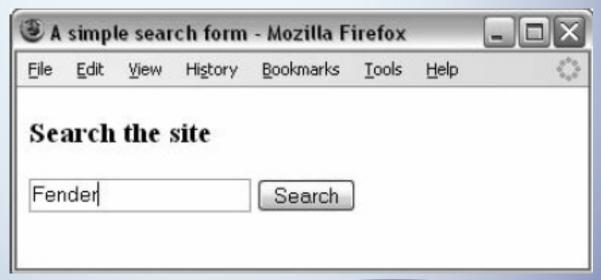


Web开发基础 HTML form &JavaScript



More about HTML-Form

 every time you want to collect information from a visitor to your site, you need to use a form



Creating a Form with the <form> Element

- The <form> element can also contain other markup, such as paragraphs, headings...
- A <form> element must not, however, contain another <form> element
- your page may contain as many forms as you like---but users will be able to send the data from only one form at a time to the server

<form>

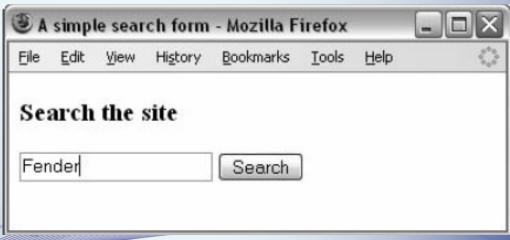
Between the opening <form> and closing

```
</form> tags
  the text input boxes
  drop-down boxes
  checkboxes
  submit button
```

• • • • •

Ex.

- <form action="http://www.example.org/search.aspx"
 method="get">
 - <h3>Search the site</h3>
 - <input type="text" name="txtSearchItem" />
 - <input type="submit" value="Search" />
- </form>



The form Attribute

The action Attribute

- The action attribute indicates what happens to the data when the form is submitted
- <form action="http://www.example.org/membership/login.aspx">

The method Attribute

- The get method, which sends data as part of the URL
- The post method, which hides data in the HTTP headers

Other useful Attribute

The id Attribute

- The id attribute allows you to unique identify the <form> element within a page, just as you can use it to uniquely identify any element on a page.
- The onsubmit Attribute
 - onsubmit="validateFormDetails();"
- The onreset Attribute
- •

Why checks form before sent to the server?

- The user does not have to wait the extra time it would take for the page to be sent to the server and then returned if there are any errors.
- The server does not have to deal with as much error checking

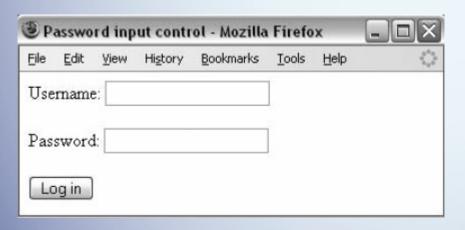
Form Controls

- Text input controls
- Buttons
- Checkboxes and radio buttons
- Select boxes (sometimes referred to as drop-down menus) and list boxes

•

Text Inputs

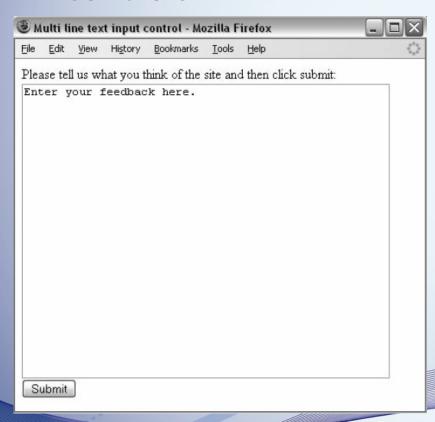
- Single-line text input controls
- Password input controls



```
<form
   action="http://www.example.com/login.a
   spx" method="post">
Username:
<input type="text" name="txtUsername"
   value="" size="20" maxlength="20" />
<br />
Password:
<input type="password"
    name="pwdPassword" value="" size="20"
    maxlength="20" />
<input type="submit" value="Submit" />
</form>
```

Text Inputs

Multi-line text input controls



```
<form
   action="http://www.example.org
   /feedback.asp" method="post">
Please tell us what you think of the
   site and then click submit:<br />
<textarea name="txtFeedback"
   rows="20" cols="50">
Enter your feedback here.
</textarea>
<br />
<input type="submit"
   value="Submit" />
</form>
```

