Comp 125 - Visual Information Processing

Spring Semester 2019 - Week 14 - Monday

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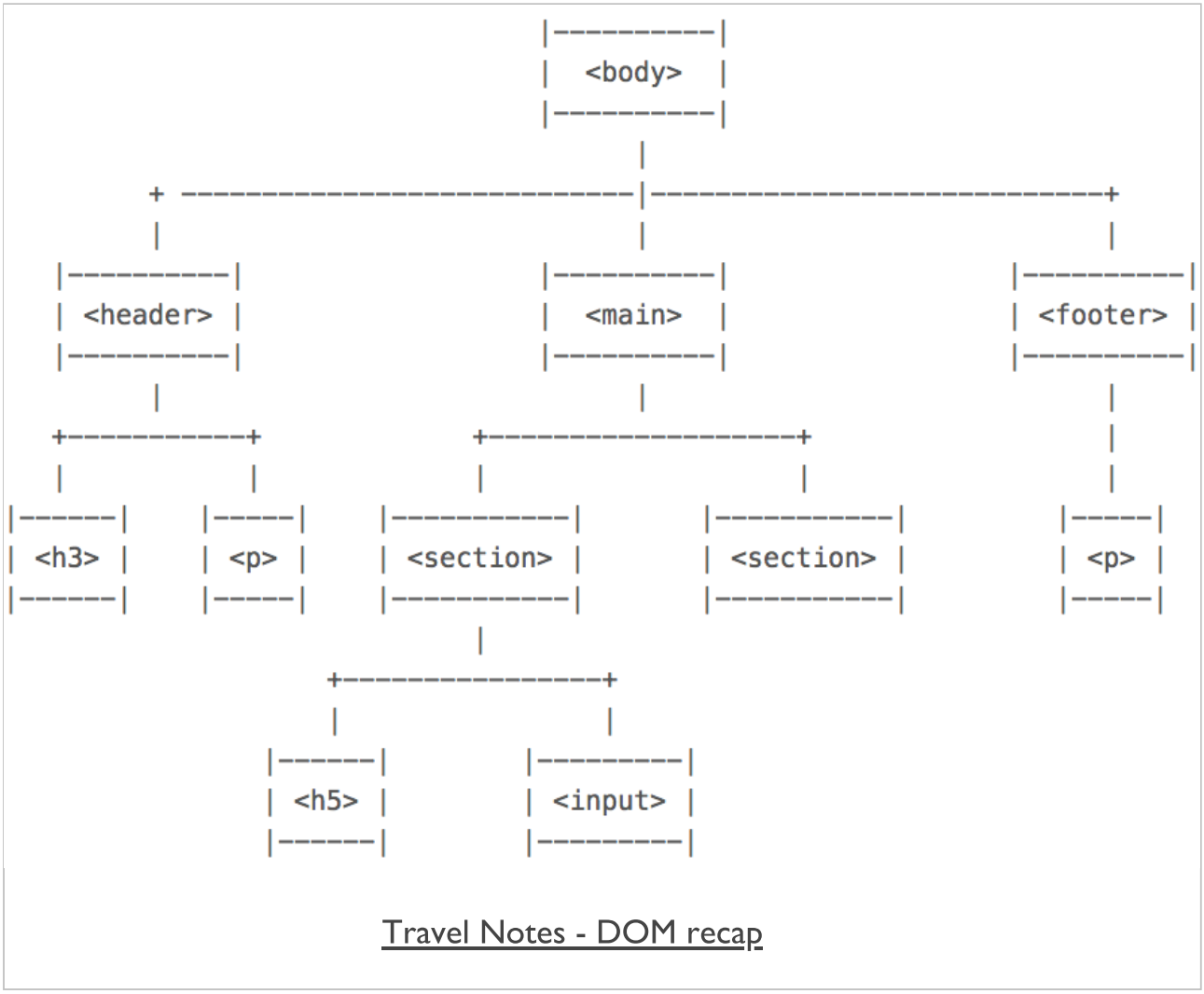
HTML5, CSS, & JS - final thoughts

