Lecture 2.4
Working with form Object, Form Validation

Course Instructor

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Form Object

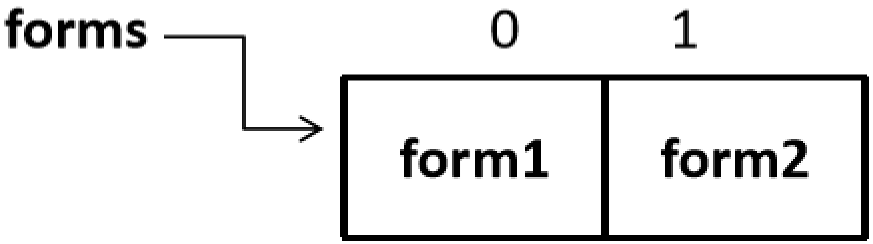
- The Form object represents an HTML form.
- The browser creates a ‘forms array’ which keeps the number of form objects in the HTML document.
- The first form object in the HTML file being held as array index [0], the second as index [1] and so on.

Form Object

- The ‘forms array’ also holds information about each element used within <FORM> and </FORM> tags
- Elements array keeps information about form elements.

Form Object

- <body>
- <form name=“form1”>
- </form>
- <form name=“form2”>
- </form> </body>



forms

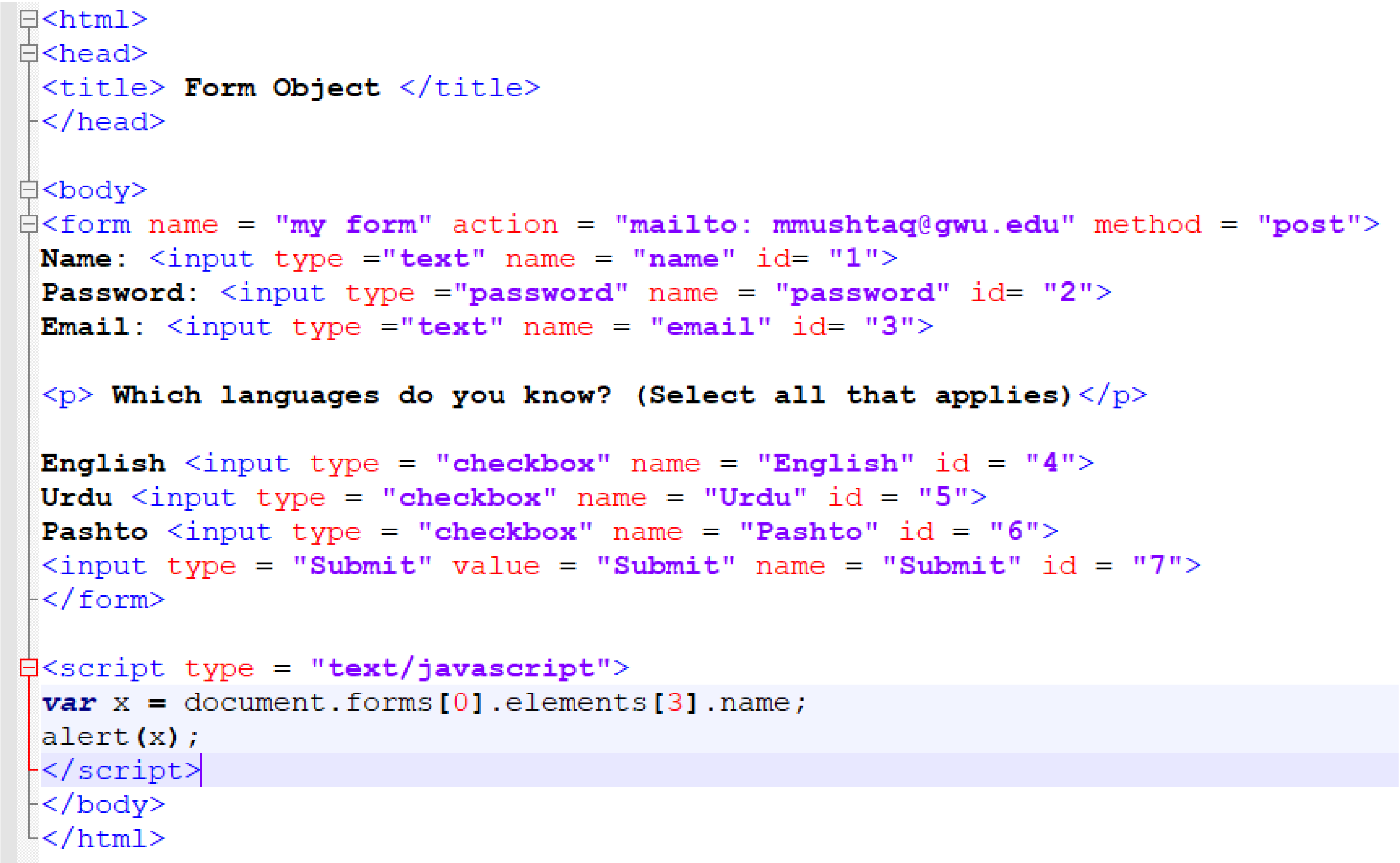
0 1

form1 form2

Accessing form elements

- <body>
- <form name=“form1”>
- <input type=“text” name=“name”>
- <input type=“text” name=“email”> </form> </body>
- document.forms[0].name.value or document.form1.elements[0].value document.forms[0].email.value or document.form1.elements[1].value