Creating Buttons Using the <input> Element

```
<input type="submit"
    name="btnVoteRed" value="Vote for
    reds" />
<input type="submit"
    name="btnVoteBlue" value="Vote for
    blues" />
<br /> <br />
<input type="reset" value="Clear form"
    /> <br /> <br />
<input type="button" value="calculate"</pre>
```



```
<input type="image" src="submit.jpg"
    alt="Submit" name="btnImageMap"
    />
```

onclick="calculate()" />

Checkboxes

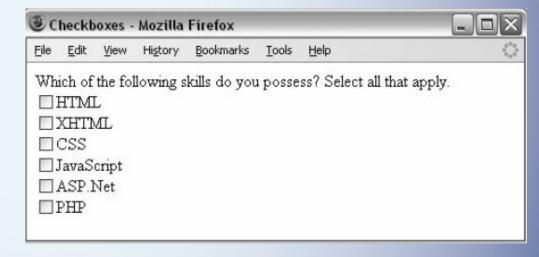
- <form action="http://www.example.com/cv.aspx"
 method="get" name="frmCV">
- Which of the following skills do you possess? Select all that apply.
- <input type="checkbox" name="chkSkills"
 value="html" />HTML

- <input type="checkbox" name="chkSkills"
 value="xhtml" />XHTML

- <input type="checkbox" name="chkSkills"
 value="CSS" />CSS

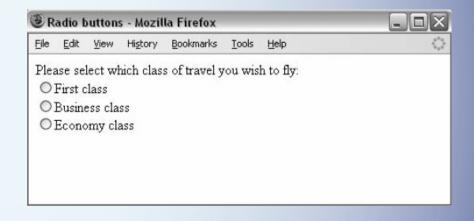
- <input type="checkbox" name="chkSkills"
 value="JavaScript" />JavaScript

- <input type="checkbox" name="chkSkills"
 value="aspnet" />ASP.Net
>
- <input type="checkbox" name="chkSkills"
 value="php" />PHP
- </form>



Radio Buttons

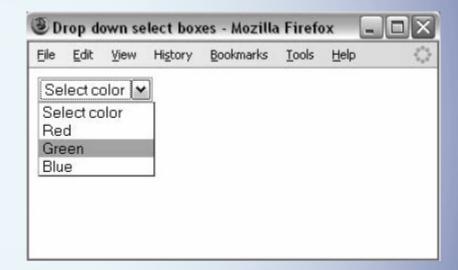
```
<form
   action="http://www.example.com/fli
   ghts.aspx" name="frmFlightBooking"
method="get">
Please select which class of travel you
   wish to fly: <br />
<input type="radio" name="radClass"</pre>
   value="First" />First class <br />
<input type="radio" name="radClass"</pre>
   value="Business" />Business class <br
<input type="radio" name="radClass"</pre>
   value="Economy" />Economy class
   <br />
```



</form>

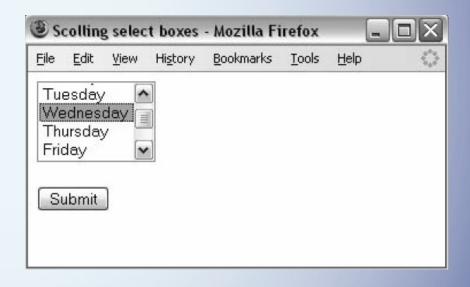
Select Boxes

```
<select name="selColor">
<option selected="selected"
    value="">Select color</option>
<option value="red">Red</option>
<option value="green">Green</option>
<option value="blue">Blue</option>
</select>
```



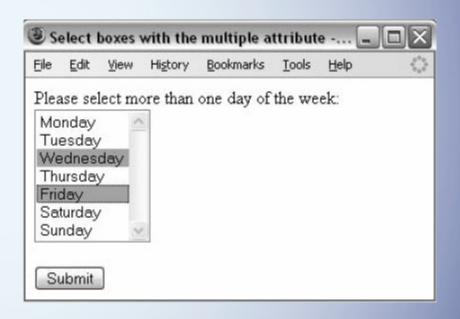
Creating Scrolling Select Boxes

```
<form
   action="http://www.example.org/days.as
   px" name="frmDays" method="get">
<select size="4" name="selDay">
<option value="Mon">Monday</option>
<option value="Tue">Tuesday</option>
<option value="Wed">Wednesday</option>
<option value="Thu">Thursday</option>
<option value="Fri">Friday</option>
<option value="Sat">Saturday</option>
<option value="Sun">Sunday</option>
</select>
<br /><br /><input type="submit"</pre>
   value="Submit" />
</form>
```



