

## document.querySelector() in JavaScript:

**document.querySelector()** is a method in JavaScript that allows you to select **the first matching element** from the DOM using **CSS selectors**.

### 1). Select by ID (#id)

```
html                                                                    Copy Edit

<h1 id="main-heading">Welcome to DOM!</h1>

<script>
  const heading = document.querySelector("#main-heading");
  console.log(heading); // <h1>Welcome to DOM!</h1>
</script>
```

### 2). Select by Class (.class)

```
html                                                                    Copy Edit

<p class="info">This is the first paragraph.</p>
<p class="info">This is the second paragraph.</p>

<script>
  const paragraph = document.querySelector(".info");
  console.log(paragraph); // Selects the first <p> with class "info"
</script>
```

### 3). Select by Tag Name (tag)

```
html                                                                    Copy Edit

<div>First Div</div>
<div>Second Div</div>

<script>
  const div = document.querySelector("div");
  console.log(div); // Selects the first <div>
</script>
```

### 4). Select Using Nested Selectors You can combine selectors like in CSS:

```
html                                                                    Copy Edit

<div class="container">
  <p class="text">Paragraph 1</p>
  <p class="text">Paragraph 2</p>
</div>

<script>
  const firstParagraph = document.querySelector(".container .text");
  console.log(firstParagraph); // Selects Paragraph 1
</script>
```

## 5). Select Using Attribute Selector

```
html                                                                    Copy Edit

<input type="text" placeholder="Enter Name">
<input type="text" placeholder="Enter Age">

<script>
  const nameInput = document.querySelector('input[placeholder="Enter Name"]');
  console.log(nameInput); // Selects the input with placeholder="Enter Name"
</script>
```

## document.querySelectorAll() in JavaScript

**document.querySelectorAll()** is a powerful method that allows you to select **all elements** from the DOM that match a specified **CSS selector**.

-> **Returns:** A **NodeList** containing all matching elements.

-> **Selector:** Uses CSS selectors like #id, .class, tag, attribute, etc.

### 1. Select Multiple Elements by Class Name

```
html                                                                    Copy Edit

<p class="text">Paragraph 1</p>
<p class="text">Paragraph 2</p>
<p class="text">Paragraph 3</p>

<script>
  const paragraphs = document.querySelectorAll(".text");
  console.log(paragraphs); // NodeList of all <p> elements with class "text"
</script>
```

## 2. Select Using Tag Name

```
html                                                                    Copy Edit

<div>First Div</div>
<div>Second Div</div>
<div>Third Div</div>

<script>
  const divs = document.querySelectorAll("div");
  console.log(divs); // NodeList of all <div> elements
</script>
```

## 3. Select Using ID and Class Combination

```
html                                                                    Copy Edit

<section id="main-section">
  <h2 class="title">Title 1</h2>
  <h2 class="title">Title 2</h2>
</section>

<script>
  const titles = document.querySelectorAll("#main-section .title");
  console.log(titles); // Selects both <h2> with class "title" inside #main-
</script>
```

#### 4. Select Using Attribute Selector

```
html                                                                    Copy Edit

<input type="text" placeholder="Name">
<input type="text" placeholder="Email">

<script>
  const inputs = document.querySelectorAll('input[placeholder]');
  console.log(inputs); // Selects all inputs with a placeholder attribute
</script>
```