

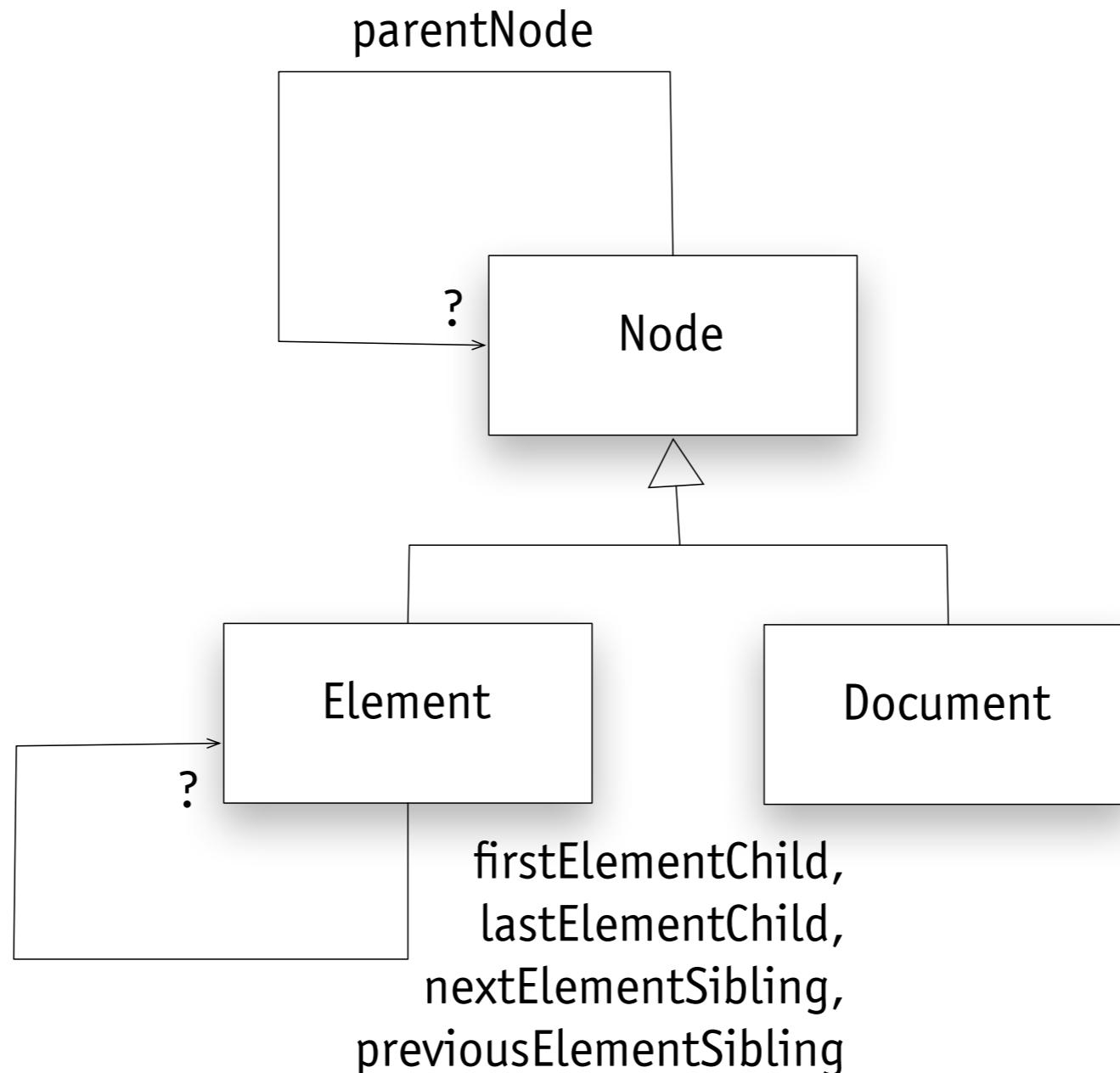
# software studio

## DOM programming idioms

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# traversal

- › using this part of the DOM object model



# traversal

```
<!DOCTYPE html>
<body>
  <h1>section</h1>
  <div>
    <p>hello
  </div>
</body>
</html>
```

page

```
function walk(elt, indent) {
  console.log(indent + elt.tagName)
  var child = elt.firstChild;
  while (child) {
    walk(child, indent + '.');
    child = child.nextElementSibling;
  }
}
walk(document.body, ''');
```