Selecting Multiple Options with the multiple Attribute

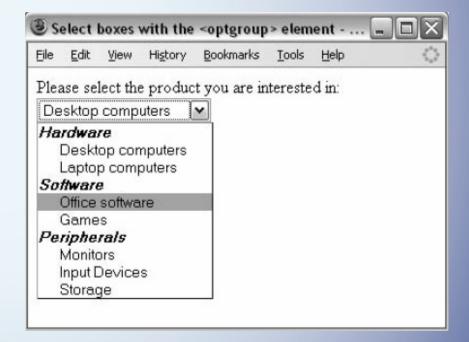
```
<form
   action="http://www.example.org/days.as
    px" method="get" name="frmDays">
Please select more than one day of the
   week:<br />
<select name="selDays" multiple="multiple">
<option value="Mon">Monday</option>
<option value="Tue">Tuesday</option>
<option value="Wed">Wednesday</option>
<option value="Thu">Thursday</option>
<option value="Fri">Friday</option>
<option value="Sat">Saturday</option>
<option value="Sun">Sunday</option>
</select>
<br /><br /><input type="submit"</pre>
   value="Submit">
</form>
```



0

Grouping Options with the <optgroup> Element

```
<form action="http://www.example.org/info.aspx"</pre>
    method="get" name="frmInfo">
Please select the product you are interested in:<br/>>br />
<select name="selInformation">
<optgroup label="Hardware">
<option value="Desktop">Desktop computers
<option value="Laptop">Laptop computers
</optgroup>
<optgroup label="Software">
<option value="OfficeSoftware">Office software
<option value="Games">Games
</optgroup>
<optgroup label="Peripherals">
<option value="Monitors">Monitors
<option value="InputDevices">Input Devices
<option value="Storage">Storage</option>
</optgroup>
</select>
<br /><br /><input type="submit" value="Submit" />
</form>
```



Structuring Your Forms

<fieldset> element
 creates a border around
 the group of form
 controls to show that
 they are related.

<legend> element allows
you to specify a caption for
the <fieldset> element,
which acts as a title for the
group of form controls.
When used, the <legend>
element should always be
the first child of the
<fieldset> element.

Ex.

<form action="http://www.example.org/competition.asp" method="post"</pre> name="frmComp"> <fieldset> <legend>Contact Information</legend> <label>First name: <input type="text" name="txtFName" size="20" /></label>
 <label>Last name: <input type="text" name="txtLName" size="20" /></label>
 <label>E-mail: <input type="text" name="txtEmail" size="20" /></label>
 </fieldset> <fieldset> <legend>Competition Question</legend> How tall is the Eiffel Tower in Paris, France?
 <label><input type="radio" name="radAnswer" value="584" /> 584ft</label>
 <label><input type="radio" name="radAnswer" value="784" /> 784ft</label>
 <label><input type="radio" name="radAnswer" value="984" /> 984ft</label>
 <label><input type="radio" name="radAnswer" value="1184" /> 1184ft</label>
 </fieldset> <fieldset> <legend>Tiebreaker Question</legend> <label>In 25 words or less, say why you would like to win \$10,000: <textarea name="txtTiebreaker" rows="10" cols="40"></textarea> </label> </fieldset> <fieldset> <legend>Enter competition</legend> <input type="submit" value="Enter Competition" /> </fieldset>

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	ast na	_					
	-mail:				_		
-0	ompe	etition	Questic	n			
H	ow ta	ll is th	e Eiffel T	ower in Pa	ris, Fra	nce?	
	D 584						
(784	ft					
(984	ft					
(D 118	4 ft					
-7	iebre	aker (Question	,——			
Ir	25 w	ords o	or less, s	ay why you	would	like to win \$1	10,000:
L							
- A	Intar i	comp	etition —				

</form>

Sending Form Data to the Server

HTTP get

 http://www.example.com/l ogin.aspx?txtUsername=wa ter&pwdPassword=LetMeIn

HTTP post

User-agent: MSIE 5.5

Content-Type: application/x-www-

form-urlencoded

Content-length: 35

...other headers go here...

txtUserName=Bob&pwdPassword=L etMeIn

not use the HTTP get method when

- updating a data source such as a database or spreadsheet
- dealing with sensitive information
- ☐ You have large amounts of data (older browsers URLs to exceed more than 1024 characters).
- form contains a file upload control
- users might enter non-ASCII.

