



# Tutorial: Javascript

## Topics to be covered:

1. What is Javascript ?
2. How to make js file
3. Javascript function
4. HTML - Javascript : Access, update html elements
5. DOM Events : Mouse, Keyboard, input, Drag - drop



# What is Javascript?

1. Scripting language, lightweight, interpreted, can run on browser
2. Javascript is for scripting while HTML, CSS or libraries like bootstrap are for designing.
3. Makes web pages more interactive and dynamic
4. Both client side and server side



# How to write js script

1. Within html page

`<script></script>` inside head/body tag

2. External js script

`<script type="text/javascript" src="js filepath">` inside body or head tag



# HTML - JS interaction

1. Fetch elements : byId, byTag, byClass, byName
2. Manipulate elements
3. Create Element
4. Delete element
5. EventListeners:

HTML: `<element eventName="myScript">`

JS: `object.eventName = function(){myScript};`

Event Listener: `object.addEventListener("<eventName>", myScript);`



## MOUSE DOM

1. **OnClick** : The event occurs when the user clicks on an element.
2. **Ondblclick**: The event occurs when the user double-clicks on an element.
3. **Onmouseenter**: The event occurs when the pointer is moved onto an element or hover onto an element.
4. **Onmouseout**: The event occurs when a user moves the mouse pointer out of an element, or out of one of its children.
5. **Onmouseleave**: The event occurs when the pointer is moved out of an element.



## Keyboard/InputDOM

1. **Onkeydown:** The event occurs when the user is pressing a key
2. **onkeypress:** The event occurs when the user presses a key
3. **onkeyup:** The event occurs when the user releases a key
4. **oninput:** The event occurs when an element gets user input



# Drag - Drop

1. **Ondrop:** A dragged element is dropped on the target
2. **Ondragover:** A dragged element is over the drop target
3. **Ondragstart:** The user starts to drag an element
4. **Ondrag:** An element is being dragged