Module 8) JavaScript
JavaScript DOM Manipulation

Question 1: What is the DOM (Document Object Model) in JavaScript? How does JavaScript interact with the DOM?

Answer :
The DOM (Document Object Model) is a representation of an HTML document as a tree of objects. Each HTML element is treated as a node that JavaScript can manipulate.

JavaScript interacts with the DOM by accessing, modifying, adding, or removing elements dynamically using various DOM methods. This allows for interactive and dynamic web pages.

Question 2: Explain the methods getElementById(), getElementsByClassName(), and querySelector() used to select elements from the DOM.

Answer :

- `getElementById("id")` selects a single element with the given ID.
- `getElementsByClassName("class")` selects all elements with the given class name (returns a list).
- `querySelector("selector")` selects the first matching element using CSS selectors (e.g., `#id, .class, tag`).

Example:

```
document.getElementById("demo").innerHTML = "Hello!";

document.getElementsByClassName("test")[0].style.color = "red";

document.querySelector(".test").style.fontSize = "20px";
```