Overview

This lab will provide an overview of radio buttons and checkboxes. Thus, in this lab we will be: learning the following things:

1. Setting up and processing radio buttons
2. Setting up and processing check boxes

Exercise 1: Setting Up And Processing Radio Buttons

In HTML, radio buttons are linked together by name. Call two or three different radio buttons the same name, and only one can be selected.

Create a new webpage and enter the following into the webpage:

```
<!doctype html>
<html>
    <head>
        <style>
            .leftcol {
                display: inline-block;
                width: 200px;
                text-align: right;
                vertical-align: top;
                font-weight: bold;
            }
            .middlecol{
                display: inline-block;
                width: 250px;
            }
            .rightcol{
                display: inline-block;
                width: 200px;
                vertical-align: top;
            }
        </style>
    </head>
    <body>
        <form>
            <div class="leftcol">
                Label
            </div>
            <div class="middlecol" style="font-weight: bold;">
                Control
            </div>
            <div class="rightcol" style="font-weight: bold;">
                Value
            </div><br />

            <div class="leftcol">
                First Example Radio Button:
            </div>
            <div class="middlecol">
              <input type="radio"
                     name="radioone"
```

```
                id="radioone1"
                value="1"
        />
        <label for="radioone1">First option</label><br />
        <input type="radio"
                name="radioone"
                id="radioone2"
                value="2" />
        <label for="radioone2">Second option</label><br />
        <input type="radio"
                name="radioone"
                id="radioone3"
                checked
                value="3" />
        <label for="radioone3">Third option</label><br />
      </div>
      <div class="rightcol" id="radioonedisplay"></div>

    </form>
  </body>
</html>
```

To make a radio button filled on startup, you use the "checked" keyword, rather than (as with pulldowns and listboxes), the word "selected." Notice how the third radio button is checked.

Run it to see what happens:

Label Control		Value
First Example Radio Button: ○ First option		
○ Second option		
◉ Third option		

Handling radio buttons on the web is tricky, because the radio control is actually a whole bunch of HTML input statements. To determine the radio button's value, you have to trawl through all the statements- kind of like how we had to do this for a multiselect listbox.

To complicate matters, a radiobutton is not selected, but is checked. Note that the length of getElementsByName is the number of items with that name.

```
<script>
 function showval(radioname, putwhere) {
   var theradiolist = document.getElementsByName(radioname);
   var howmany = theradiolist.length;
   var x = 0;
   var ischecked=false;
   while (x < howmany && !ischecked) {
     ischecked = theradiolist.item(x).checked;
     if (!ischecked)
       x++;
   }
   if (ischecked)
```

```
        putwhere.innerHTML="The value of " + radioname + " is: " +
theradiolist.item(x).value;
        }

    </script>
```

Don't forget to add this to the radio buttons. You have to add it to every one.

```
        <input type="radio"
            name="radioone"
            id="radioone1"
            value="1"
            onclick="showval('radioone',radioonedisplay);"
        />
        <label for="radioone1">First option</label><br />
        <input type="radio"
            name="radioone"
            id="radioone2"
            onclick="showval('radioone',radioonedisplay);"
            value="2" />
        <label for="radioone2">Second option</label><br />
        <input type="radio"
            name="radioone"
            id="radioone3"
            onclick="showval('radioone',radioonedisplay);"
            checked
            value="3" />
        <label for="radioone3">Third option</label><br />
        </div>
```

Also, add it to the body onload.

```
  <body onload="showval('radioone',radioonedisplay);">
```

Run the code to see what it does.

Label Control   **Value**

First Example Radio Button: ○ First option   The value of radioone is: 3
       ○ Second option
       ⦿ Third option

Let's create two intermingled radio buttons to demonstrate that the name of the radio button is very important:

Put this in the embedded html:

```
        <div class="leftcol">
          Second and third radio buttons:
        </div>
        <div class="middlecol">
          <input type="radio"
```

```
        name="radiotwo"
        id="radiotwo1"
        onclick="showval('radiotwo',radiotwodisplay);"
        value="1"
    />
    <label for="radiotwo1">Second Radio First option</label><br />
    <input type="radio"
        name="radiothree"
        id="radiothree1"
        onclick="showval('radiothree',radiothreedisplay);"
        value="1"
    />
    <label for="radiothree1">Third Radio First option</label><br />
    <input type="radio"
        name="radiotwo"
        id="radiotwo2"
        onclick="showval('radiotwo',radiotwodisplay);"
        value="2"
    />
    <label for="radiotwo2">Second Radio Second option</label><br />
    <input type="radio"
        name="radiothree"
        id="radiothree2"
        onclick="showval('radiothree',radiothreedisplay);"
        value="2"
    />
    <label for="radiothree2">Third Radio Second option</label><br />
</div>
<div class="rightcol">
    <span id="radiotwodisplay"></span><br />
    <span id="radiothreedisplay"></span>
</div>
```