JavaScript

- JavaScript gives web developers a programming language for use in web pages and allows them to perform following:
 - □ Read elements from documents and write new elements and text into documents
 - ☐ Manipulate or move text
 - ☐ Create pop-up windows
 - ☐ Perform mathematical calculations on data
 - ☐ React to events, such as a user's rolling over an image or clicking a button
 - ☐ Retrieve the current date and time from a user's computer or the last time a document was modified
 - ☐ Determine the user's screen size, browser version, or screen resolution
 - ☐ Perform actions based upon conditions such as alerting users if they enter the wrong information into a form or if they press a certain button

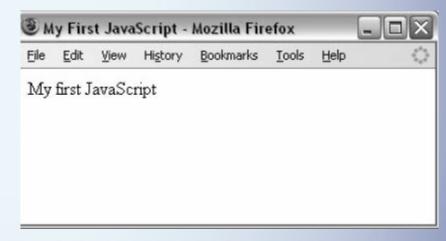
How to Add a Script to Your Pages

 (1)add scripts to your page inside the <script> element

```
<html>
<body>

<script type="text/javascript">
document.write("My first JavaScript")
</script>

</body>
</html>
```



Body- run as the page loads

 Head- load before the page is displayed



How to Add a Script to Your Pages

• (2) write JavaScript in external documents that have the file extension .js

element, the script is treated the same as when the script lives inside the head of the document waiting for an event to trigger it

<script type="JavaScript"
 src="scripts/validation.j
 s" />

If it is placed in the <body> element it will act like a script in the body section and execute as the page loads.

Comments in JavaScript

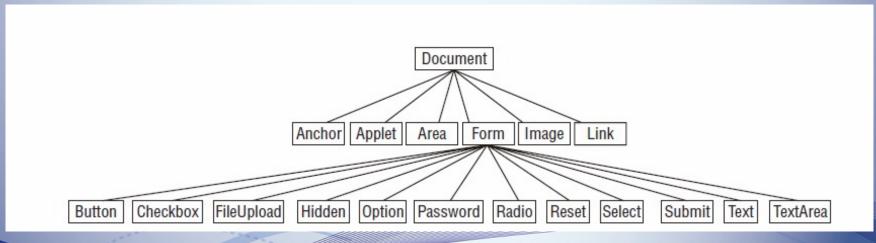
```
<script type="text/javascript">
document.write("My first JavaScript") // comment goes here
</script>
```

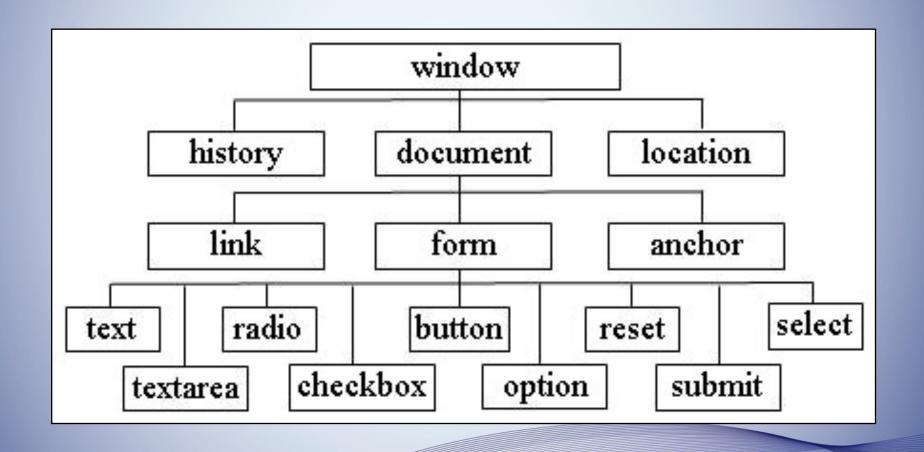
/* This whole section is commented
out so it is not treated as a part of
the script. */