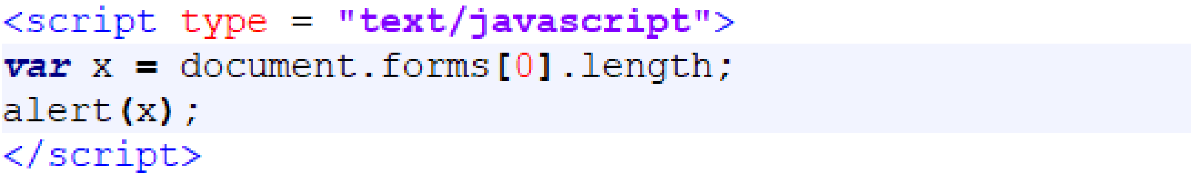
Accessing form elements



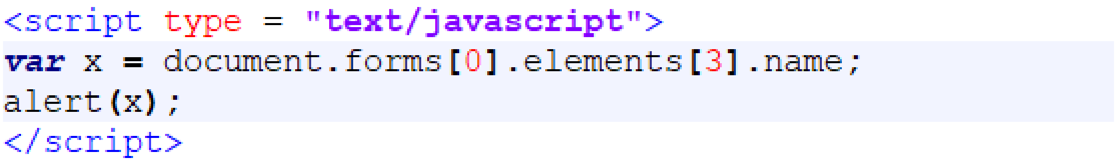
```
<html>
<head>
<title> Form Object </title>
</head>

<body>
<form name = "my form" action = "mailto: mmushtaq@gwu.edu" method = "post">
Name: <input type ="text" name = "name" id= "1">
Password: <input type ="password" name = "password" id= "2">
Email: <input type ="text" name = "email" id= "3">

<p> Which languages do you know? (Select all that applies)</p>

English <input type = "checkbox" name = "English" id = "4">
Urdu <input type = "checkbox" name = "Urdu" id = "5">
Pashto <input type = "checkbox" name = "Pashto" id = "6">
<input type = "Submit" value = "Submit" name = "Submit" id = "7">
</form>

<script type = "text/javascript">
var x = document.forms[0].elements[3].name;
alert(x);
</script>
</body>
</html>
```

Accessing form elements

- What will be the output?



```
<script type = "text/javascript">
var x = document.forms[0].length;
alert(x);
</script>
```



```
<script type = "text/javascript">
var x = document.forms[0].elements[3].name;
alert(x);
</script>
```

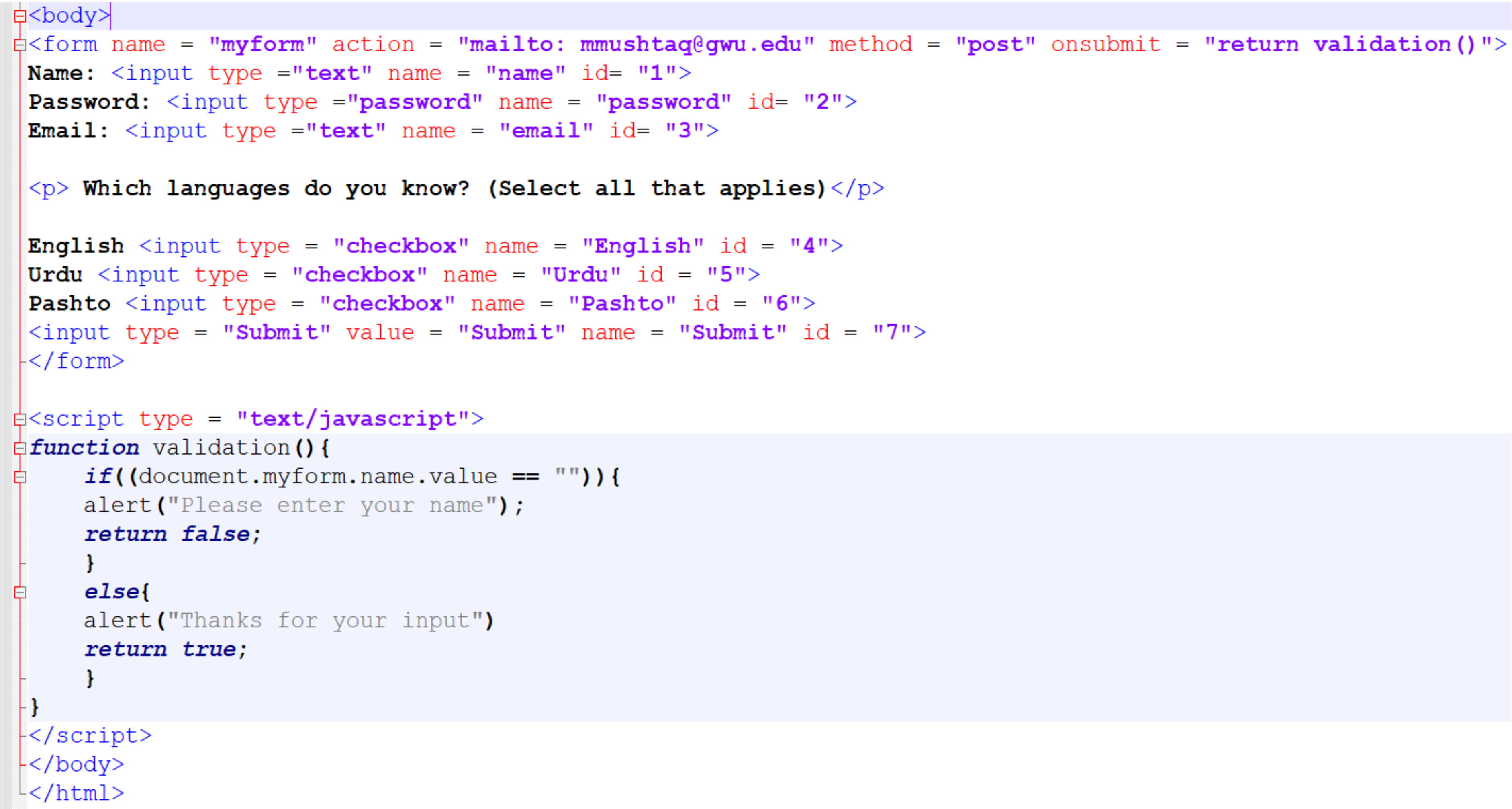
Setting form elements

- <body> <form name="form1">
- <input type="text" name="name">
- <input type="text" name="email">
- </form> </body>
- document.forms[0].name.value = "ali" or document.form1.element[0].value = "ali" document.forms[0].email.value = "ali@gmail.com" or document.form1.elements[1].value = "ali@gmail.com

Validating form elements

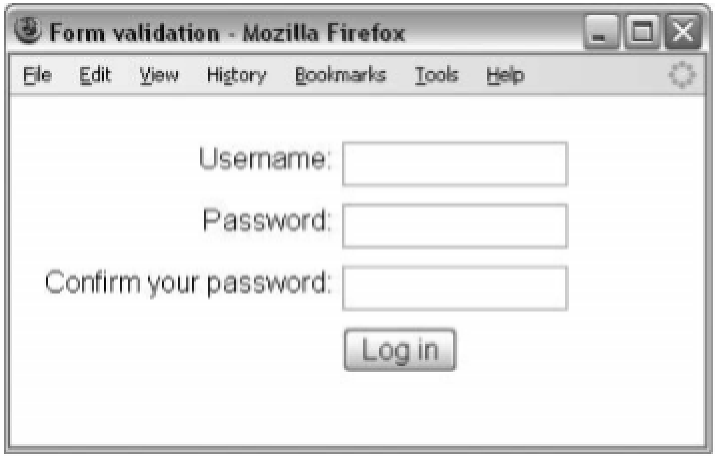
- One of the most common tasks performed using JavaScript.
- Validation can happen in two places, either in the browser using JavaScript or on the server.
- Onsubmit event handler, which triggers a validation function.
- The function returns true in order for the form to be sent. If the function returns false the user’s form will not be sent.

