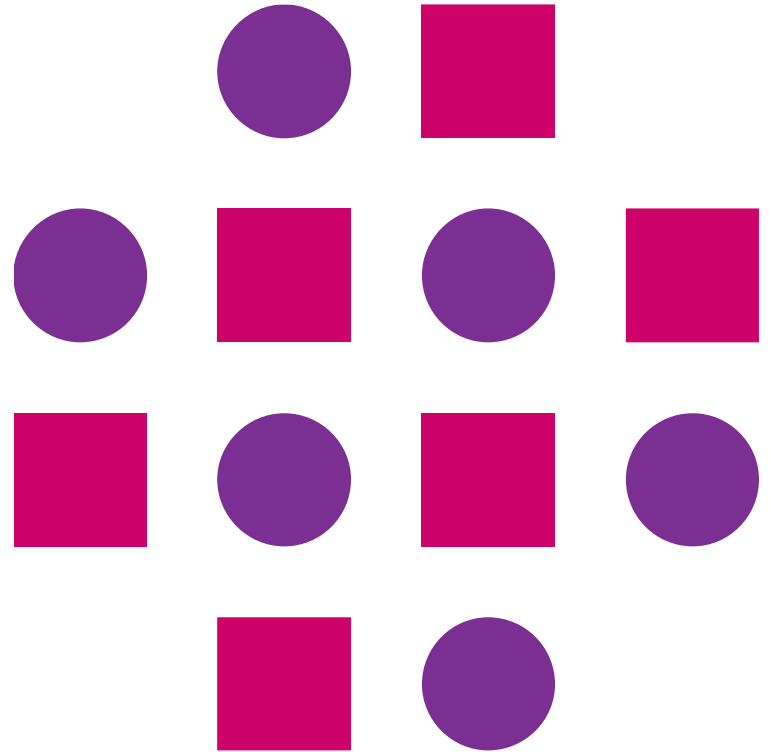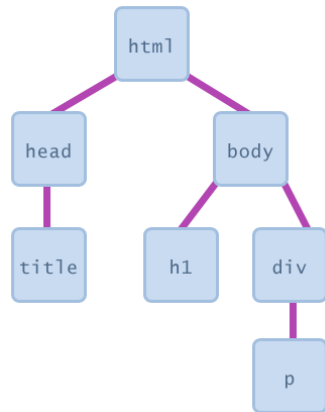# DOM Handling
jQuery

Document Object Model (DOM)

- The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to **dynamically access and update the content, structure, and style of a document**

- jQuery provides multiple methods to manipulate DOM

- Using these methods it is easy to access and manipulate elements and attributes

- It also provides methods to change browser window dimensions

DOM APIs

Selector	Description
`$(selector).text();`	Sets or returns the text content of selected elements
`$(selector).html();`	Sets or returns the content of selected elements (including HTML mark-up)
`$(selector).val();`	Sets or returns the value of form fields

Example usage – Getting values using DOM APIs

```
<script>
$(document).ready(function() {
    /* Get values from various HTML elements */
    $("#btn1").click(function(){
        console.log("Paragraph" + $("#test1").text());
        console.log("Value" + $("#test2").val());
    });
});
</script>
```

Example usage – Setting values using DOM APIs
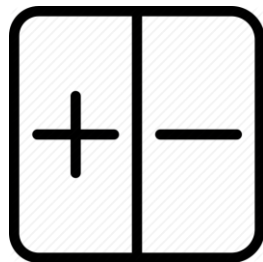
```html
<script>
$(document).ready(function() {

/* Upon button click change text */
$("#btn1").click(function(){
    $("#test1").text("First paragraph - normal text");
});
/* Upon button click change HTML text */
$("#btn2").click(function(){
    $("#test2").html("<b>Second paragraph</b>");
});
/* Upon button click change input field value */
$("#btn3").click(function(){
    $("#test3").val("New Value...");
});
});
</script>
```

DOM APIs – Insert and Remove

Selector	Description
`$(selector).append();`	Inserts content at the end of the selected elements
`$(selector).prepend();`	Inserts content at the beginning of the selected elements
`$(selector).after();`	Inserts content after the selected elements
`$(selector).before()`	Inserts content before the selected elements
`$(selector).remove();`	Removes the selected element (and its child elements)
`$(selector).empty();`	Removes the child elements from the selected element

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Example usage – Insert and remove using DOM APIs

```html
<script>
$(document).ready(function() {

$("#myButton2").click(function(){
    $("#test2").remove();
});


$("#myButton4").click(function(){
    $("#test3").append(" <li><b>Appended text</b></li> ");
});


});
</script>
```
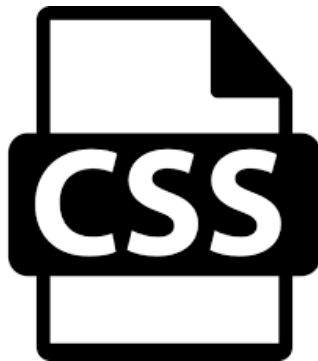
DOM APIs – Handling styles

