

## **EXAMPLE 52: USING THE DOM TO MODIFY THE HTML OF A PAGE**

## **EXAMPLE 52: USING THE DOM TO MODIFY THE HTML OF A PAGE**

**We all love Closures!**

**Closures are SO cool, I just love  
closures.**

**Agree?**

Yes!

No!

# DOM = "DOCUMENT-OBJECT-MODEL"

THE DOM IS A WAY OF ACCESSING ANY PART OF THE  
HTML OF A WEBPAGE AS A JAVASCRIPT OBJECT.

```
var code = document.getElementById("code")
```

# DOM = "DOCUMENT-OBJECT-MODEL"

THE DOM IS A WAY OF ACCESSING ANY PART OF THE HTML OF A WEBSITE AS A JAVASCRIPT OBJECT.

```
<script id = "code">  
var code = document.getElementById("code")  
function nullExample() {  
    var code = document.getElementById("code")  
    if(code != null) {  
        console.log("The code in this webpage  
contains this html: " + code.innerHTML)  
    }  
    else {  
        console.log("code is null!");  
    }  
}
```

# DOM = "DOCUMENT-OBJECT-MODEL"

THE DOM IS A WAY OF ACCESSING ANY PART OF THE  
HTML OF A WEBPAGE AS A JAVASCRIPT OBJECT.

```
var code = document.getElementById("code")
```

```
console.log("The code in this webpage contains this html: " +  
code.innerHTML);
```

# DOM = "DOCUMENT-OBJECT-MODEL"

THE DOM IS A WAY OF ACCESSING ANY PART OF THE  
HTML OF A WEBPAGE AS A JAVASCRIPT OBJECT.

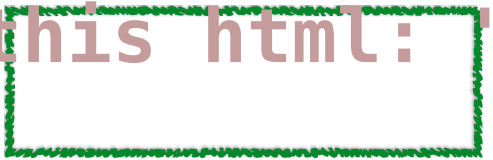
```
var code = document.getElementById("code")
```

```
console.log("The code in this webpage contains this html: " +  
code.innerHTML);
```

# DOM = "DOCUMENT-OBJECT-MODEL"

THE DOM IS A WAY OF ACCESSING ANY PART OF THE  
HTML OF A WEBPAGE AS A JAVASCRIPT OBJECT.

```
var code = document.getElementById("code");  
console.log("The code in this webpage contains this html:"  
code.innerHTML);
```



WE CAN NOW ACCESS THE HTML VIA AN  
OBJECT PROPERTY!!

```
var code = document.getElementById("code")
```

**IF THERE IS NO HTML ELEMENT WITH ID = "CODE",  
THEN document.getElementById  
RETURNS null**



LET'S BUILD THE CODE FOR THIS LITTLE POLL IN 2 WAYS.

**We all love Closures!**

**Closures are SO cool, I just love  
closures.**

**Agree?**



Yes! No!

**THE "YES" BUTTON WILL KEEP TRACK OF  
THE YES VOTES USING A CLOSURE**

# WE HAVE 2 BUTTONS IN THE HTML



```
<button id = "yesButton"> Yes! </b>  
<button id = "noButton"> No! </but
```

EACH HAS AN ID THAT WE CAN USE FROM THE  
JAVASCRIPT USING `document.getElementById`

```
window.onload = function() {
```

```
    var yesButton = document.getElementById("yesButton");  
    var noButton = document.getElementById("noButton");  
    var yesVotes = 0;
```

```
    noButton.onclick = countNoVotes;
```

```
    yesButton.onclick = function() {  
        yesVotes++;  
        var yesVotesMessage =  
document.getElementById("yesVotes");  
        yesVotesMessage.innerHTML = "# Yes votes = <b>" +  
yesVotes + "</b><br/>";  
    }  
}
```

Yes!

No!

```
function countNoVotes() {  
    noVotes++;  
    var noVotesMessage = document.getElementById("noVotes");  
    noVotesMessage.innerHTML = "# No votes = <b>" + noVotes +  
"</b><br/>";  
}
```

```
var yesButton = document.getElementById("yesButton");  
var noButton = document.getElementById("noButton");  
var yesVotes = 0;
```

**WE HAVE A LOCAL (NOT GLOBAL) VARIABLE TO  
COUNT THE NUMBER OF YES VOTES**

```
yesButton.onclick = function() {  
    yesVotes++;  
    var yesVotesMessage =  
document.getElementById("yesVotes");  
    yesVotesMessage.innerHTML = "# Yes votes = <b>" +  
yesVotes + "</b><br/>";  
}
```