Validating form elements



```
<body>
<form name = "myform" action = "mailto: mmushtaq@gwu.edu" method = "post" onsubmit = "return validation()">
Name: <input type ="text" name = "name" id= "1">
Password: <input type ="password" name = "password" id= "2">
Email: <input type ="text" name = "email" id= "3">

<p> Which languages do you know? (Select all that applies)</p>

English <input type = "checkbox" name = "English" id = "4">
Urdu <input type = "checkbox" name = "Urdu" id = "5">
Pashto <input type = "checkbox" name = "Pashto" id = "6">
<input type = "Submit" value = "Submit" name = "Submit" id = "7">
</form>

<script type = "text/javascript">
function validation(){
    if((document.myform.name.value == "")){
    alert("Please enter your name");
    return false;
    }
    else{
    alert("Thanks for your input")
    return true;
    }
}
</script>
</body>
</html>
```

Validating form elements



Form validation - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Log in

Username:

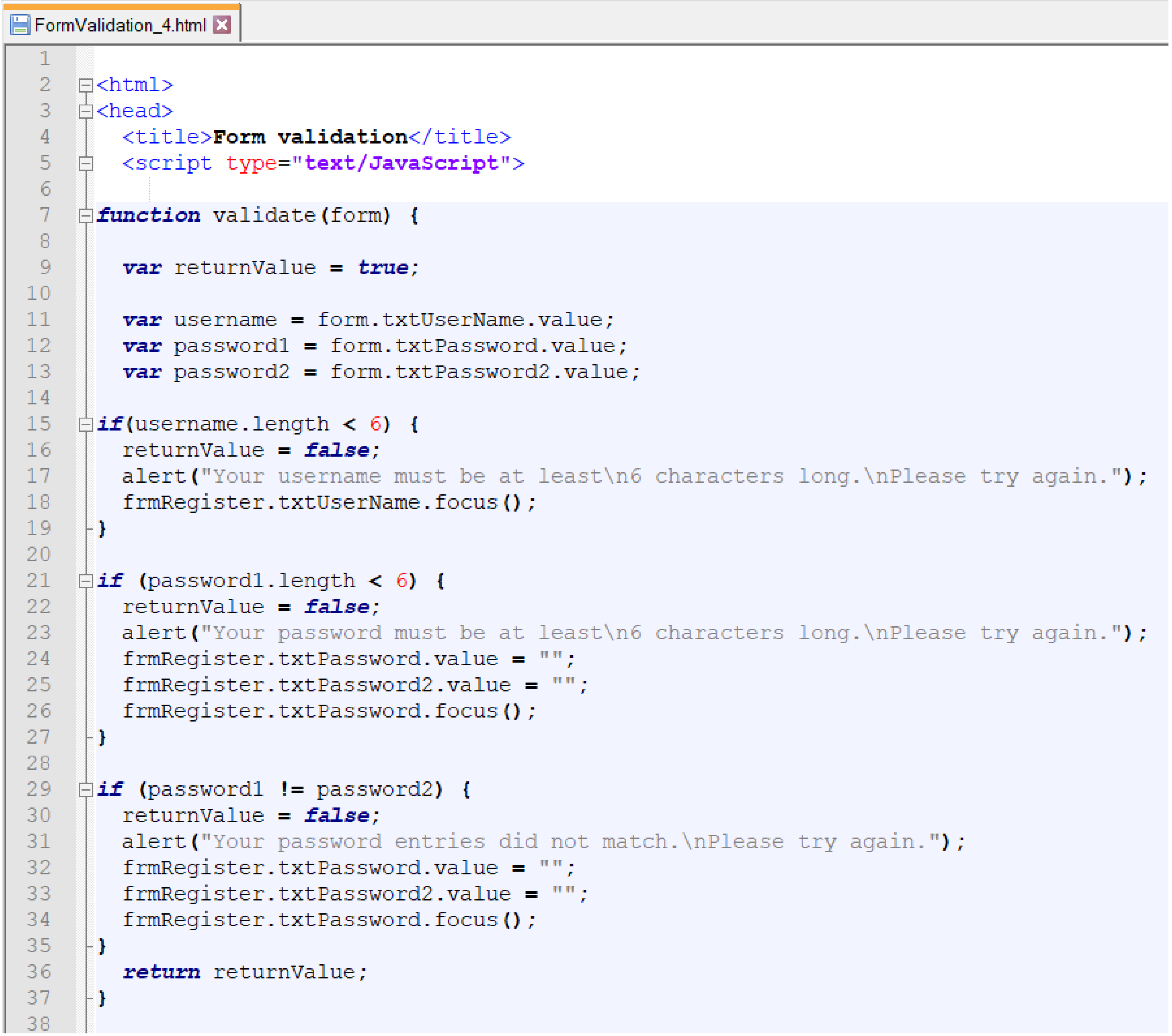
Password:

Confirm your password:

- In this form we might want to check a few things:
  - That the username is of a minimum length
  - That the password is of a minimum length
  - That the two passwords match