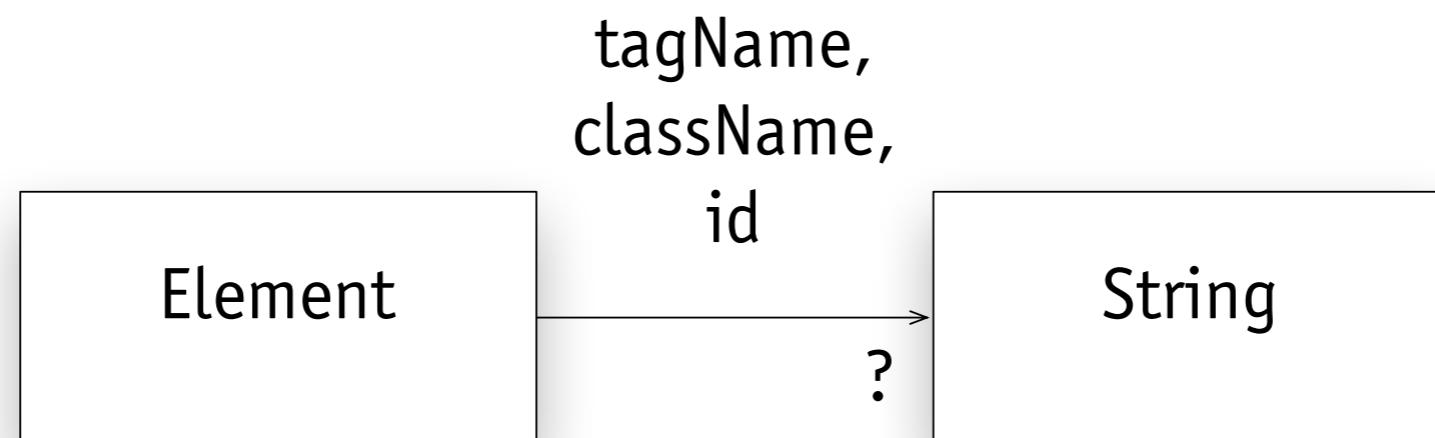
code executed in console

```
walk(document.body, '');
BODY
.H1
.DIV
..P
< undefined
```

output

# lookups

- › using this part of the DOM object model



# lookups

```
<!DOCTYPE html>
<body>
  <h1 id="header" class="">
    My new webpage
  </h1>
  <div id="content">Welcome!
  </div>
</body>
</html>
```

page

```
function display() {
  var e = document.getElementById('content');
  console.log("HTML of content: " + e.innerHTML);
}

display();
```

code executed in console



A screenshot of a browser's developer tools console window. The console shows the execution of a JavaScript function named 'display'. The function uses the 'document.getElementById' method to select an element with the ID 'content', and then it logs the inner HTML of that element to the console using 'console.log'. The output in the console is the string 'Welcome!', which is the content of the 'content' div from the provided HTML code.

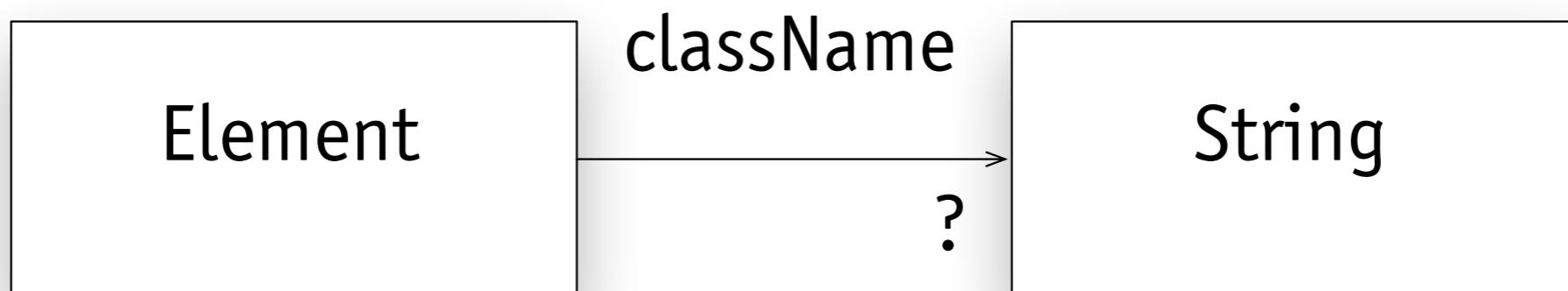
```
> function display() {
  var e = document.getElementById('content');
  console.log("HTML of content: " + e.innerHTML);
}

display();
HTML of content: Welcome!
```

output

# modifying styles

- › using this part of the DOM object model



# modifying styles

```
<!DOCTYPE html>
<head>
  <style>
    .plain {color: black}
    .highlight {color: red}
  </style>
</head>
<body>
  <h1 id="header" class="">
    My new webpage
  </h1>
  <div id="content" class="plain">Welcome!
  </div>
</body>
</html>
```

page

My new webpage

Welcome!

before

My new webpage

Welcome!

