElement('h2');
    // h2.innerText='My Website blog-6';
    // div.appendChild(h2);

    // const p=document.createElement('p');
    // p.innerText='Lorem ipsum dolor sit amet consectetur
    adipisicing elit. Doloremque at accusantium aliquam soluta aspernatur
    sapiente officia animi quas! Vero nulla assumenda quisquam aperiam
    dolor consequuntur ipsum, placeat culpa voluptas ad?';
    // div.appendChild(p);

    div.innerHTML=
    `
        <h2>My website blog-6</h2>
        <p>Lorem ipsum dolor sit amet consectetur adipisicing
        elit. Doloremque at accusantium aliquam soluta aspernatur sapiente
        officia animi quas! Vero nulla assumenda quisquam aperiam dolor
        consequuntur ipsum, placeat culpa voluptas ad?</p>
    `;

```

```
// parent of div
const blogSection=document.getElementById('blogs');
blogSection.appendChild(div);
```

24-9 Module summary and DOM Review

```
// remove friend
const friend =document.getElementById('friend');
// console.log(friend);
// console.log(friend.childNodes);
// console.log(friend.children);

const fifth=friend.children[4];
friend.removeChild(fifth);

// create element
const friends=document.createElement('li');
friends.innerText='Friend-11';
friend.append(friends);
```