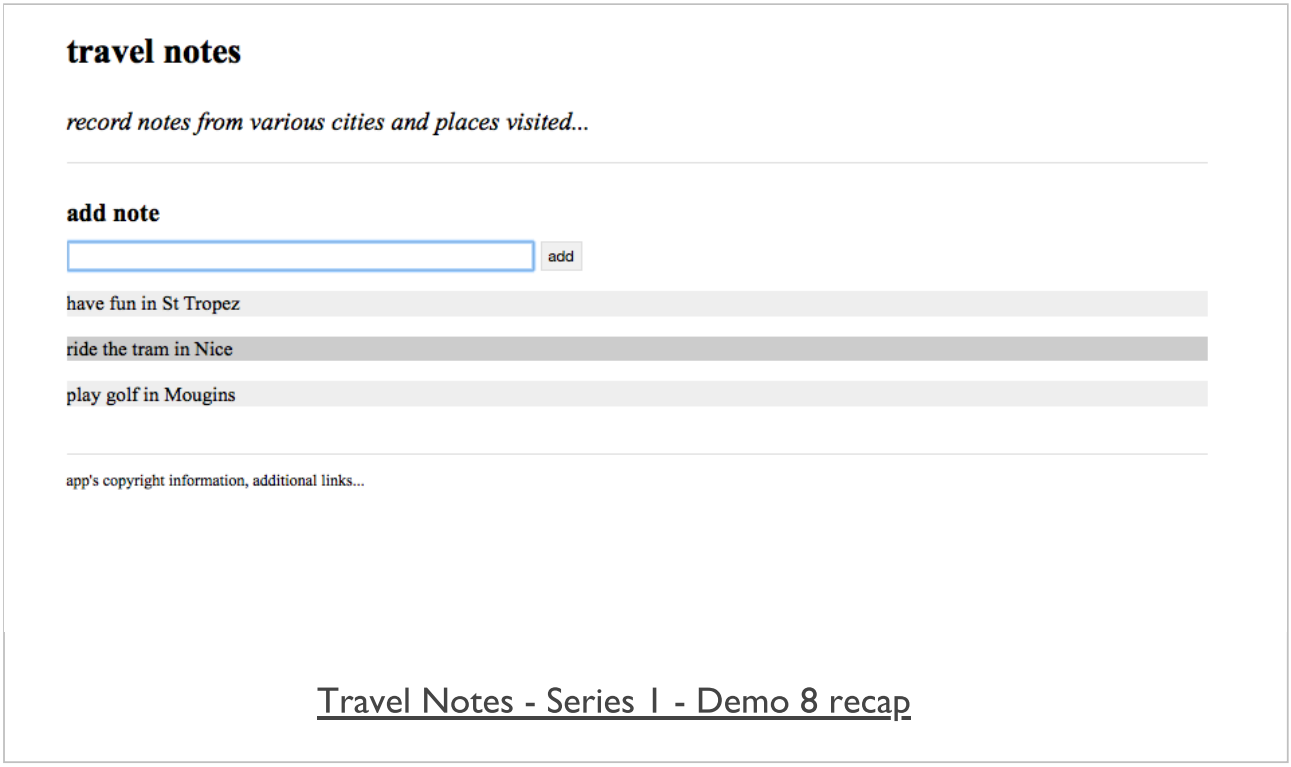
- a basic app that records simple notes
- many additional options we can add
- some basic functionality is needed to make it useful
  - *autosave - otherwise we lose our data each time we refresh the browser*
  - *edit a note*
  - *delete a note*
  - *add author information*
- additional functionality might include
  - *save persistent data to DB, name/value pairs...*
  - *organise and view collections of notes*
  - *add images and other media*
  - *local and APIs*
  - *add contextual information*
  - *again, local and APIs*
  - *structure notes, media, into collection*
  - *define related information*
  - *search, sort...*
  - *export options and sharing...*
- security, testing, design patterns

Image - HTML5, CSS, & JS - DOM recap



Travel Notes - DOM recap

Image - Travel Notes - Series 1 - recap



Travel Notes - Series 1 - Demo 8 recap

HTML5, CSS, & JS - example - add-ons

new features and add-ons...