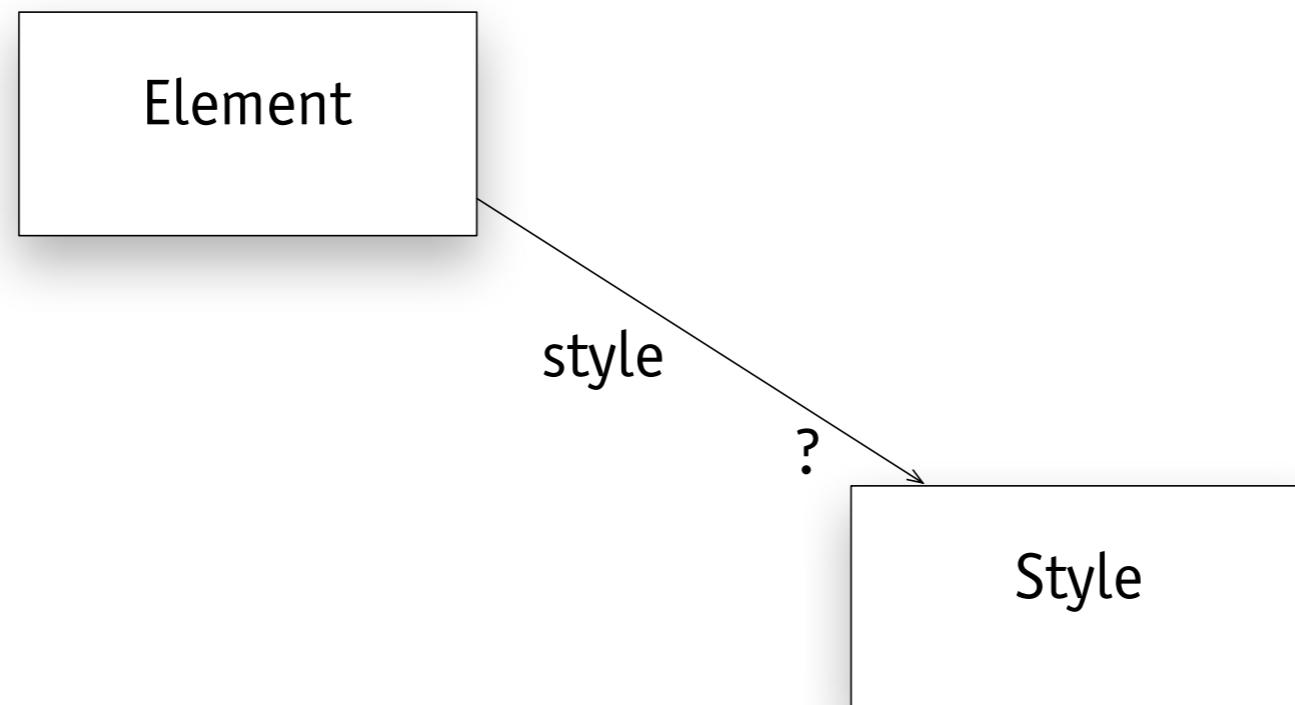
after

```
function highlight_content() {
  var e = document.getElementById('content');
  e.className = 'highlight';
}
highlight_content();
```

code executed in console

# animating elements

- › using this part of the DOM object model



# animating elements

```
<!DOCTYPE html>
<head>
  <style>
    #object {
      position:absolute;
      background:yellow;
      left:0px;
    }
  </style>
</head>

<body>
  <h1 id="header" class="">
    My new webpage
  </h1>
  <div id="object">Watch me!
  </div>
</body>
</html>
```

page

```
var obj = document.getElementById('object');
var i = 0;
function animate() {
  obj.style.left = i + 'px';
  i = i + 10;
  setTimeout(animate, 20);
}
animate();
```