**AND A NESTED FUNCTION THAT DISPLAYS A  
MESSAGE WHEN SOMEONE VOTES "YES"**

```
function countNoVotes() {  
    noVotes++;  
    var noVotesMessage = document.getElementById("noVotes");  
    noVotesMessage.innerHTML = "# No votes = <b>" + noVotes  
"</b><br/>";  
}
```

```

var yesButton = document.getElementById("yesButton");
var noButton = document.getElementById("noButton");
var yesVotes = 0;

noButton.onclick = countNoVotes;

yesButton.onclick = function() {
    yesVotes++;
    var yesVotesMessage =
document.getElementById("yesVotes");
    yesVotesMessage.innerHTML = "# Yes votes = <b>" +
yesVotes + "</b><br/>";
}
}

function countNoVotes() {
    noVotes++;
    var noVotesMessage = document.getElementById("noVotes");
    noVotesMessage.innerHTML = "# No votes = <b>" + noVotes
"</b><br/>";
}

```

**CLOSURE**

**=**

SAY WE HAVE A **NESTED**

**+**

**VARIABLES LOCAL TO THE  
OUTER SCOPE**

**"REFERENCING"**

```
var yesButton = document.getElementById("yesButton");  
var noButton = document.getElementById("noButton");
```

**THE "YES" BUTTON WILL KEEP TRACK OF  
THE YES VOTES USING A CLOSURE**

```
yesButton.onclick = function() {  
    yesVotes++;  
    var yesVotesMessage =  
document.getElementById("yesVotes");  
    yesVotesMessage.innerHTML = "# Yes votes = <b>" +  
yesVotes + "</b><br/>";  
}
```

**CLOSURE =**

SAY WE HAVE A NESTED +  
**VARIABLES LOCAL TO THE  
OUTER SCOPE**  
"REFERENCING"

```
function countNoVotes() {  
    noVotes++;  
    var noVotesMessage = document.getElementById("noVotes");  
    noVotesMessage.innerHTML = "# No votes = <b>" + noVotes  
"</b><br/>";  
}
```

LET'S BUILD THE CODE FOR THIS LITTLE POLL IN 2 WAYS.

**We all love Closures!**

**Closures are SO cool, I just love  
closures.**

**Agree?**



Yes! No!

**THE "YES" BUTTON WILL KEEP TRACK OF  
THE YES VOTES USING A CLOSURE**



LET'S BUILD THE CODE FOR THIS LITTLE POLL IN 2 WAYS.

**We all love Closures!**

**Closures are SO cool, I just love  
closures.**

**Agree?**

THE "NO" BUTTON WILL KEEP TRACK OF THE  
NO VOTES WITHOUT USING CLOSURES



# THE "NO" BUTTON WILL KEEP TRACK OF THE NO VOTES WITHOUT USING CLOSURES

```
var noVotes = 0;
```

```
window.onload = function() {
```

```
    var yesButton = document.getElementById("yesButton");
```

```
    var noButton = document.getElementById("noButton");
```

```
    var yesVotes = 0;
```

```
    noButton.onclick = countNoVotes;
```

```
    yesButton.onclick = function() {
```

```
        yesVotes++;
```

```
        var yesVotesMessage = document.getElementById("yesVotes");
```

```
        yesVotesMessage.innerHTML = "# Yes votes = <b>" + yesVotes +  
>";
```

```
    }
```

```
}
```

```
function countNoVotes() {
```

```
    noVotes++;
```

```
    var noVotesMessage = document.getElementById("noVotes");
```

```
    noVotesMessage.innerHTML = "# No votes = <b>" + noVotes + "</b>"
```

```
}
```

```
var noVotes = 0;
```

**THE "NO" BUTTON WILL KEEP TRACK OF  
THE NO VOTES WITHOUT USING CLOSURES**

```
var yesButton = document.getElementById("yesButton");
var noButton = document.getElementById("noButton");
var yesVotes = 0;

noButton.onclick = countNoVotes;

yesButton.onclick = function() {
    yesVotes++;
    var yesVotesMessage = document.getElementById("yesvotes");
    yesVotesMessage.innerHTML = "# Yes votes = <b>" + yesVotes + "</b><br/>";
};
```

**TO DO THIS WITHOUT CLOSURES, WE  
END UP NEEDING A GLOBAL VARIABLE!**

```
function countNoVotes() {
    noVotes++;
    var noVotesMessage = document.getElementById("noVotes");
    noVotesMessage.innerHTML = "# No votes = <b>" + noVotes + "</b><br/>";
}
```

# **We all love Closures!**

## **Closures are SO cool, I just love closures.**

### **Agree?**

**# Yes votes = 20**

**# No votes = 1**

# We all love Closures!

**Closures are SO cool, I just love closures.**

**Agree?**

Yes!

No!

# Yes votes = 20

# No votes = 1