Checking Text Fields

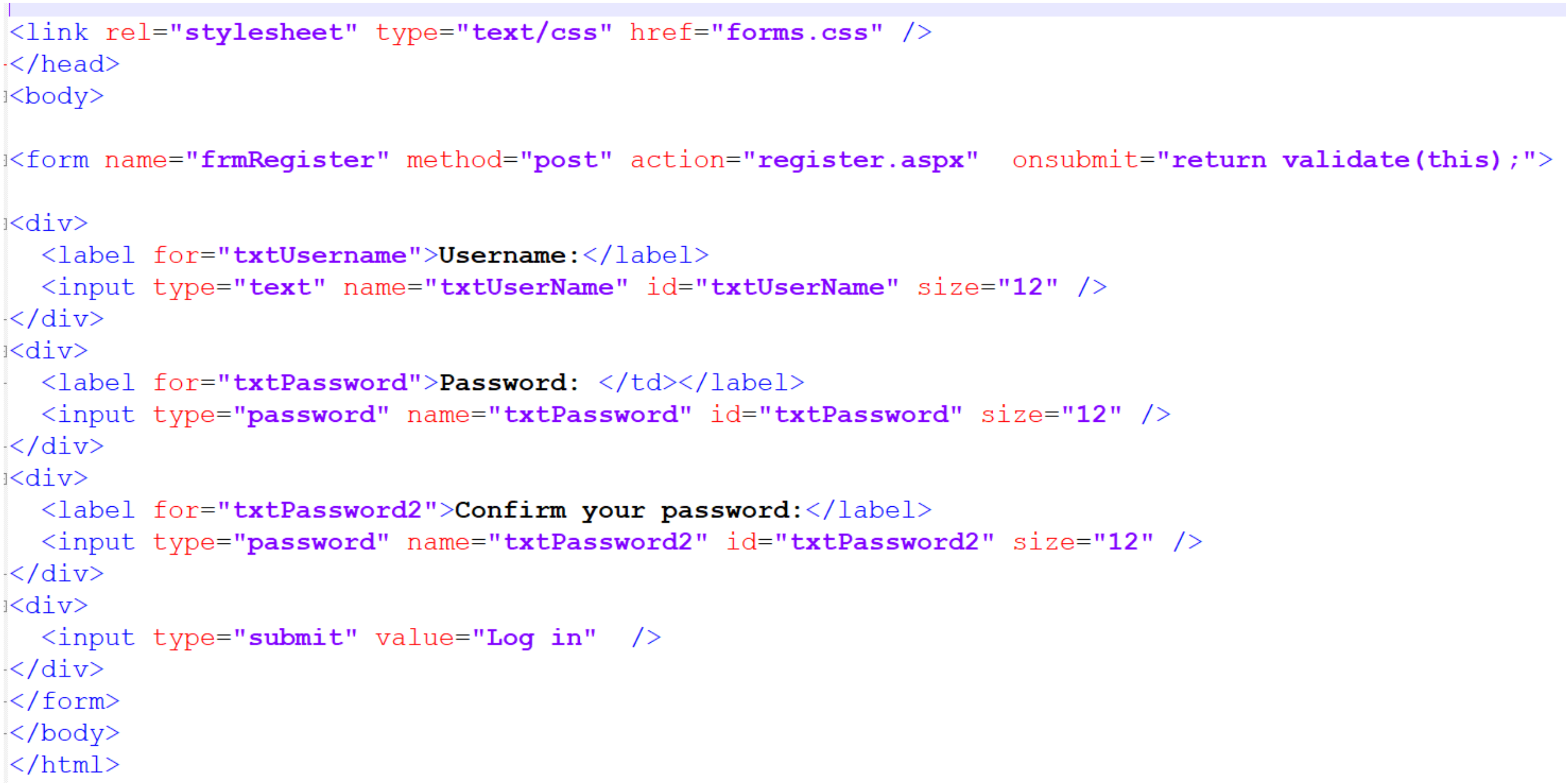
JS Validation Function



FormValidation_4.html

```

<html>
<head>
  <title>Form validation</title>
  <script type="text/JavaScript">

function validate(form) {

  var returnValue = true;

  var username = form.txtUserName.value;
  var password1 = form.txtPassword.value;
  var password2 = form.txtPassword2.value;

if(username.length < 6) {
  returnValue = false;
  alert("Your username must be at least\n6 characters long.\nPlease try again.");
  frmRegister.txtUserName.focus();
}

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

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

```

Checking Text Fields



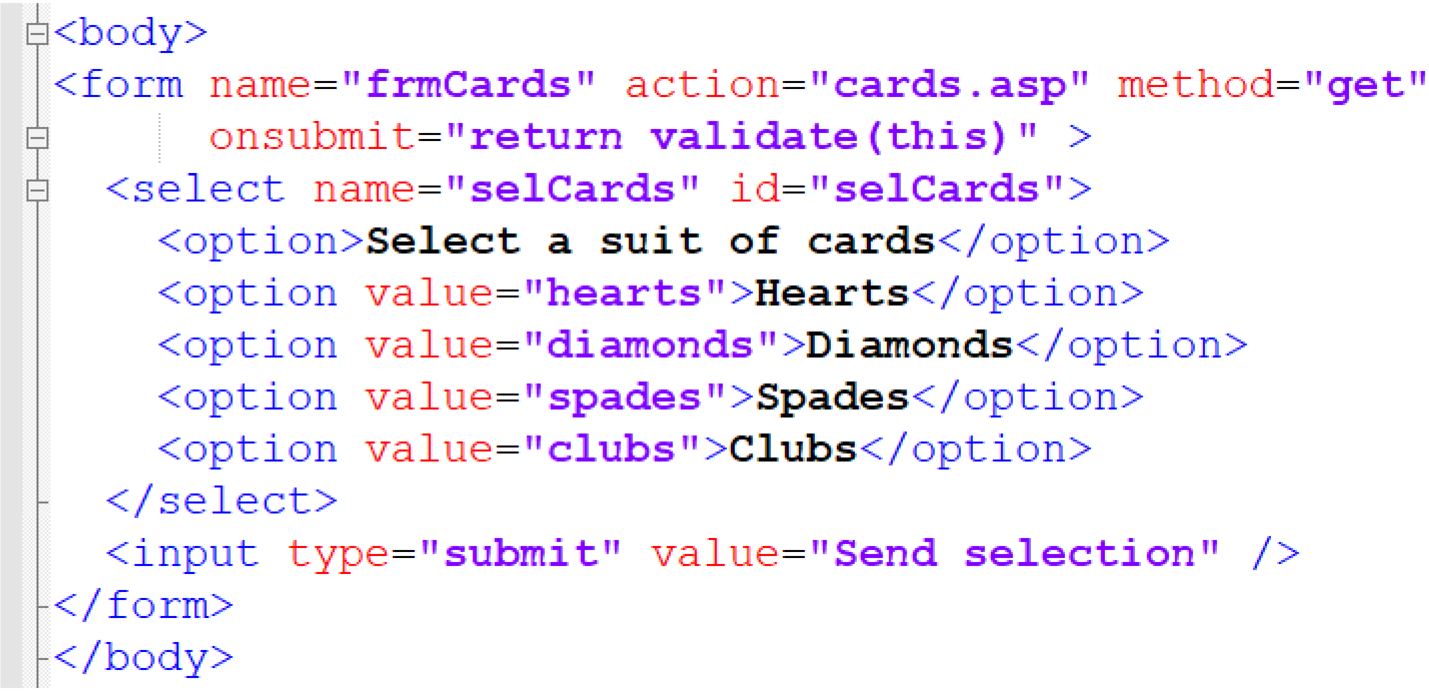
```
<link rel="stylesheet" type="text/css" href="forms.css" />
</head>
<body>

<form name="frmRegister" method="post" action="register.aspx"  onsubmit="return validate(this);">

<div>
  <label for="txtUsername">Username:</label>
  <input type="text" name="txtUserName" id="txtUserName" size="12" />
</div>
<div>
  <label for="txtPassword">Password: </td></label>
  <input type="password" name="txtPassword" id="txtPassword" size="12" />
</div>
<div>
  <label for="txtPassword2">Confirm your password:</label>
  <input type="password" name="txtPassword2" id="txtPassword2" size="12" />
</div>
<div>
  <input type="submit" value="Log in"  />
</div>
</form>
</body>
</html>
```

