

# Document Object Model (DOM)

# What is DOM?

- A programming interface for HTML or XML
- DOM represents the document as nodes and objects
  - Nodes and objects can be created or changed or removed

# DOM accessing

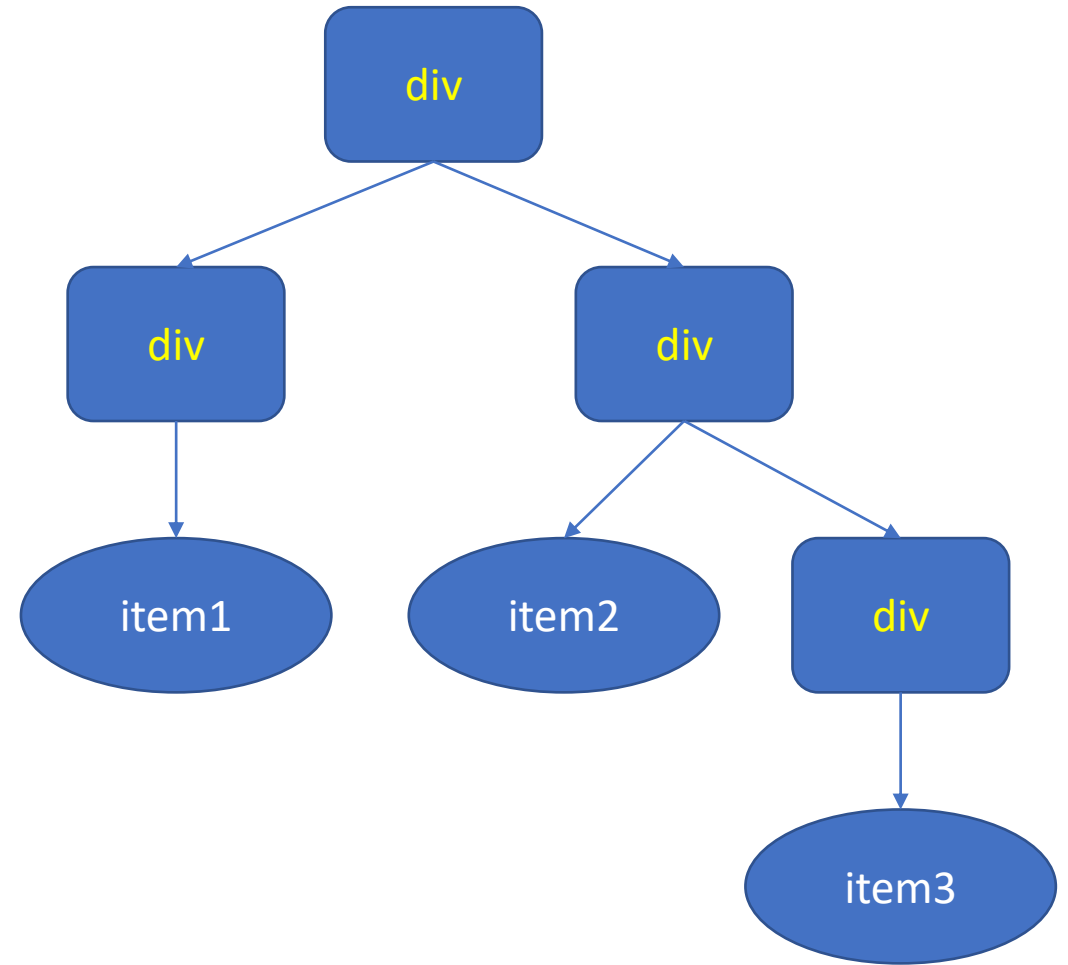
- As of now, every web browser uses DOM as a gateway to the document for scripting language (e.g. JavaScript)

# Fundamental Data Types

- Document
- Node : basic object within document
  - Element : type of node
    - NodeList : Array of elements
  - Attribute : type of node
  - Text
  - Comment
  - etc.

# Example

```
<div>  
  <div>  
    item1  
  </div>  
  <div>  
    item2  
    <div>  
      item3  
    </div>  
  </div>  
</div>
```



# Example of Methods of Document Object

- `write("string")`
- `getElementById()`
- `getElementsByName()`
- `getElementsByTagName()`
- `getElementsByClassName()`

# The Levels of DOM

- Level 0: Supports an interface DOM and refers to what existed before the standard
- Level 1: allows Navigation of DOM, content manipulation
- Level 2: Support namespace, filtered views and event
- Level 3: has many specifications:
  - Core
  - Load and Save
  - XPath
  - Views and formatting
  - Requirements
  - Validation

(further reading: <https://www.c-sharpcorner.com/UploadFile/79037b/let%E2%80%99s-understand-the-levels-of-dom-document-object-model/> )

# Events

- Normally used in combination with functions
- Examples of DOM event:
  - abort: loading of a media is aborted
  - blur: element loses focus
  - change: content of element has changed
  - click: mouse clicks on element
  - focus: element gets focus
  - etc.

(further reading: [https://www.w3schools.com/jsref/dom\\_obj\\_event.asp](https://www.w3schools.com/jsref/dom_obj_event.asp) )



# Navigator Object

- Contains information about the browser
- Examples:
  - appName: name of the browser
  - appVersion: version of the browser
  - cookieEnabled: cookies are enabled or not
  - etc.

(further reading: [https://www.w3schools.com/jsref/obj\\_screen.asp](https://www.w3schools.com/jsref/obj_screen.asp) )

# Other DOM Objects

- Screen object
- Style object
- Window object

(further reading: [https://www.w3schools.com/js/js\\_htmlDOM.asp](https://www.w3schools.com/js/js_htmlDOM.asp) )

# Recommended watching

- Watch VDO clip:

<https://www.youtube.com/watch?v=O6BNfJz3rgs&list=PLyuRouwmmQCjkuH93Mq8zgi8bybNjvDTu2>

# Reference

- [https://developer.mozilla.org/en-US/docs/Web/API/Document\\_Object\\_Model/Introduction](https://developer.mozilla.org/en-US/docs/Web/API/Document_Object_Model/Introduction)
- <https://www.geeksforgeeks.org/dom-document-object-model/>
- <https://www.c-sharpcorner.com/UploadFile/79037b/let%E2%80%99s-understand-the-levels-of-dom-document-object-model/>