Now try it out:

Second and third radio buttons:
- ○ Second Radio First option
- ○ Third Radio First option
- ◉ Second Radio Second option
- ◉ Third Radio Second option

The value of radiotwo is: 2
The value of radiothree is: 2

Also, while it often makes sense to make the value of a radio button an integer, it doesn't have to be. Put the following in the embedded html:

```
<div class="leftcol">
  Fourth radio buttons:
</div>
<div class="middlecol">
  <input type="radio"
      name="radiofour"
```

```
        id="radiofour1"
        value="one"
        onclick="showval('radiofour',radiofourdisplay);"
  />
  <label for="radiofour1">First option</label><br />
  <input type="radio"
        name="radiofour"
        id="radiofour2"
        value="two"
        onclick="showval('radiofour',radiofourdisplay);"
  />
  <label for="radiofour2">Second option</label><br />
  <input type="radio"
        name="radiofour"
        id="radiofour3"
        value="three"
        onclick="showval('radiofour',radiofourdisplay);"
  />
  <label for="radiofour3">Third option</label><br />
</div>
<div class="rightcol" id="radiofourdisplay"></div><br />
```

You should get this:

Fourth radio buttons: ○ First option   The value of radiofour is: three
                         ○ Second option
                         ⦿ Third option

As with listboxes and pulldowns, you sometimes need to generate radio buttons from a database.

Add the following to the HTML:

```
<div class="leftcol">
  Database radio button:
</div>
<div class="middlecol" id="dbgoeshere">
</div>
<div class="rightcol" id="radiofivedisplay"></div><br />
```

Now make the following AJAX JavaScript function:

```
function populateradio(){
  const xhttp = new XMLHttpRequest();
  xhttp.onload = function() {
    var bookcatarray = JSON.parse(this.responseText);
    dbgoeshere.innerHTML="";
    var x=0;
    for (x=0; x<bookcatarray.length; x++){
```

```
            var theradio=document.createElement("input");
            theradio.type="radio";
            theradio.name="radiofive";
            theradio.id="radiofive"+x;
            theradio.value=bookcatarray[x].category_code;
            theradio.setAttribute("onclick","showval('radiofive',radiofivedisplay);");
            dbgoeshere.appendChild(theradio);
            var thelabel=document.createElement("label");
            thelabel.htmlFor="radiofive"+x;
            thelabel.innerHTML=bookcatarray[x].category_name;
            dbgoeshere.appendChild(thelabel);
            dbgoeshere.innerHTML+="<br />";


         }
        }
      xhttp.open("GET", "bookcat.php", true);
      xhttp.send();
   }
```

And link it to the onload of the body tag.

```
  <body onload="showval('radioone',radioonedisplay); populateradio();">
```

The logic is essentially the same as the database display for Week 4, but now adapted to radio buttons.

Again, try out the code to see what it does.

Database radio button: ○ Computer   The value of radiofive is: HOR
                        ○ General Fiction
                        ● Horror
                        ○ Science Fiction/Fantasy

Exercise 2: Setting Up And Processing Check Boxes

Check boxes are essentially the same as radio buttons. However, by convention, we use a check box for yes and no things, rather than for multiple choice.

Here's a simple check box. In the html, add:

```
    <div class="leftcol">
     <label for="checkboxone">Simple checkbox:</label>
    </div>
    <div class="middlecol">
     <input type="checkbox"
         id="checkboxone"
         onclick="if (checkboxone.checked)
              checkboxonedisplay.innerHTML='Y';
           else
             checkboxonedisplay.innerHTML='N';"
```

```
      />
    <label for="checkboxone">I love making lots of money</label>
  </div>
  <div class="rightcol" id="checkboxonedisplay">N</div><br />
```

This is what you get:

Notice how we used labels both for the text in front of and behind the checkbox. In this way, one doesn't have to toggle the checkbox just by clicking on the tiny little square box.