- delete all notes
- delete a single note
- new event handlers
- additional styling

HTML5, CSS, & JS - example - part 1.1

delete option - all notes

- standard `remove()` function in jQuery

```
$("p").remove();
```

- option to **delete all** notes from `.note-output`
- add a new toolbar for note controls and options

```
<section class="note-controls">
  <button id="notes-delete">Delete all</button>
</section>
```

- then add some simple styling for this new toolbar

```
/* note controls */
.note-controls {
  margin: 10px 0 10px 0;
  padding: 2px;
  border-bottom: 1px solid #dedede;
  display: none;
}
/* simplify default button styles for note controls */
.note-controls button {
  padding: 2px;
  margin: 2px;
  border-radius: 0;
  border: 1px solid #dedede;
  cursor: pointer;
}
```

HTML5, CSS, & JS - example - part 1.2

delete option - all notes - plain js

```
// delete all notes button
let deleteAll = document.getElementById('notes-delete');

// add event listener for delete all notes...
deleteAll.addEventListener('click', () => {
    // get notes from DOM
    let notes = noteOutput.querySelectorAll('p');
    // loop through notes and remove a single note per iteration...
    for (let note of notes) {
        note.remove();
    }
});
```

HTML5, CSS, & JS - example - part 2.1

delete option - all notes

- note controls toolbar is hidden, by default in the CSS
- need some way to check its visibility as we add our notes
  - *no notes, then the toolbar is not required*

```
//check element visibility - expects single element relative to display:none
function checkVisible(element) {
  if (element.is(":hidden")) {
    element.fadeIn();
  }
}
```

- simply checking a passed element to see whether it is hidden
  - *then `fadeIn()` as necessary*
- can update this method later on to check hidden and visible
- call this function as required

```
checkVisible($(".note-controls"));
```

HTML5, CSS, & JS - example - part 2.2

delete option - all notes - plain js

- use `display` property to check node

```
// check visibility of passed node
function checkVisible(node) {
    // check passed node's current visibility
    if (node.style.display != 'block') {
        // show in DOM to allow fadeIn...
        node.style.display = 'block';
        // call fadeIn for node in DOM
        fadeIn(node);
    }
}
```

- & usage with a defined node

```
// define node to check...
let controls = document.getElementById('controls');
// call function
checkVisible(controls);
```

HTML5, CSS, & JS - example - part 2.3

delete option - all notes - plain js

- use `visibility` property to check node

```
// check visibility of passed node
function checkVisible(node) {
    // check passed node's current visibility
    if (node.style.visibility = 'hidden') {
    // show in DOM to allow fadeIn...
    node.style.display = 'block';
    node.style.visibility = 'visible';
    // call fadeIn for node in DOM
    fadeIn(node);
    }
}
```

HTML5, CSS, & JS - example - part 3

delete option - all notes

- add a note, the `.note-controls` toolbar is shown
  - ***delete all*** *button now becomes available to our users*

```
//handle deletion of all notes
$("#notes-delete").on("click", function(e) {
  var $note = $(".note-output p");
  $(this).parent().hide();
  $note.remove();
});
```

- creating a new handler for the click events on the `#notes-delete` button
- hides its own container, the notes toolbar
- then removes all of the notes, `p`, from the `.note-output` section

HTML5, CSS, & JS - example - part 4.1

JS code so far

```
//check element visibility - expects single element relative to display:none
function checkVisible(element) {
  if (element.is(":hidden")) {
    element.fadeIn();
  }
}
...
//handle deletion of all notes
$("#notes-delete").on("click", function(e) {
  var $note = $(".note-output p");
  $(this).parent().hide();
  $note.remove();
});
```

HTML5, CSS, & JS - example - part 4.2

JS code so far - plain JS

- hide parent node for controls...

```
// delete all notes button
let deleteAll = document.getElementById('notes-delete');

// add event listener for delete all notes...
deleteAll.addEventListener('click', () => {
    // hide parent controls node...
    deleteAll.parentNode.style.display = 'none';
    // get notes from DOM
    let notes = noteOutput.querySelectorAll('p');
    // loop through notes and remove a single note per iteration...
    for (let note of notes) {
        // remove single node
        note.remove();
    }
});
```

- DEMO 1 - travel notes - series 2

HTML5, CSS, & JS - example - part 5

delete option - all notes

- still making an assumption notes exist in the note-output section
- add an additional function to check element exists in the DOM or not
- use `length` property - plain JS & jQuery

```
$("p").length
```

