



INTRODUCTION TO WEB DEVELOPMENT AND HTML

Lecture 16: - Spring 2011

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Outline

- ▶ **Form validation**
- ▶ **Other forms techniques**
- ▶ **Navigation**





JavaScript Tips



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Tips when using JavaScript

1. **Do not invent the wheel!** Reuse other's people JavaScript libraries. Google them!

- ▶ www.HotScripts.com
- ▶ www.JavaScriptKit.com

2. Reuse your own functions:

<form name="frmLoanCalc" onsubmit="calculateLoan()">

Loan Amount: <input type="text" name="txtAmount"/>

Repayment: <input type="text" name="txtRepayment"/>

Interest rate: <input type="text" name="txtInterest"/>

```
function calculateLoan() {  
    loanAmount = document.frmLoanCalc.txtAmount.value  
    loanValue = document.frmLoanCalc.txtRepayment.value  
    interestRate = document.frmLoanCalc.txtInterest.value  
    /*... more code ...*/
```

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Tips when using JavaScript (Cont'd)

```
<form name="frmLoanCalc" onsubmit="calculateLoan( )">
```

```
  Loan Amount: <input type="text" name="txtAmount1"/>
```

```
  Repayment: <input type="text" name="txtAmount2"/>
```

```
  Interest rate: <input type="text" name="txtRate"/>
```

```
function calculateLoan() {  
  loanAmount = document.frmLoanCalc.txtAmount1.value  
  loanValue = document.frmLoanCalc.txtAmount2.value  
  interestRate = document.frmLoanCalc.txtRate.value  
  /*... more code ...*/  
}
```

Better Approach:

```
function calculateLoan(loanAmount, repaymentPeriod, interestRate){  
  /*... more code ...*/  
}
```

Tips when using JavaScript (Cont'd)

3. Use External JavaScript files!

- ▶ `<script type="text/javascript" src="js/script.js"></script>`

4. Place your scripts in a script folder: Folders are commonly named:

- ▶ `js`
- ▶ `script`
- ▶ `javascript`





Form Validation



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Form Validation

- ▶ You cannot check whether user has entered correct information
- ▶ However, you can check that user has entered the information in the correct format.
- ▶ Form are usually validated using the **onsubmit** event.
- ▶ The JavaScript function must return true so **the form can be submitted**. Otherwise, it will not be submitted.



Checking Text Fields

Form validation - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Username:

Password:

Confirm your password:

Log in

Username should be of a minimum size

Password should be of a minimum size

Passwords should match

Let's Create our Validate function

```
function validate(form) {  
    var returnValue = true;  
    var username = frmRegister.txtUserName.value;  
    var password1 = frmRegister.txtPassword.value;  
    var password2 = frmRegister.txtPassword2.value;  
    /*username length should be longer than six  
    characters*/  
    if(username.length < 6) {  
        returnValue = false;  
        alert("Your username must be at least\n6  
        characters long.\n  
        Please try again.");  
        frmRegister.txtUserName.focus();  
    }  
}
```



Check password length

```
/*username length should be longer than six  
characters*/
```

```
if (password1.length < 6) {  
    returnValue = false;  
    alert("Your password must be at least\n6  
        characters long.\n Please try again.");  
    frmRegister.txtPassword.value = "";  
    frmRegister.txtPassword2.value = "";  
    frmRegister.txtPassword.focus();  
}
```



Passwords should match

```
/*passwords should match*/
```

```
if (password1.value != password2.value) {  
    returnValue = false;  
    alter("Your password entries did not  
        match.\nPlease try again.");  
    frmRegister.txtPassword.value = "";  
    frmRegister.txtPassword2.value = "";  
    frm Register.txtPassword.focus();  
}
```

```
/* Finally return variable "returnValue" */
```

```
    return returnValue;  
}
```



Making Required fields!

- ▶ How can we create required fields into a form?
- ▶ For example, a registration form that requires your username, first name, last name, password and email address to have a valid value.
- ▶ However, middle name, and cell phone are not required.



