**JavaScript DOM**

* DOM stands for **Document Object Model**
* The whole **document** of a website and its all elements are called **DOM Elements**
* We can add, remove, change and delete by **DOM operation**
* DOM operations are executed by **DOM event**
* DOM **properties** and **methods** help **DOM manipulation**
* DOM object is a **document**

**DOM Object**

* Title
* Domain
* Images
* Doctype
* Body
* Head
* URL
* Links
* Scripts
* form
* Embeds
* Cookie

**DOM Selectors**

* getElementById()
* getElementsByClassName()
* getElementsByTagName()
* querySelector()
* querySelectorAll()

**DOM Property & Methods**

* innerHTML
* innerText
* textContent
* setAttribute
* getAttributes
* hasAttributes
* Style
* className
* classList.add / remove/ contains/toggle
* Id
* Children
* firstElementChild
* LastElementChild
* parentElement
* nextElementSiblings
* previoustElementSiblings
* Value, placeholder

**Add and Delete Elements**

* createElement
* createTextNode
* append / appendChild / removeChild / replaceChild
* insertBefore
* remove
* write

**Event Listener**

* Fire event in DOM
* addEventListener ( eventName, callback )
* event with arrow
* **Mouse Event**- click  
  - dblclick  
  - mouseenter  
  - mouseleave  
  - mousedown  
  - mouseup
* **Keyboard  
  -** keydown  
  - keyup
* **Form Event**-focus  
  - blur  
  - change  
  - submit   
  - input

**Event Declare**

* To set an event with action
* We cam set event like this
* Event with callback   
  const callback = () => {  
     
  }  
  element.addEventListener(‘event\_name’, callback);
* Event with closer   
  element.addEventListener(‘event\_name’, () => {  
    
  });
* Event with arow function   
  element.oneventname = () => {  
    
  }
* Event prevent default for stop realoding   
  element.oneventname = (event) => {  
   event.preventDefault()  
  }

**Get Event action**

* When we fire a event into an element, we can also manage this event by event handler
* First get this event with a variables   
   element.oneventname = (event) => {  
   console.log(event)   
  }
* Get the event target   
   element.oneventname = (event) => {  
   console.log(event.target)   
  }
* Event with this key   
   element.oneventname = (event) => {  
   console.log(this)   
  }
* Event with Nodelist   
   element.forEach( (item , index ) => {  
   item.oneventname = (event) => {  
   console.log(this)   
   }  
  })
* Get data from a radio btn   
  const radio = document.querySelector(‘input[type=”radio”]:checked’);
* Get data form a checkbox list   
  element.forEach( (item , index ) => {  
   item.oneventname = (event) => {  
   console.log(this)   
   }  
  })

**Form Data Object**

* We can get all form data by using FormData object
* First set all fields name
* Then set method
* Now init form data object   
  const form\_data = new FormData(e.target);
* Now merge all form data entries to Object form entries   
  const data = **Object**.formEntries(**data**.entries())

**JavaScript Timing**

* JavaScript can be execute in time intervals
* Timeout functions   
  setTimeout  
  clearTimeout   
    
  let timeSet = setTimeout(()=> {  
   // output goes here   
  }, 1000);  
  clearTimeout(timeSet);
* Interval functions   
  setInterval   
  clearInterval   
  let timeInt = setInterval(()=> {  
   // output goes here   
  }, 1000);   
  clearTimeout(timeInt);

**JavaScript BOM**

* BOM means Browser Object Model
* It allowes to talk to the browser
* We must know about BOM for browser based apps
* BOM **window** object
* Alert, confirm, prompt
* LS, SS, CS storage
* Timer functions

**DOM with BOM Project**

* Digital clock
* Analog clock
* Calculator
* To Do Apps