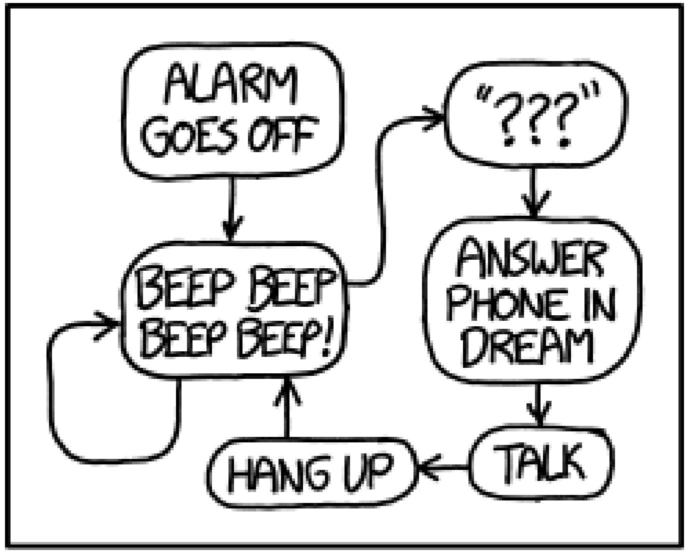
CSE 154



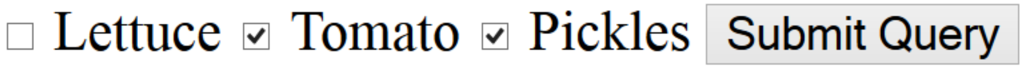
MY PROBLEM WITH PHONE ALARMS

LECTURE 9: EVENTS AND TIMERS

Checkboxes: <input>

yes/no choices that can be checked and unchecked (inline)

```
<input type="checkbox" name="lettuce" /> Lettuce
<input type="checkbox" name="tomato" checked="checked" /> Tomato
<input type="checkbox" name="pickles" checked="checked" /> Pickles   HTML
```



☐ Lettuce ☑ Tomato ☑ Pickles Submit Query

output

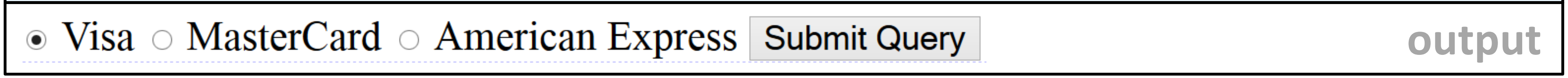
- none, 1, or many checkboxes can be checked at same time
- when sent to server, any checked boxes will be sent with value on:
  - http://webster.cs.washington.edu/params.php?tomato=on&pickles=on
- use checked="checked" attribute in HTML to initially check the box

Radio buttons: <input>

sets of mutually exclusive choices (inline)

```
<input type="radio" name="cc" value="visa" checked="checked" /> Visa
<input type="radio" name="cc" value="mastercard" /> MasterCard
<input type="radio" name="cc" value="amex" /> American Express
```