HTML Code

Select Box Options

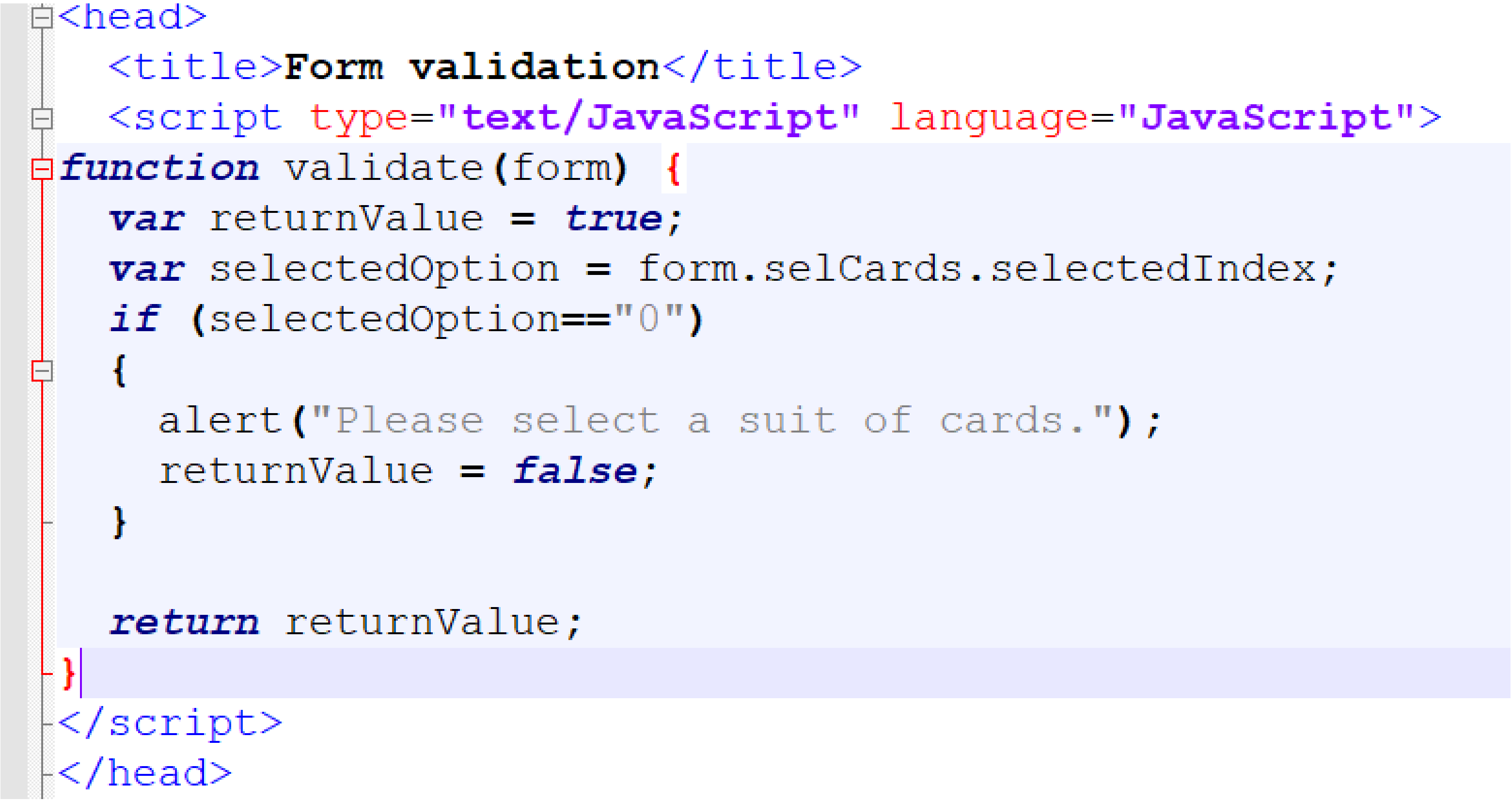
- Select boxes, also known as drop-down list boxes, save space on the screen, especially when there are lots of options.
- selectedIndex property of the select object represents the select box.
- By default, the value will be 0 for a standard select box.
- The defaultSelected property returns the default value if any set by the user.

