

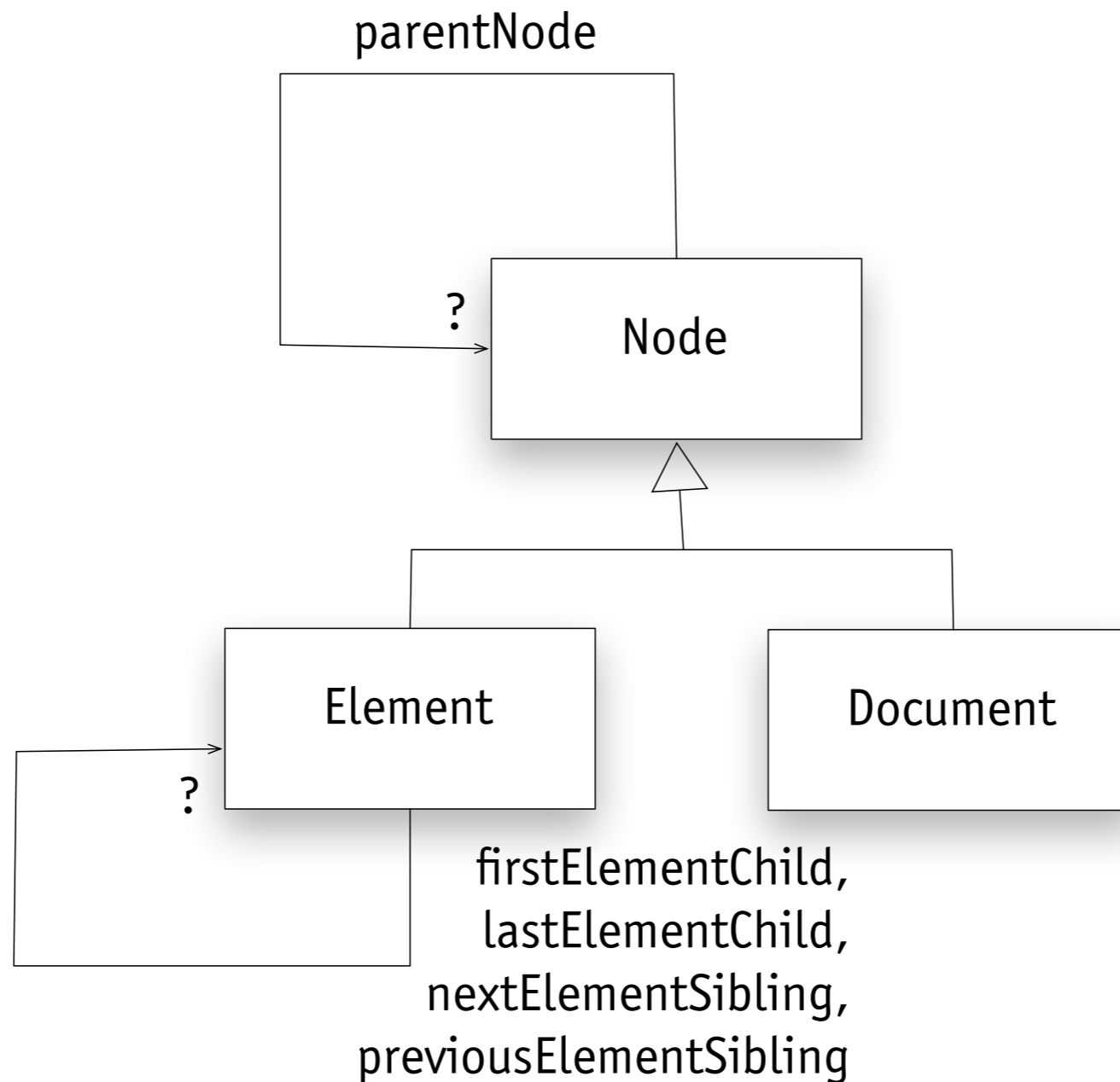
software studio

DOM programming idioms

Daniel Jackson

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, '');
```

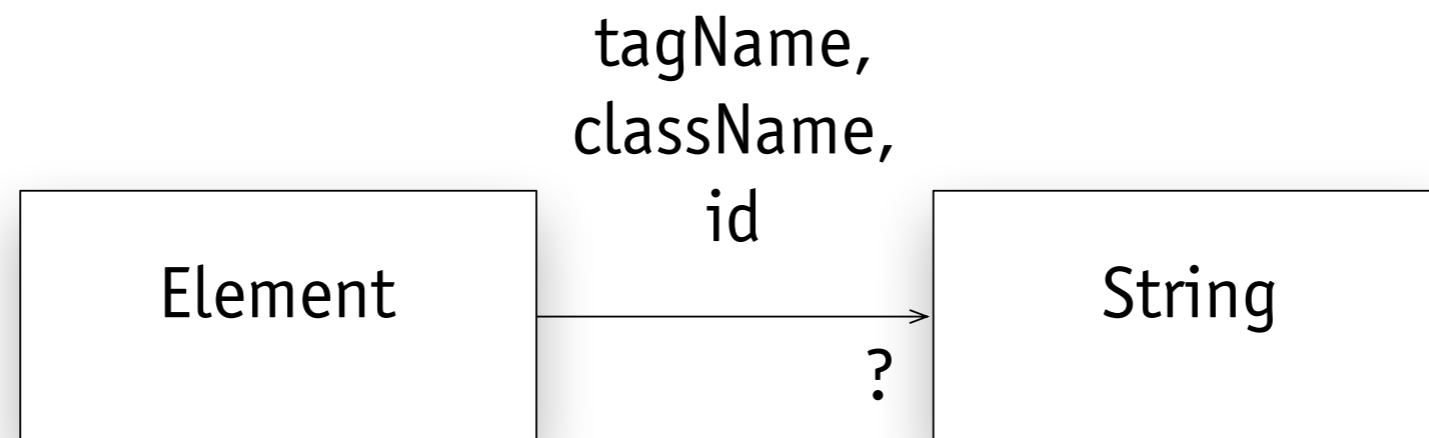
code executed in console

```
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();
