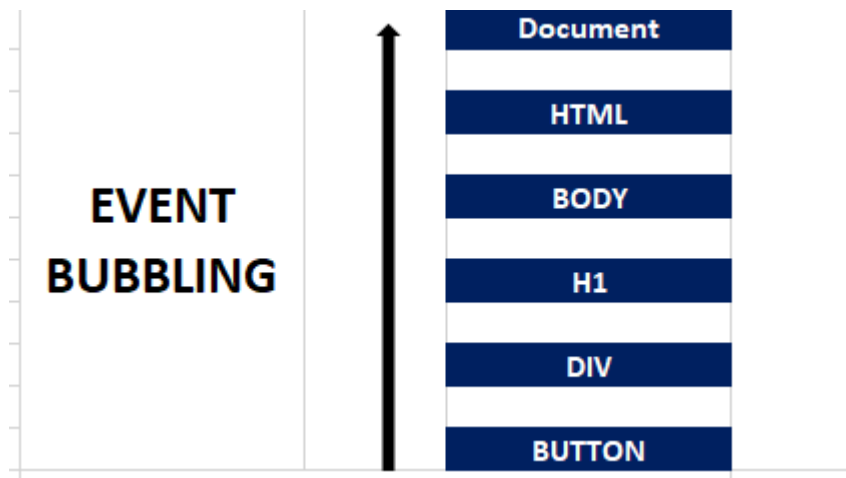


- **Event Bubbling:**

Event Bubbling is a concept in the DOM. It happens when an element receives an event, that event bubbles up from target element to the root element.



Example:

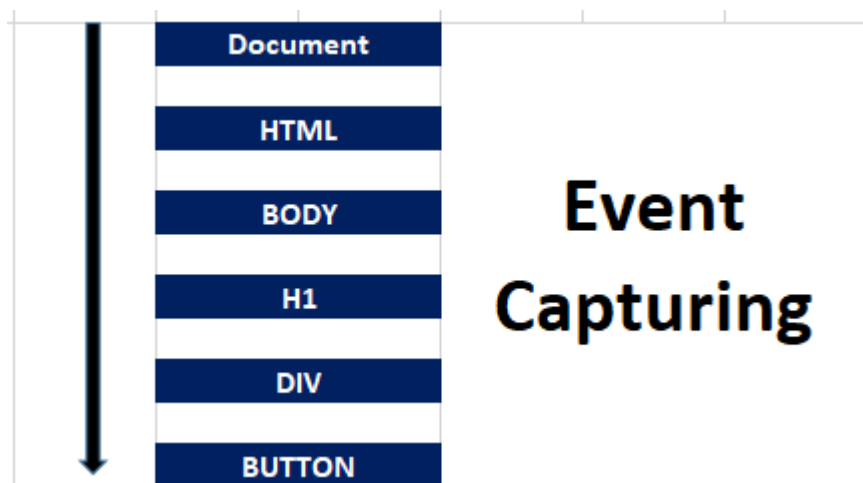
```
<body>
  <div id="grandparent" style="background-color: rgb(229, 255, 0); height: 500px; padding: 20px">
    grandparent
    <div id="parent" style="background-color: rgb(6, 229, 250); height: 200px; padding: 20px">
      parent
      <div id="child" style="background-color: rgb(244, 8, 12); padding: 30px" >
        child
      </div>
    </div>
  </div>
  <script>

document.getElementById("grandparent").addEventListener("click",
() => {
  let gp = document.getElementById("grandparent");
  gp.style.backgroundColor = "skyblue";
  console.log("grand parent triggered");
});
document.getElementById("parent").addEventListener("click",
() => {
  let pr = document.getElementById("parent");
  pr.style.backgroundColor = "babypink";
```

```
    console.log("parent triggered");
  });
  document.getElementById("child").addEventListener("click", ()
=> {
    let cd = document.getElementById("child");
    cd.style.backgroundColor = "yellow";
    console.log("child triggered");
  });
</script>
</body>
```

- **Event Capturing:**

Event capturing occurs when a nested element gets clicked. The click event of its parent elements must be triggered before the click of the nested element. This phase trickles down from the top of the DOM tree to the target element. It is reverse of event bubbling.



Example:

```
<body>
  <div id="grandparent" style="background-color: #0000FF; height: 500px; padding: 20px">
    grandparent
    <div id="parent" style="background-color: #00FFFF; height: 200px; padding: 20px">
      parent
      <div id="child" style="background-color: #FF0000; padding: 30px" >
        child
      </div>
    </div>
  </div>
</body>
<script>
  document.getElementById("grandparent").addEventListener("click", () => {
    let gp = document.getElementById("grandparent");
    gp.style.backgroundColor = "skyblue";
    console.log("grand parent triggered");
  }, true);
  document.getElementById("parent").addEventListener("click", () => {
    let pr = document.getElementById("parent");
    pr.style.backgroundColor = "babypink";
    console.log("parent triggered");
  }, true);
  document.getElementById("child").addEventListener("click", () => {
    let cd = document.getElementById("child");
    cd.style.backgroundColor = "yellow";
    console.log("child triggered");
  });
</script>
</body>
```

- **Event Propagation:**

The event. stopPropagation() method stops the bubbling of an event to parent elements, preventing any parent event handlers from being executed.

NOTE:- Stop propagation only work in event bubble.

```
<body>
  <div id="grandparent" style="background-color: rgb(229, 255, 0); height: 500px; padding: 20px">
    grandparent
    <div id="parent" style="background-color: rgb(6, 229, 250); height: 200px; padding: 20px">
      parent
      <div id="child" style="background-color: rgb(244, 8, 12); padding: 30px" >
        child
      </div>
    </div>
  </div>
</body>
<script>
```

```
document.getElementById("grandparent").addEventListener("click",
() => {
    let gp = document.getElementById("grandparent");
    gp.style.backgroundColor = "skyblue";
    console.log("grand parent triggered");
});
document.getElementById("parent").addEventListener("click",
() => {
    let pr = document.getElementById("parent");
    pr.style.backgroundColor = "babypink";
    console.log("parent triggered");
});
document.getElementById("child").addEventListener("click",
(e) => {
    e.stopImmediatePropagation()
    let cd = document.getElementById("child");
    cd.style.backgroundColor = "yellow";
    console.log("child triggered");
});
</script>
</body>
```