Select Box Options



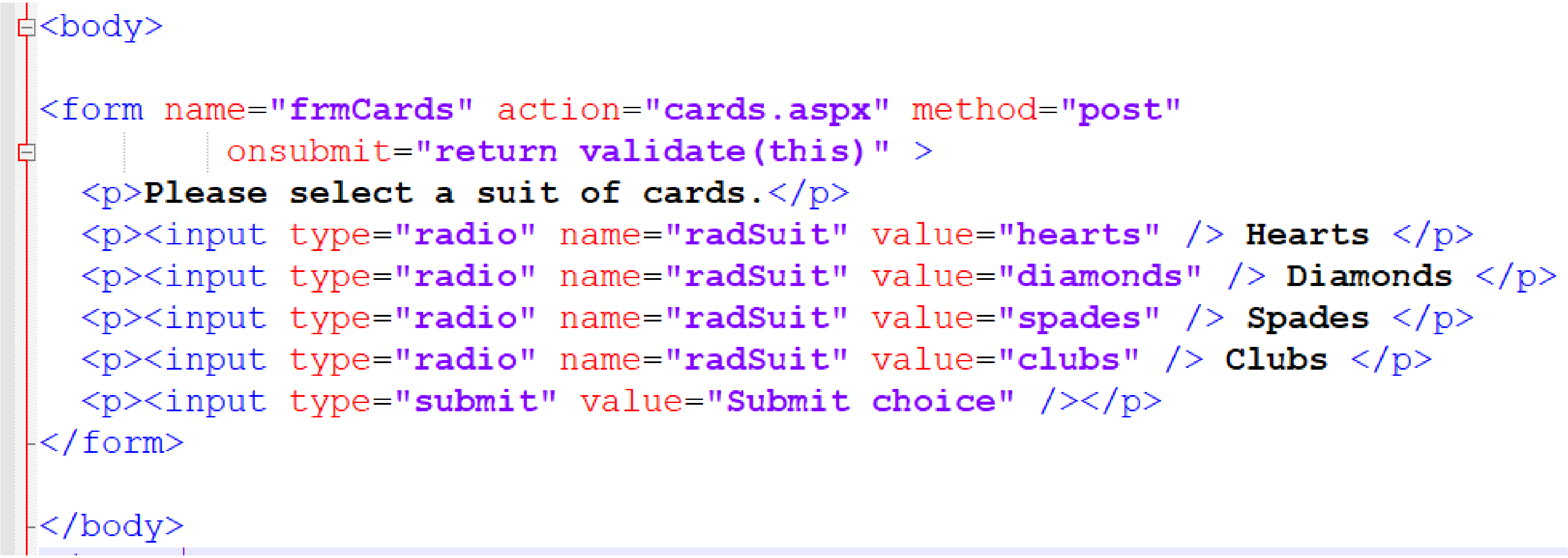
```
<body>
<form name="frmCards" action="cards.asp" method="get"
      onsubmit="return validate(this)" >
  <select name="selCards" id="selCards">
    <option>Select a suit of cards</option>
    <option value="hearts">Hearts</option>
    <option value="diamonds">Diamonds</option>
    <option value="spades">Spades</option>
    <option value="clubs">Clubs</option>
  </select>
  <input type="submit" value="Send selection" />
</form>
</body>
```

Select Box Options



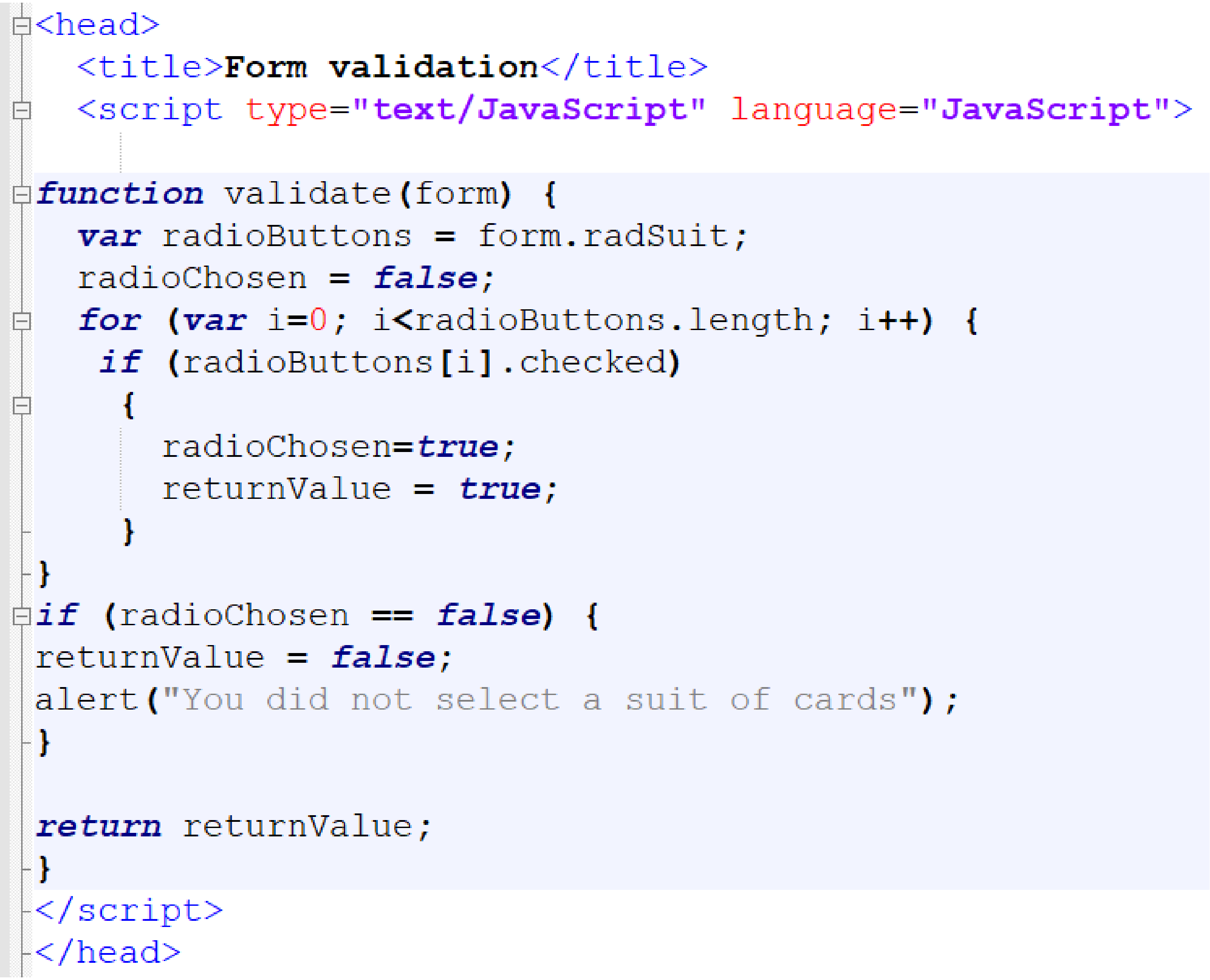
```
<head>
  <title>Form validation</title>
  <script type="text/JavaScript" language="JavaScript">
function validate(form) {
  var returnValue = true;
  var selectedOption = form.selCards.selectedIndex;
  if (selectedOption=="0")
  {
    alert("Please select a suit of cards.");
    returnValue = false;
  }

  return returnValue;
}
</script>
</head>
```

Radio Buttons



```
<body>

<form name="frmCards" action="cards.aspx" method="post"
        onsubmit="return validate(this)" >
  <p>Please select a suit of cards.</p>
  <p><input type="radio" name="radSuit" value="hearts" /> Hearts </p>
  <p><input type="radio" name="radSuit" value="diamonds" /> Diamonds </p>
  <p><input type="radio" name="radSuit" value="spades" /> Spades </p>
  <p><input type="radio" name="radSuit" value="clubs" /> Clubs </p>
  <p><input type="submit" value="Submit choice" /></p>
</form>

</body>
```