- new function for checking elements in the DOM - plain JS & jQuery

```
//check elements exists
function checkExist(element) {
  if (element.length) {
    return true;
  } else {
    return false;
  }
}
```

HTML5, CSS, & JS - example - part 6.1

delete option - all notes

- updated delete all notes option to include check for notes
- call `checkExist()` function in conditional statement

```
//handle deletion of all notes
$("#notes-delete").on("click", function(e) {
  //set note selector
  var $note = $(".note-output p");
  //check $note exists
  if (checkExist($note) === true) {
    //hide note-controls
    $(this).parent().hide();
    //remove all notes
    $note.remove();
  }
});
```

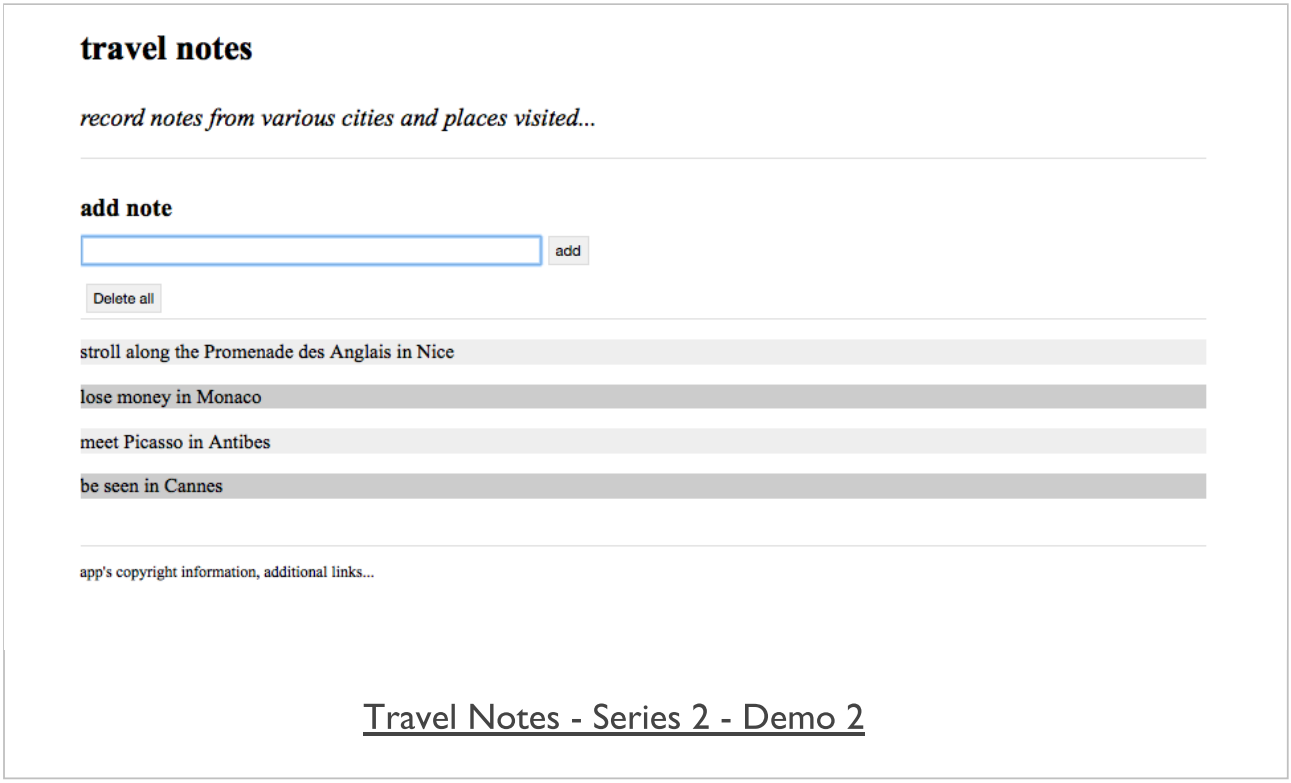
HTML5, CSS, & JS - example - part 6.2

delete option - all notes - plain JS

```
// add event listener for delete all notes...
deleteAll.addEventListener('click', () => {
    // get notes from DOM
    let notes = noteOutput.querySelectorAll('p');
    // check notes in DOM
    if (checkExist(notes) === true) {
        // hide parent controls node...
        deleteAll.parentNode.style.display = 'none';
        // loop through notes and remove a single note per iteration...
        for (let note of notes) {
            // remove single node
            note.remove();
        }
    }
});
```