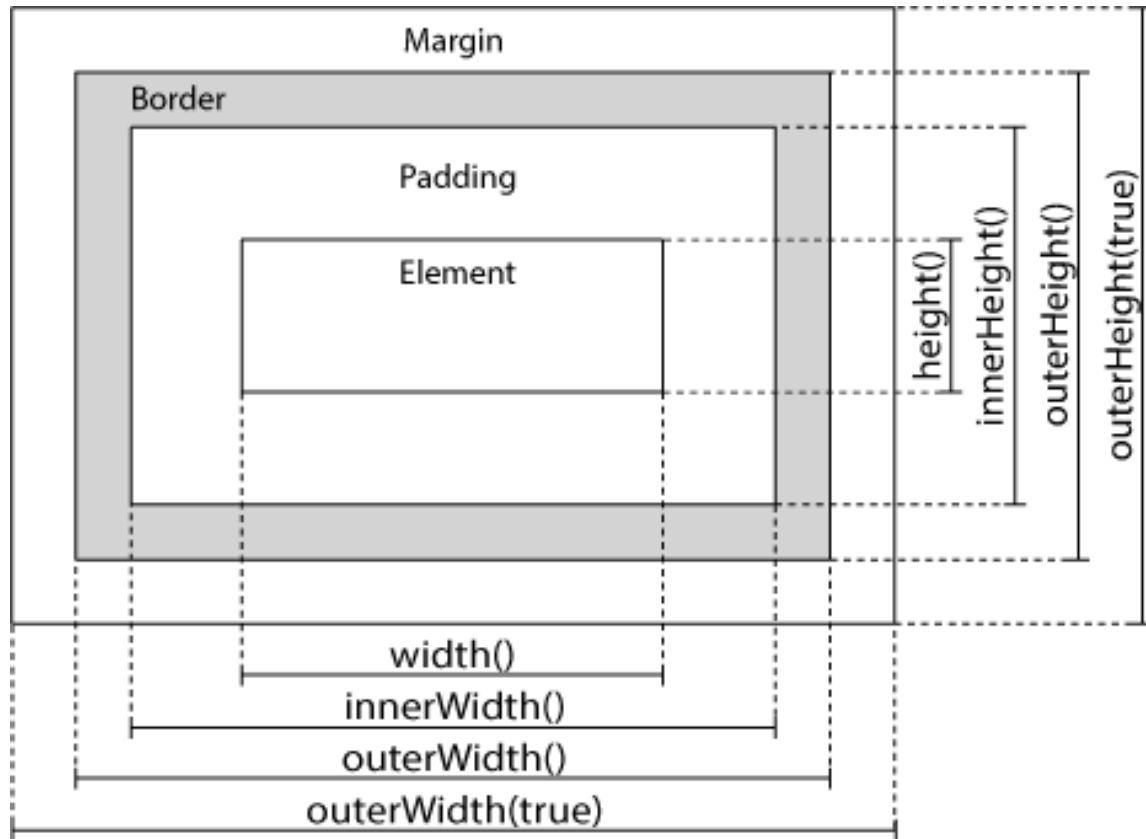| Selector & Description |
|:---:|
| `$(selector).css("property", "value");`
`$(selector).css({"property": "value", "property": "value",....});`
Set a single or multiple properties on a selector |


```
$("p").css("background-color", "blue");
$("p").css({"background-color": "red", "font-size": "100%"});
```

jQuery – Dimension APIs

Selector	Description
`$(selector).width();`	Sets or returns the width of an element (excludes padding, border and margin)
`$(selector).height();`	Sets or returns the height of an element (excludes padding, border and margin).
`$(selector).innerWidth();`	Returns the width of an element (includes padding)
`$(selector).innerHeight();`	Returns the height of an element (includes padding)
`$(selector).outerWidth();`	Returns the width of an element (includes padding and border)
`$(selector).outerHeight();`	Returns the height of an element (includes padding and border)

jQuery – Dimension APIs

Example usage – Dimensions

```
<script>
$(document).ready(function() {

$("button").click(function(){
    console.log("Width: " + $("#div1").width());
    console.log("Height: " + $("#div1").height());
    console.log("OuterWidth: " + $("#div1").outerWidth());
    console.log("OuterHeight: " + $("#div1").outerHeight());
});

});
</script>
```

Exercise

- Implement Multiple lists as follows and implement various list operations (insert, delete, append, insert before etc..) by using DOM APIs
  - Student names
  - Course names
  - Qualification

- Re-implement following JavaScript exercises using jQuery and find out the difference in implementation:

  - Modify the text-align, font-size, font-family of heading1
  - Change the background color of all the <div> tag
  - Add text shadow in all paragraphs in the given essay

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Thank You

WebStack Academy

#83, Farah Towers,
1st Floor, MG Road,
Bangalore – 560001

M: +91-809 555 7332
E: training@webstackacademy.com

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