Radio Buttons

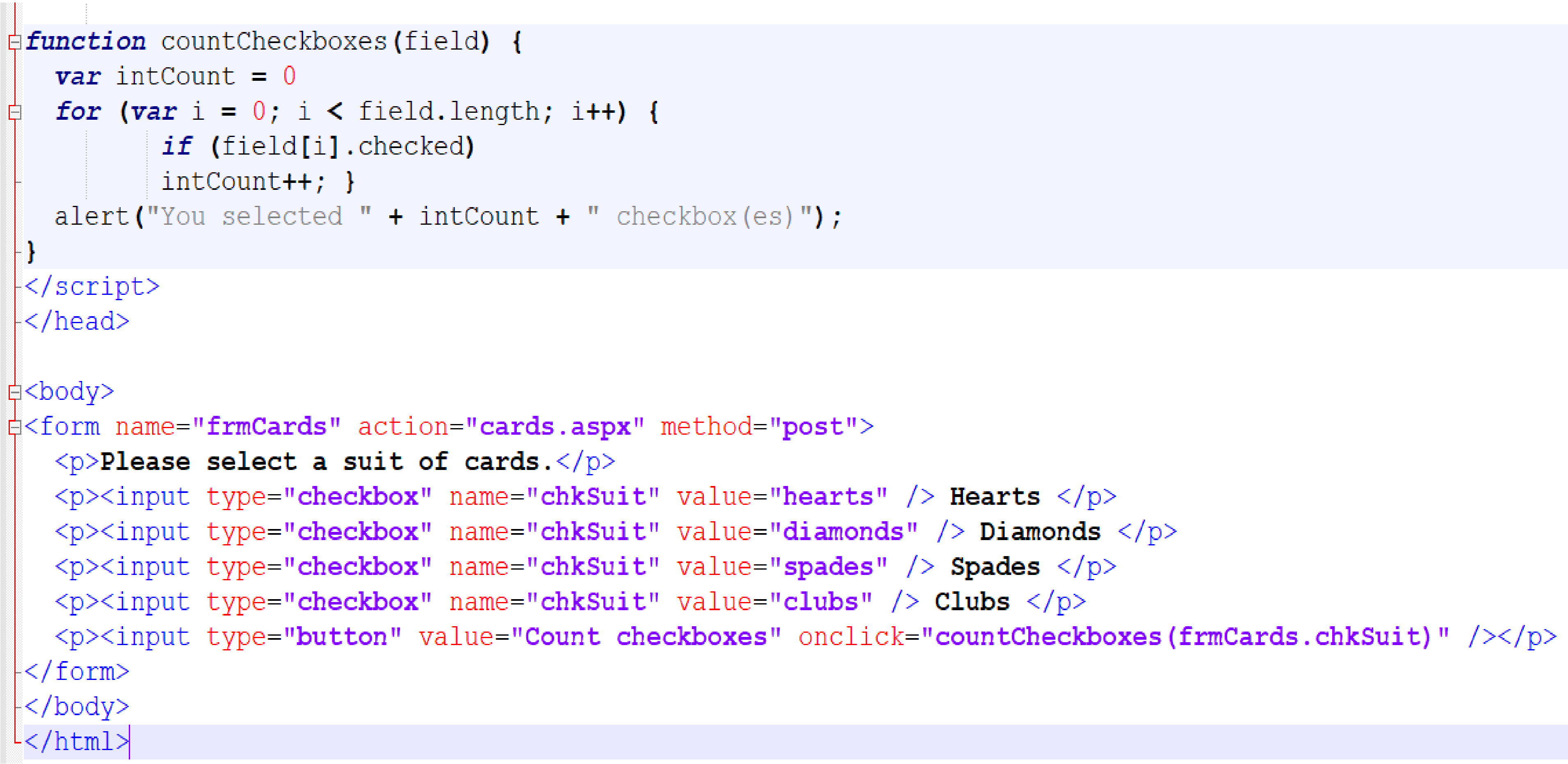


```
<head>
  <title>Form validation</title>
  <script type="text/JavaScript" language="JavaScript">

function validate(form) {
  var radioButtons = form.radSuit;
  radioChosen = false;
  for (var i=0; i<radioButtons.length; i++) {
   if (radioButtons[i].checked)
    {
      radioChosen=true;
      returnValue = true;
    }
}
if (radioChosen == false) {
returnValue = false;
alert("You did not select a suit of cards");
}

return returnValue;
}
</script>
</head>
```

Checkboxes

- Checkboxes allow a user to select zero, one, or more items from a set of choices.
- A group of checkboxes share the same name but they are not mutually exclusive as radio buttons are.

Checkboxes

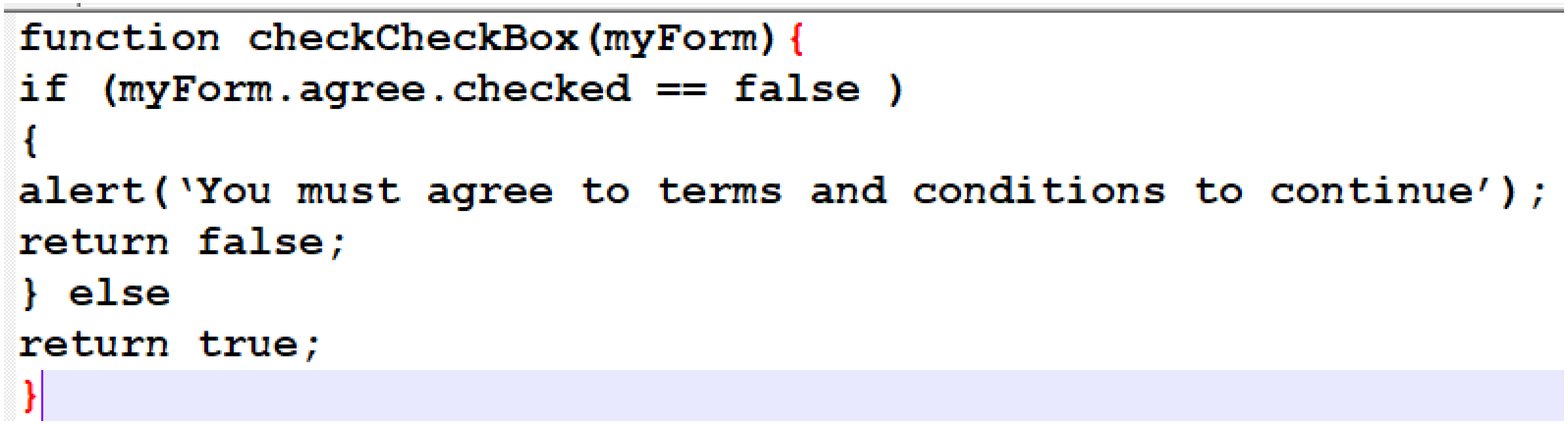


```
function countCheckboxes(field) {
  var intCount = 0
  for (var i = 0; i < field.length; i++) {
         if (field[i].checked)
         intCount++; }
  alert("You selected " + intCount + " checkbox(es)");
}
</script>
</head>

<body>
<form name="frmCards" action="cards.aspx" method="post">
  <p>Please select a suit of cards.</p>
  <p><input type="checkbox" name="chkSuit" value="hearts" /> Hearts </p>
  <p><input type="checkbox" name="chkSuit" value="diamonds" /> Diamonds </p>
  <p><input type="checkbox" name="chkSuit" value="spades" /> Spades </p>
  <p><input type="checkbox" name="chkSuit" value="clubs" /> Clubs </p>
  <p><input type="button" value="Count checkboxes" onclick="countCheckboxes(frmCards.chkSuit)" /></p>
</form>
</body>
</html>
```