Document Object Model

Level 0 HTML Document Object Model

The Document Object represents the whole document, and then each of the child objects represents a *collection* of similar tags within that document





two ways to access values from this document

```
<h1>User Registration</h1>
<form name="frmLogin" action="login.aspx"</pre>
   method="post">
Username <input type="text"
   name="txtUsername" size="12" /> <br />
Password <input type="password"
   name="pwdPassword" size="12" /> <br />
<input type="submit" value="Log In" />
</form>
If you are a new user <a
   href="register.aspx">Register here</a> |
If you have lost your password you can <a
   href="lostPassword.aspx">retrieve
your password here</a>.
```

document.links[0].href

 document.frmLogin.pw dPassword.value

Objects, Methods, and Properties

- A property tells you something about an object
 - document.title
 - document.lastModified
- A method performs an action
 - document.write('This is a document');
 - document.write('Page last modified on ' + document.lastModified);

Program with JavaScript

- A variable is used to store some information
- Operators allow you to do things to variables or references to
 - Arithmetic operators
 - Comparison operators
- Functions are code containing rules that you create to perform an operation

Variables

- userName = "water"
- var userName = "water"
- * case-sensitive
- *Lifetime
 - Function
 - page

Operators

- Arithmetic operators
- Assignment operators
- Comparison operators
- Logical operators
- String operators

Arithmetic operators

Symbol	Description	Example $(x = 10)$	Result
+	Addition	x+5	15
-	Subtraction	x-2	8
*	Multiplication	x*3	30
/	Division	x/2	15
%	Modulus (division remainder)	x%3	1
++	Increment (increments the variable by 1 — this technique is often used in counters)	X++	11
	Decrement (decreases the variable by 1)	x	9

Assignment operators

Symbol	Example Using Shorthand	Equivalent Without Shorthand
+=	x+=y	x=x+y
-=	x-=y	x=x-y
=	x=y	x=x*y
/=	x/=y	x=x/y
%=	x%=y	x=x%y

Comparison operators

Operator	Description	Example
==	Equal to	1==2 returns false 3==3 returns true
!=	Not equal to	1!=2 returns true 3!=3 returns false
>	Greater than	1>2 returns false 3>3 returns false 3>2 returns true
<	Less than	1<2 returns true 3<3 returns false 3<1 returns false
>=	Greater than or equal to	1>=2 returns false 3>=2 returns true 3>=3 returns true
<=	Less than or equal to	<pre>1<=2 returns true 3<=3 returns true 3<=4 returns false</pre>

Logical operators

Operator	Name	Description	Example (where x=1 and y=2)
&&	And	Allows you to check if both of two conditions are met	(x < 2 && y > 1) Returns true (because both conditions are met)
??	Or	Allows you to check if one of two conditions are met	(x < 2 ??y < 2) Returns true (because the first condition is met)
!	Not	Allows you to check if something is not the case	! (x > y) Returns true (because x is not more than y)

String Operator

firstName = "Bob"

lastName = "Stewart"

name = firstName + lastName

Functions

- \square name
- arguments
- □ return value

```
function calculateArea(width, height) {
  area = width * height
  return area
}
```

Call a Function

<form name="frmArea" action="">
Enter the width and height of your rectangle to calculate the size:

Width: <input type="text" name="txtWidth" size="5" />

Height: <input type="text" name="txtHeight" size="5" />

<input type="button" value="Calculate area"
onclick="alert(calculateArea(document.frmArea.txtWidth.value,
document.frmArea.txtHeight.value))" />
</form>

Conditional Statements

```
if (condition)
code to be executed if condition is
   true
if (condition)
code to be executed if condition is true
else
code to be executed if condition is false
```

```
switch (expression)
case option1:
code to be executed if expression is what is written
     in option1
break;
case option2:
code to be executed if expression is what is written
    in option2
break;
case option3:
code to be executed if expression is what is written
     in option3
break;
default:
code to be executed if expression is different from
    option1, option2,
and option3
```

Looping

```
while (condition)
code to be executed
do
code to be executed
while (condition)
```

```
for (a; b; c)
code to be executed
for (i=0; i<11; i++) {
document.write(i + "x 3 = " + (i * 3) +
   "<br />" );
```

Events

- Window events
 - Onload
 - Onunload
 - **–**

- User events
 - Onclick
 - Onmouseover

— ...

