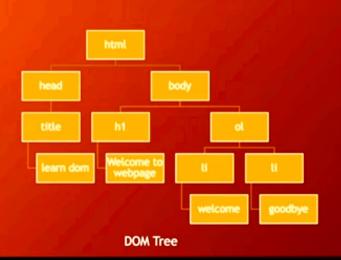
## Traversing & manipulating

- Manipulating creating, inserting, removing elements
- Traversing selecting an element from other elements

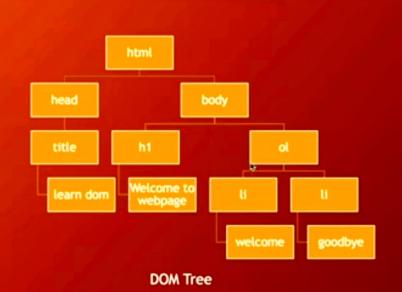


### How to select DOM elements

#### selecting DOM Elements

- getElementById,
- 2. getElementsByClassName,
- 3. getElementsByTagName,
- 4. querySelector(),
- querySelectorAll(),





# 3 direction for traversing

- 1. Downwards
  - querySelector() / querySelectorAll()
  - 2. children
- 2. Upwards
  - 1. parentElement
- 3. Sideways
  - nextElementSibling, previousElementSibling
  - 2. parentElement + children + index



#### 1. Downwards - querySelector / querySelectorAll

```
<!DOCTYPE html>
<html lang="en">
   <head>
       <title>Document</title>
   </head>
    <body>
        class="student-a">student A
           class="student-b">student B
           class="student-c">student C
       <script src="./index.js"></script>
   </body>
</html>
```

```
const studentsList = document.querySelector(".students-list");
const studentA = document.querySelector(".student-a");
```

```
const studentsList = document.querySelector(".students-list");
const studentA = studentsList.querySelector(".student-a");
```



#### 1. Downwards - childrens

```
<!DOCTYPE html>
<html lang="en">
   <head>
       <title>Document</title>
   </head>
   <body>
       li class="student-a">student A
           class="student-b">student B
           student C
       <script src="./index.js"></script>
   </body>
</html>
```

```
const studentsList = document.querySelector(".students-list");
// studentsList.children
const studentA = studentsList.children[0];
```





## 2. Upwards - parentElement

```
<!DOCTYPE html>
<html lang="en">
   <head>
       <title>Document</title>
   </head>
    <body>
       class="student-a">student A
           class="student-b">student B
           class="student-c">student C
       <script src="./index.js"></script>
    </body>
</html>
```

const studentA = document.querySelector("li"); const studentsList = studentA.parentElement;



## 3. sideways - nextElementSibling, previousElementSibling

```
<!DOCTYPE html>
<html lang="en">
   <head>
       <title>Document</title>
   </head>
   <body>
       class="student-a">student A
           class="student-b">student B
           class="student-c">student C
       <script src="./index.js"></script>
   </body>
</html>
```

```
const studentA = document.querySelector("li");
const studentB = studentA.nextElementSibling;
const studentC = studentB.nextElementSibling;
```

```
const studentC = document.querySelectorAll("li")[2];
const studentB = studentC.previousElementSibling;
```



#### 3. sideways - parentElement + children + index

```
<!DOCTYPE html>
<html lang="en">
    <head>
        <title>Document</title>
    </head>
    <body>
        class="student-a">student A
            li class="student-b">student B
           class="student-c">student C
        <script src="./index.js"></script>
    </body>
</html>
```

```
const studentA = document.querySelector("li");
const studentsList = studentA.parentElement;
const studentC = studentsList.children[2];
```