HTML



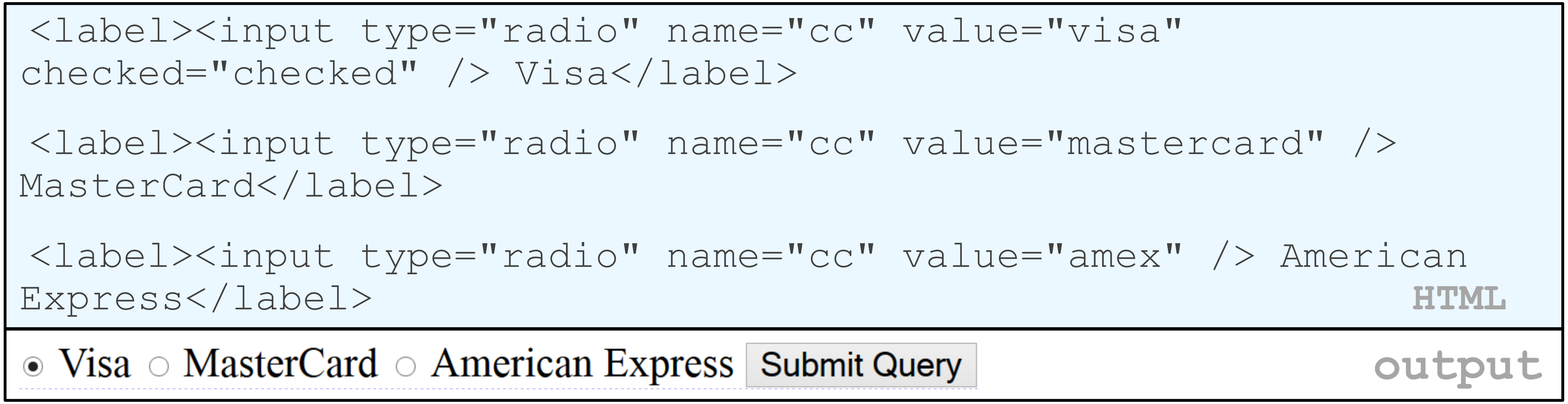
● Visa ○ MasterCard ○ American Express

output

- grouped by name attribute (only one can be checked at a time)

- must specify a value for each one or else it will be sent as value on

Text labels: <label>



```html
<label><input type="radio" name="cc" value="visa"
checked="checked" /> Visa</label>

<label><input type="radio" name="cc" value="mastercard" />
MasterCard</label>

<label><input type="radio" name="cc" value="amex" /> American
Express</label>
```

◉ Visa ○ MasterCard ○ American Express

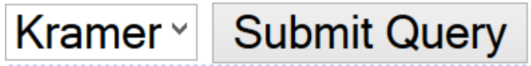
- associates nearby text with control, so you can click text to activate control
- can be used with checkboxes or radio buttons
- label element can be targeted by CSS style rules

Drop-down list: <select>, <option>

menus of choices that collapse and expand (inline)

```html
<select name="favoritecharacter">
  <option>Jerry</option>
  <option>George</option>
  <option selected="selected">Kramer</option>
  <option>Elaine</option>
</select>
```

HTML



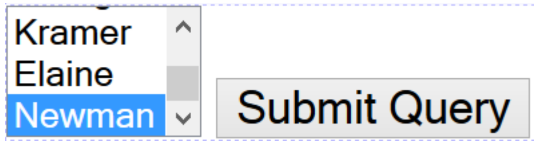
output

- option element represents each choice
- select optional attributes: disabled, multiple, size
- optional selected attribute sets which one is initially chosen

Using <select> for lists

```html
<select name="favoritecharacter[]" size="3" multiple="multiple">
  <option>Jerry</option>
  <option>George</option>
  <option>Kramer</option>
  <option>Elaine</option>
  <option selected="selected">Newman</option>
</select>
```