<a href=""
onmouseover="document.images.link.src='images/click_red.gif';"
onmouseout="document.images.link.src='images/click_green.gif'">
<img src="images/click_green.gif" width="100" height="50" border="0"
name="link">

Built-in Objects

- Stringalert(myString.length)
- MathnumberPI = Math.PI
- Window

window.status = "Did you see me down here?" Date

Today.getYear()

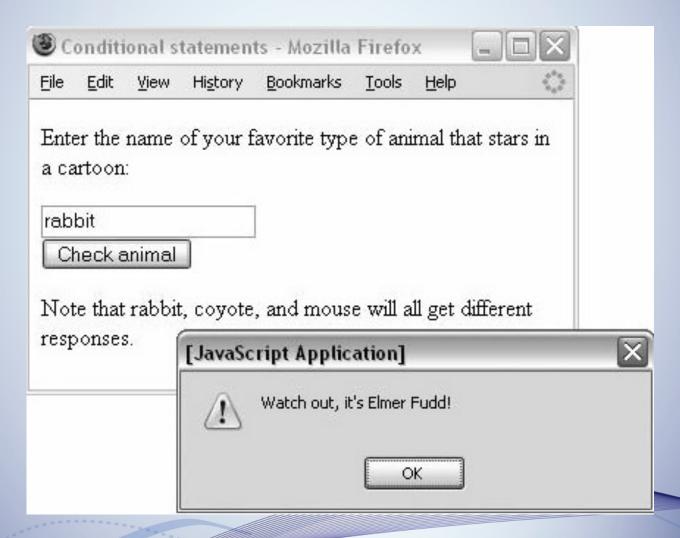
Array

```
fruit = new Array("apple",
     "banana", "orange",
     "mango", "lemon")
document.write(fruit.length)
```

Ex. Check text field value

```
Enter the name of your
  favorite type of animal that
  stars in a cartoon:
<form name="frmAnimal">
<input type="text"
  name="txtAnimal" /><br />
<input type="button"
  value="Check animal"
  onclick="checkAnimal()" />
</form>
```

```
function checkAnimal() {
switch (document.frmAnimal.txtAnimal.value){
case "rabbit":
alert("Watch out, it's Elmer Fudd!")
break;
case "coyote":
alert("No match for the road runner - meep
    meep!")
break;
case "mouse":
alert("Watch out Jerry, here comes Tom!")
break:
default : alert("Are you sure you picked an
    animal from a cartoon?");
```



Ex. Form Validation

- Form validation is one of the most common tasks performed using JavaScript
- When to Validate
 - Client side
 - Server side



- That the username is of a minimum length
- That the password is of a minimum length
- That the two passwords match

 The validate() function you are about to look at will live between the following <script> tags in the head of the document <script type="text/JavaScript">
</script>

```
<form name="frmRegister" method="post" action="register.aspx"</pre>
onsubmit="return validate(this);">
<div class="label"><label
     for="txtUsername">Username:</label></div>
<div class="formElement">
<input type="text" name="txtUserName" id="txtUserName"</pre>
     size="12" />
</div>
<div class="label"><label for="txtPassword">Password:
     <div class="formElement">
<input type="password" name="txtPassword" id="txtPassword"
     size="12" />
</div>
<div class="label"><label for="txtPassword2">Confirm your
     password:</label></div>
<div class="formElement">
<input type="password" name="txtPassword2" id="txtPassword2"</pre>
     size="12" />
</div>
<div class="label">&nbsp;</label></div>
<div class="formElement"><input type="submit" value="Log in"</pre>
     /></div>
</form>
```

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

Lab 3 form and JavaScript

Purpose

 The purpose of this lab is to practice web pages using Form and JavaScript

Exercice 1: on-line test form

- Create a page named onlinetest.html that provied a on-line test for the browser.
 - The name of this examination
 - A description/introduction of this test
 - At least 3 group of questions.
 - Using at least 3 kinds of form control



- Exercise 2: Modify the form so that it can say somethings more like this:
 - What is the date & time on visitor's computer
 - Greeting words like these:
 - ☐ "Good Morning" to visitors coming to the page before 12 p.m. (using an if statement).
 - ☐ "Good Afternoon" to visitors coming to the page between 12 and 6 p.m. (again using an if statement. (Hint: You might need to use a logical operator.)
 - ☐ "Good Evening" to visitors coming to the page after 6 p.m. up until midnight (again using an if statement).

- Exercise 3:examing user's answer when user click the submit button
 - Create a button on the bottom of this form
 - Cteate a script that examine user's answer
 - Count the score for the user
 - Inform user his score by the popup window

Exercise 4 (advanced): Advanced javaScript Techniques

- Inform user the total time he/she used to finish this test
- hint :you can use data/time build-in object ...