code executed in console

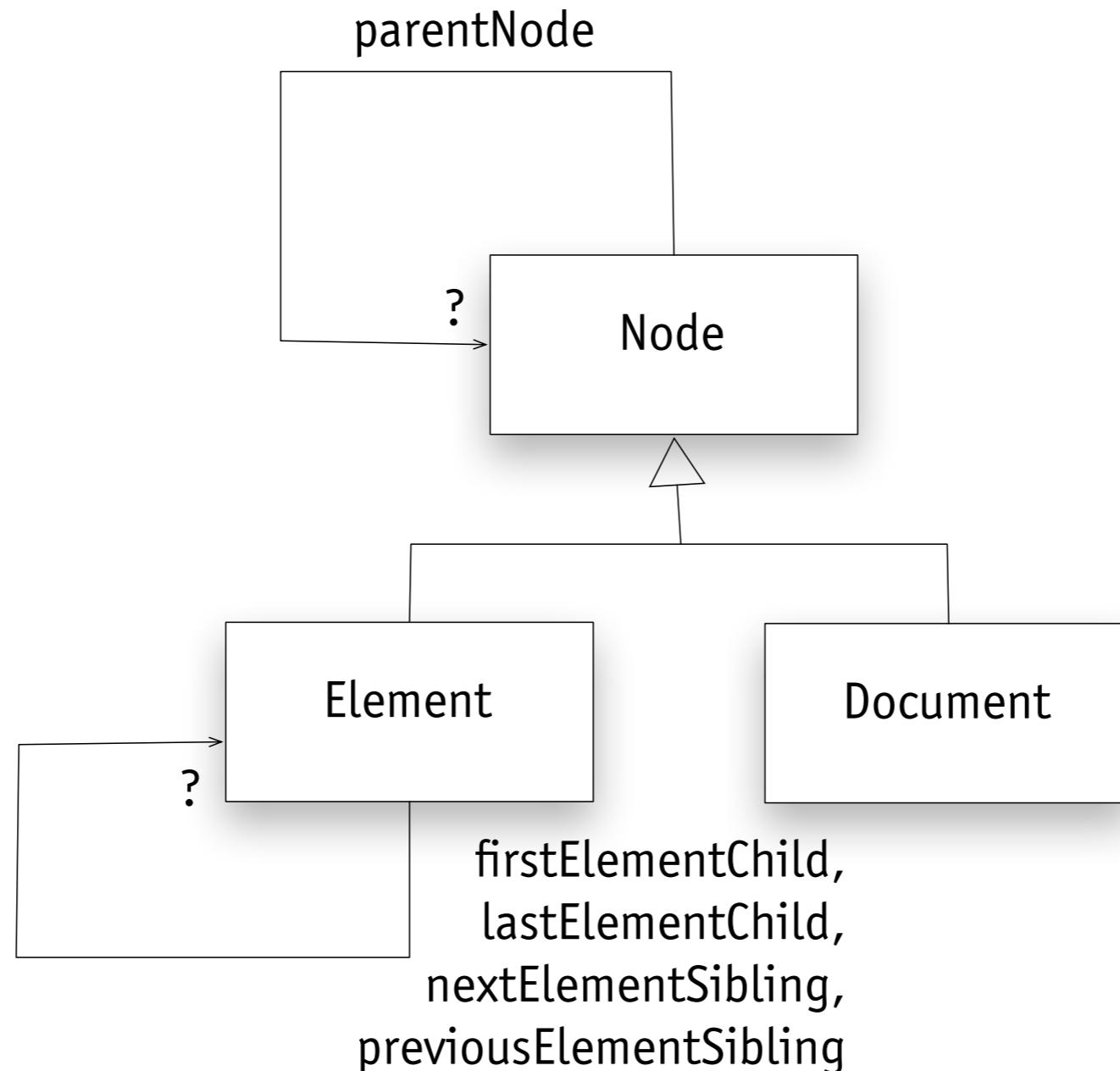
My new webpage

Watch me!

effect

# inserting elements

- › using this part of the DOM object model again



# inserting elements

```
<!DOCTYPE html>
<head>
  <style>
    #content {
      font-size: 20px;
    }
    .popup {
      position: relative;
      left: 10px;
      width: 100px;
      top: -40px;
      opacity: 0.5;
      background: yellow;
    }
  </style>
</head>
<body>
  <h1 id="header" class="">
    My new webpage
  </h1>
  <div id="content">Content
  </div>
</body>
</html>
```

page

```
function popup(elt) {
  var box = document.createElement('div');
  box.innerHTML = "comment";
  box.className = 'popup';
  elt.appendChild(box);
}
var elt = document.getElementById('content');
popup(elt);
```

code executed in console

My new webpage

Content

before

My new webpage

comment  
Content

after

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6.170 Software Studio  
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