```

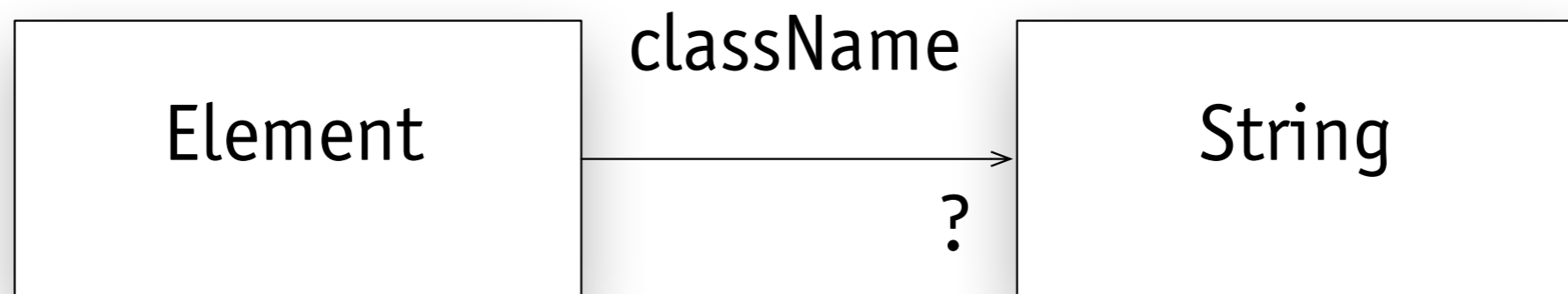
code executed in console

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

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



before



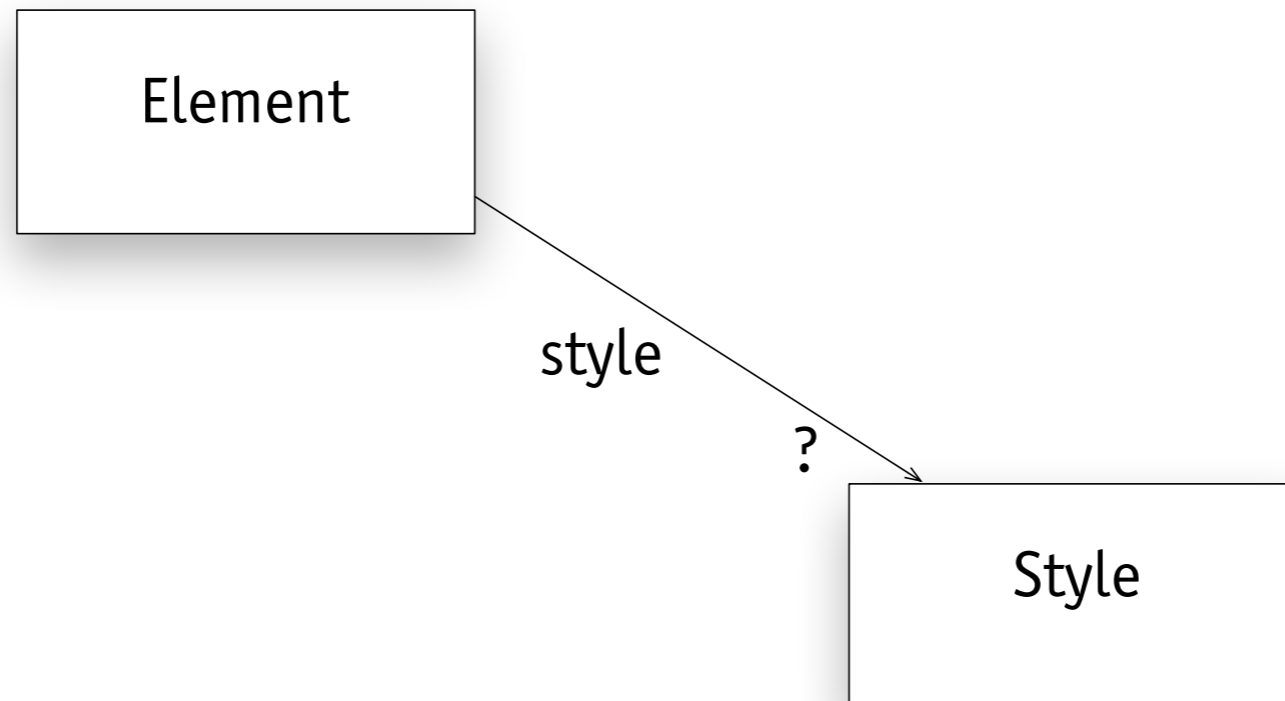
after

