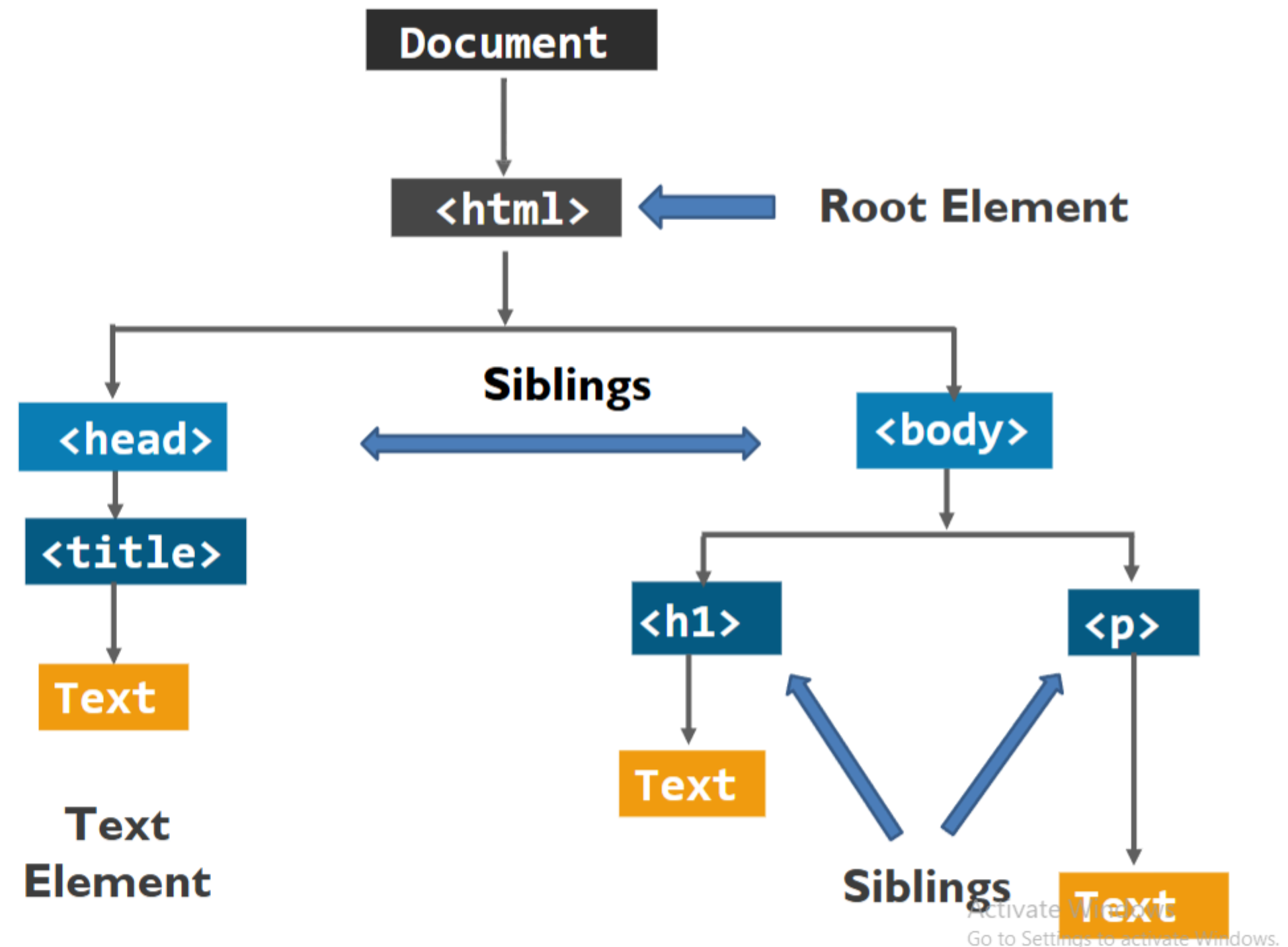# Document Object Model

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Document Object Model

- Document Object Model (DOM) defines the logical structure of a document.

- When a page is loaded, the web browser takes the HTML document and creates a tree-like structure with the help of HTML elements. This tree-like structure is known as **DOM**.

- Any element found on an HTML document can be manipulated using the **DOM**.

Document

<html> ← Root Element

Siblings

<head>

<title>

Text

Text Element

<body>

<h1>

Text

<p>

Siblings Text

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HTML DOM

- It's a standard Object model and also a programming model for HTML.

- Here, all the HTML elements act as an object.

- **Document** object is the parent element of all the child elements.

- `<html>..</html>` tag is **root** of this Object model.

- Rest elements are **child nodes** of the root.

```
<html>
    <head>
    </head>
    <body>
        <div>
            <h1> </h1>
        </div>
    </body>
</html>
```

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Selecting Elements

- Methods in DOM used to select the elements based on their class, id, tag, etc. are as follows:

Method	Description
getElementById()	Selects an element by id
getElementsByName()	Selects all the elements having same name that is given
getElementsByTagName()	Selects an element by tag name
getElementsByClassName()	Selects an element by class name
querySelector()	Selects an element by CSS Selectors

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Example - I

Code:

```
<body>
    <h3 id="head">Heading 3</h3>
    <input name="Changer">
    <button onclick="Change()">click here</button>
    <script>
        var Change=()=>{
            document.getElementById('head').style.color="orange"
            element=document.getElementsByName('Changer')[0];
            element.setAttribute("type", "radio");

        }
    </script>
</body>
```

Selects first element whose name="changer"

Selects elements by id

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Example – I Output

Heading 3

User before clicking click here button

Heading 3

User after clicking click here button

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Example - 2

Code:

```html
<body>
  <h3>Heading 3</h3>
  <input class="Changer">
  <button class="btn-blue"  onclick="Change()">click here</button>
  <script>
    var Change=()=>{
      document.getElementsByTagName('h3')[0].style.color="orange"
      element=document.getElementsByClassName('Changer')[0];
      element.setAttribute("type", "radio");
      element=document.querySelector('.btn-blue')
      element.style.backgroundColor="blue"
    }
  </script>
</body>
```

Gets the first h3 tag

Gets the first class whose name="Changer"

Gets the first element in the document whose class="btn-blue"

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Example – 2 Output

User before clicking click here button

User after clicking click here button

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