Making Required Form Fields

```
<form name="frmEnquiry" method="post"
  action="gotoSomewhere" onsubmit="return
  validate(this) ;">
  Name:<input type="text" class="required"
    name="Name" />
  E-mail:<input type="text" class="required"
    name="E-mail" />
  Please enter your query here:
  <textarea rows="8" class="required" cols="30"
    name="query"></textarea>
  <input type="submit" class="" value="Submit your
    form" />
</form>
```



JavaScript function

```
function validate(form) {  
    var returnValue=true;  
    var formElements = form.elements;  
  
    for (var i=0; i<formElements.length; i++){  
        currentElement = formElements[i];  
        if (currentElement.value==" " &&  
currentElement.className=="required") {  
            /*Show a respective alert message */  
            currentElement.focus();  
            returnValue = false;  
            break;  
        }  
    }  
    return returnValue;  
}
```



Form with **required** fields

Name*:

E-mail*:

Please enter your query here:

Javascript Alert

The required field " E-mail" is empty. Please provide a value for it.

OK



Playing with Random and Images

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Random

- ▶ The `random()` method generates a random number between 0 and 1
- ▶ Syntax:
 - ▶ `Math.random()`
- ▶ Also, we know that with JavaScript we can change the source of an image by modifying their property **src**



Random Images Example

```
function randomImage() {  
    var images=new Array()  
    images[0]="google1.png"  
    images[1]="google2.jpg"  
    images[2]="google3.png"  
    images[3]="google4.gif"  
    images[4]="google5.jpg"  
  
    var i=Math.floor(Math.random()*images.length)  
    document.images.imgBanner.src = "img/" + images[i];  
}
```



Random Images Example: HTML

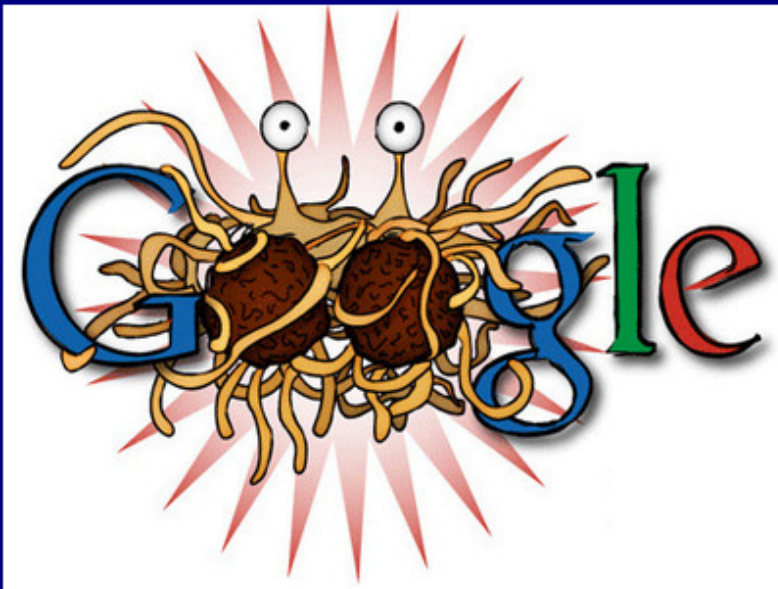
```
<body onload="randomImage ( ) ">  
  
</body>
```



The body onload event triggers **startSlideShow()**



The image changes randomly



**My image is changing randomly
everytime the onload event is
triggered.** [Change Image](#) [Stop SlideShow](#)

Get Dojo !



Cloud hosting via CDN

You can utilize the full Dojo Toolkit from the services by including a script tag in your page:

☒ Google CDN

☐ Yandex CDN (Europe)

```
<script src="http://ajax.googleapis.com/ajax/libs/dojo/1.6/dojo/dojo.xd.js" type="text/javascript"></script>
```

```
<script src="http://ajax.googleapis.com/ajax/libs/dojo/1.6/dojo/dojo.xd.js" type="text/javascript"></script>
```



Cool Examples with Dojo!!!

- ▶ See Examples in course site



Questions?



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