```
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

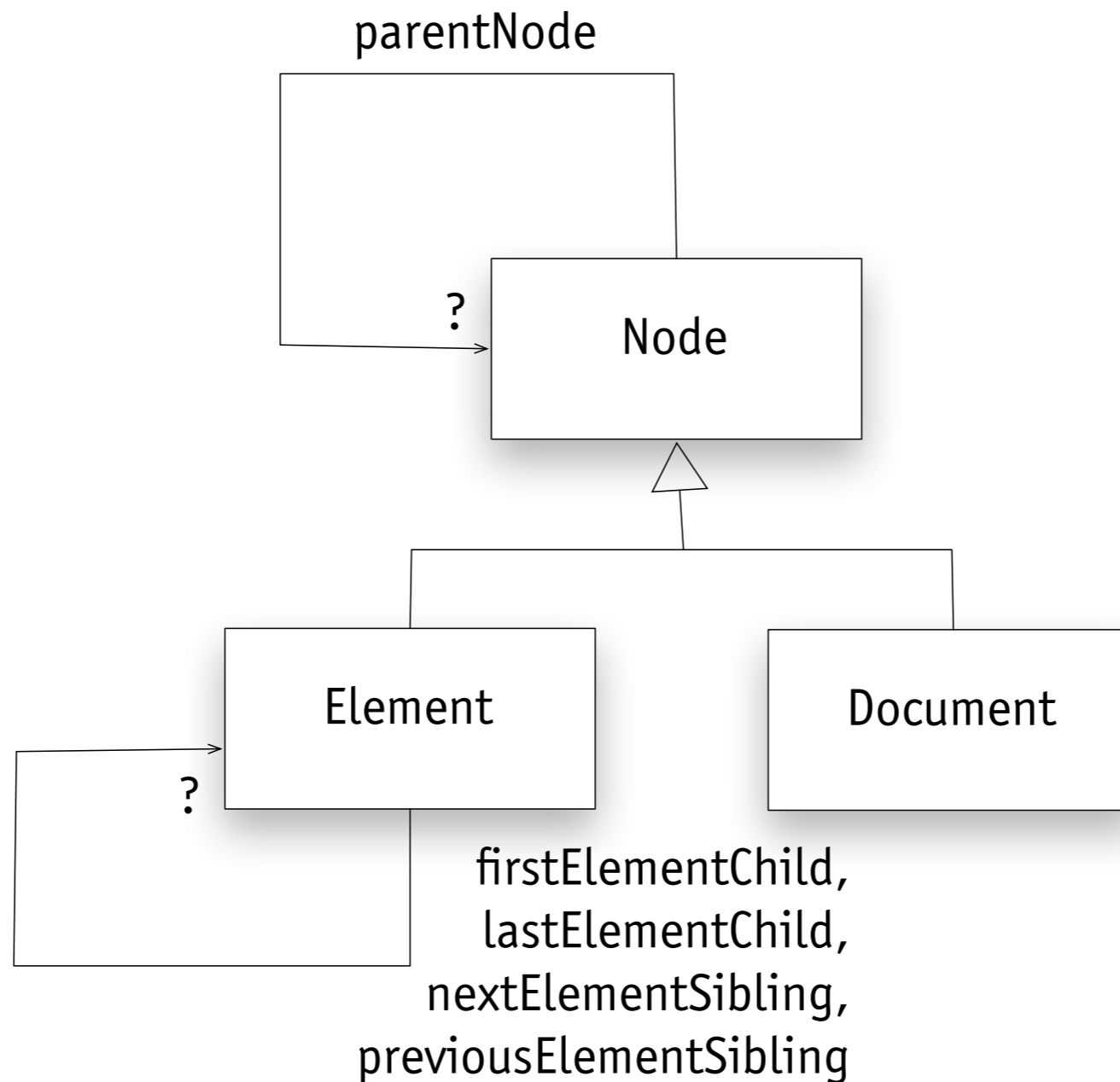
My new webpage

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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