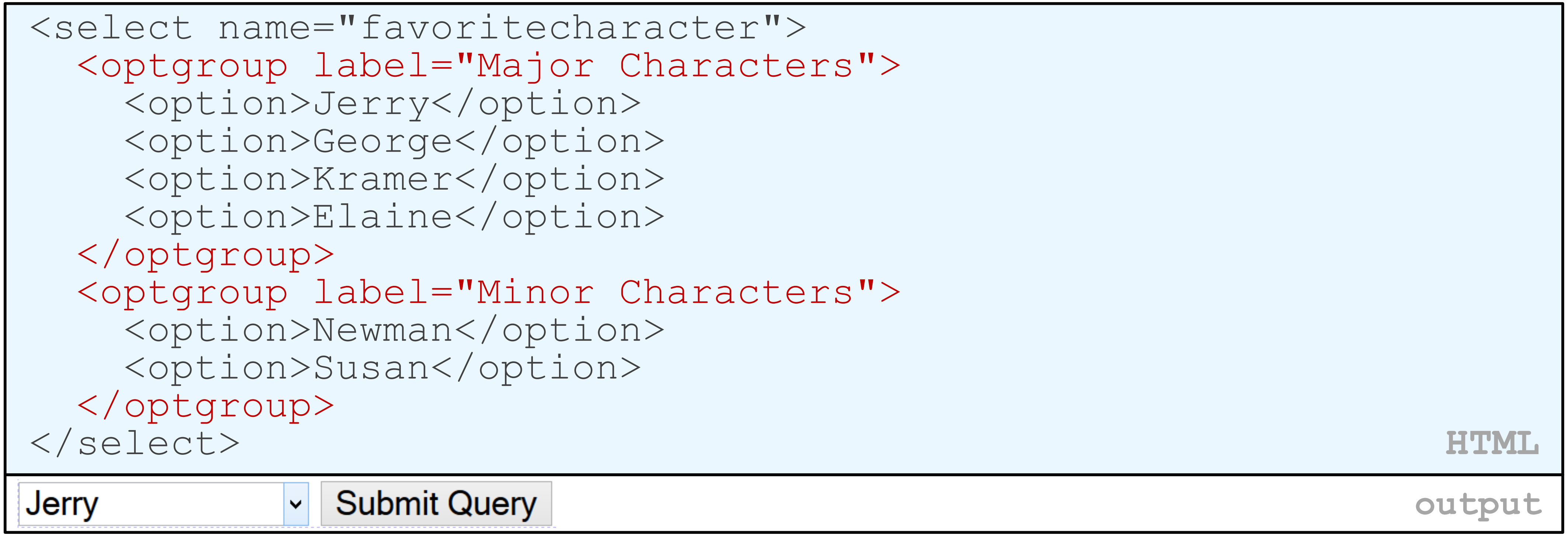
HTML



output

- optional multiple attribute allows selecting multiple items with shift- or ctrl-click
  - must declare parameter's name with [] if you allow multiple selections
- option tags can be set to be initially selected

Option groups: <optgroup>



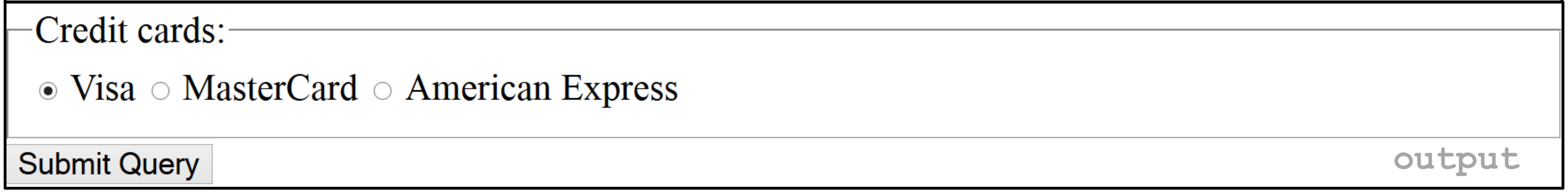
```
<select name="favoritecharacter">
  <optgroup label="Major Characters">
    <option>Jerry</option>
    <option>George</option>
    <option>Kramer</option>
    <option>Elaine</option>
  </optgroup>
  <optgroup label="Minor Characters">
    <option>Newman</option>
    <option>Susan</option>
  </optgroup>
</select>
```

- What should we do if we don't like the bold appearance of the optgroups?

Grouping input: <fieldset>, <legend>

groups of input fields with optional caption (block)

```
<fieldset>
  <legend>Credit cards:</legend>
  <input type="radio" name="cc" value="visa" checked="checked" /> Visa
  <input type="radio" name="cc" value="mastercard" /> MasterCard
  <input type="radio" name="cc" value="amex" /> American Express
</fieldset>
```
HTML



Credit cards:

● Visa ○ MasterCard ○ American Express

output

- fieldset groups related input fields, adds a border; legend supplies a caption

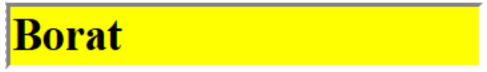
Styling form controls

```
element[attribute="value"] {
   property : value;
   property : value;
   ...
   property : value;
}
```

CSS

```
input[type="text"] {
  background-color: yellow;
  font-weight: bold;
}
```

CSS



Borat

output

- attribute selector: matches only elements that have a particular attribute value
- useful for controls because many share the same element (input)

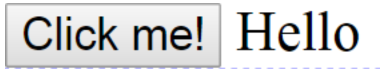
The innerHTML property

```html
<button onclick="addText();">Click me!</button>
<span id="output">Hello </span>
```

HTML

```js
function addText() {
  var span = document.getElementById("output");
  span.innerHTML += " bro";
}
```

JS



Hello

output

- can change the text inside most elements by setting the `innerHTML` property

Abuse of innerHTML

```
// bad style!
var paragraph = document.getElementById("welcome");
paragraph.innerHTML =
               "<p>text and <a href=\"page.html\">link</a>";
```

JS

- innerHTML can inject arbitrary HTML content into the page
- however, this is prone to bugs and errors and is considered poor style
- we forbid using innerHTML to inject HTML tags; inject plain text only
  - (later, we'll see a better way to inject content with HTML tags in it)