Preventing a Form Submission Until a Checkbox Has Been Selected

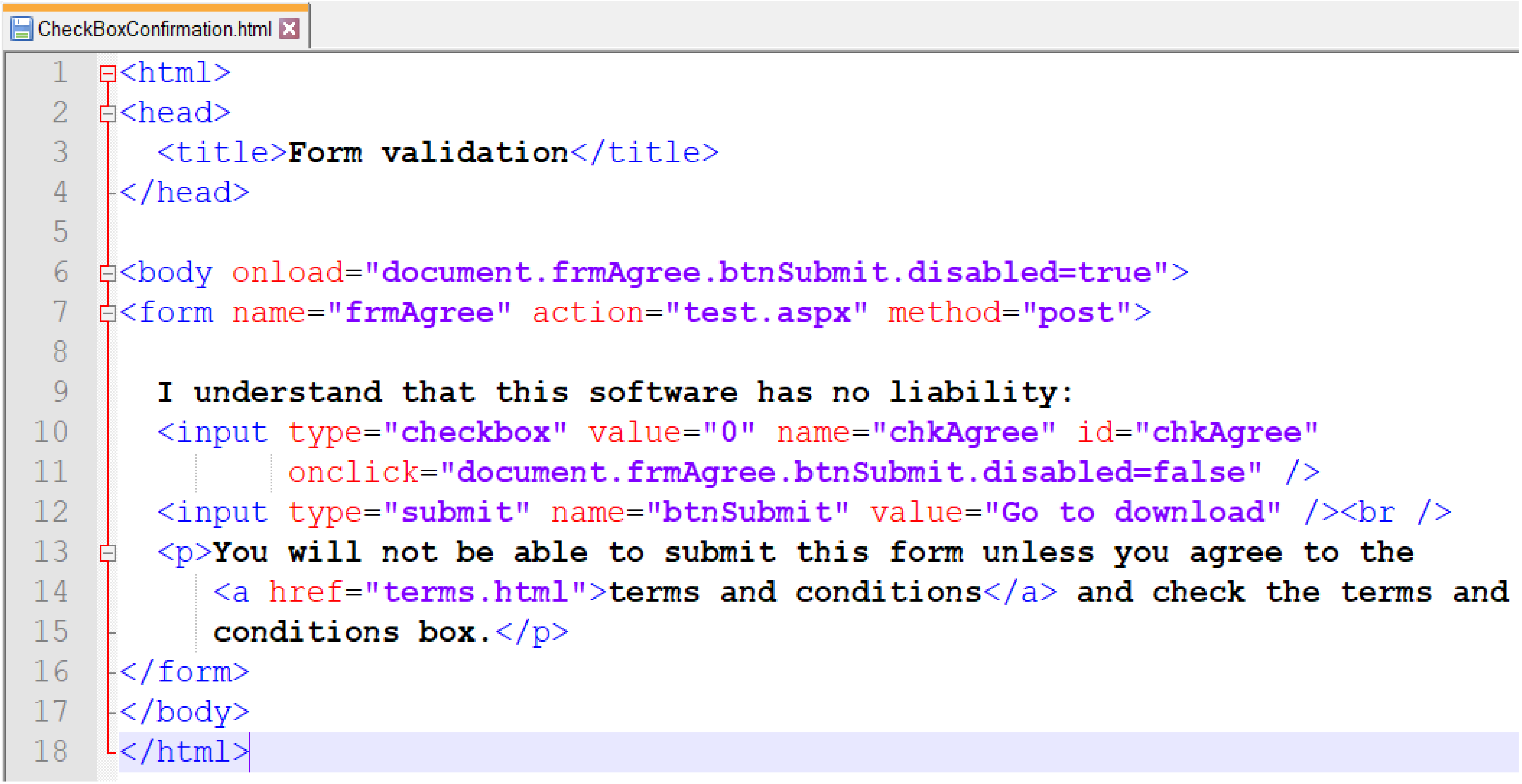
- If you want to ensure that a checkbox has been selected — for example, if you want a user to agree to certain terms and conditions.
- Add a function to the onsubmit event handler.
- The function checks whether the checkbox has been checked.
- If the function returns true the form will be submitted.
- If the function returns false, the user would be prompted to check the box.

Preventing a Form Submission Until a Checkbox Has Been Selected



```
function checkCheckBox(myForm){
if (myForm.agree.checked == false )
{
alert(‘You must agree to terms and conditions to continue’);
return false;
} else
return true;
}
```

Preventing a Form Submission Until a Checkbox Has Been Selected



```html
<html>
<head>
  <title>Form validation</title>
</head>

<body onload="document.frmAgree.btnSubmit.disabled=true">
<form name="frmAgree" action="test.aspx" method="post">

  I understand that this software has no liability:
  <input type="checkbox" value="0" name="chkAgree" id="chkAgree"
         onclick="document.frmAgree.btnSubmit.disabled=false" />
  <input type="submit" name="btnSubmit" value="Go to download" /><br />
  <p>You will not be able to submit this form unless you agree to the
     <a href="terms.html">terms and conditions</a> and check the terms and
     conditions box.</p>
</form>
</body>
</html>
```

References

- Chapter 12 Beginning HTML, XHTML,CSS, and JavaScript, by Jon Duckett, Wiley Publishing; 2009, ISBN: 978-0-470-54070-1.