- DEMO 2 - travel notes - series 2

Image - Travel Notes - Series 2 - demo 2



Travel Notes - Series 2 - Demo 2

HTML5, CSS, & JS - example - part 7

delete option - per note

- consider adding a single delete option per note
- allowing a user to selectively delete their chosen note
  - *regardless of hierarchical position within the* `.note-output` *section*
- design decisions for such an option might include
  - *do we offer a selection option, such as checkboxes, to select one or more delete items*
  - *perhaps a single delete button per note*
  - *a drag and drop to delete option*
  - *there are many different ways to present and use this option*
- programmatically follow a similar pattern for deletion of the note
- three jQuery functions can help us remove elements from a document
  - `remove()`
  - `detach()`
  - `replaceWith()`

jQuery - removing elements - quick overview

- used `remove()` function with delete all notes
  - *best used to remove elements permanently from a document*
  - *will **unbind** any attached event handlers for elements being removed*
  - *will return reference to removed elements, but not the original bound events*
- `detach()` often used for any temporary removal requirements
  - *eg: update a lot of the DOM, detach affected elements, then insert later...*
  - *retains its event handlers, and we can add these elements later*

```
$("p").detach();
```

- then append the attached elements as required

```
var $detachP = $("p").detach();
$detachP.appendTo("#detached");
```

- `replaceWith()` replaces an element, or group of elements, with passed element
- event handlers for the replaced elements are unbound

```
var $replacedP = $(".note-output p").first().replaceWith("<p>replaced...</p>");
```

HTML5, CSS, & JS - example - part 8.1

delete option - per note

- simply need to delete the selected note
  - *use the same `remove()` function for single and all notes*
- add option per note to allow user to delete a required note
- add a delete button for each note
  - *add programmatically with each new note*

```
function createButton(buttonClass, buttonText) {
  var $button = $('<button class="'+buttonClass+'">'+buttonText+'</button>');
  return $button;
}
```

- new function allows us to create simple buttons as required
  - *a specified class and button text passed as parameters*
  - *use function to build required delete button in `createNote()` function*

```
//create delete button
var $delete_button = createButton("note-delete", "delete");
```

HTML5, CSS, & JS - example - part 8.2

delete option - per note - plain js

```
// create button element - pass class and text
function createButton(btnClass, btnTxt) {
    // create button node
    let btnNode = document.createElement('button');
    // create button text node
    let btnTxtNode = document.createTextNode(btnTxt);
    // set attribute on button node
    btnNode.setAttribute('class', btnClass);
    // append text to button
    btnNode.appendChild(btnTxtNode);
    // return new button node with text and attribute...
    return btnNode;
}
```

- then call as required,

```
// create delete button for note
let delButton = createButton('note-delete', 'delete');
```

HTML5, CSS, & JS - example - part 9.1

delete option - per note

- append delete option to note
  - *before adding note to the DOM in `createNote` function*

```
function createNote() {
    ...
    //set content for note
    $note.html($note_text.val());
    //append delete button to each note
    $note.append($delete_button);
    ...
}
```

HTML5, CSS, & JS - example - part 9.2

delete option - per note - plain js

```
function createNote(input, output) {
  // get value from input field for note
    let inputVal = input.value;

    // check input value
    if (inputVal !== '') {
    // create p node
    let p = document.createElement('p');
        // create delete button for note
        let delButton = createButton('note-delete', 'delete');
        // prepend button to note
        p.prepend(delButton);
        // create text node
        let noteText = document.createTextNode(inputVal);
        // append text to paragraph
        p.appendChild(noteText);
        // append new paragraph and text to existing note output
        output.appendChild(p);
        // call custom animation for fade in...
        //fadeIn(p);
        // clear input text field
        input.value = '';
    }

    let controls = document.getElementById('app-controls');
    checkVisible(controls);
}
```

HTML5, CSS, & JS - example - part 10

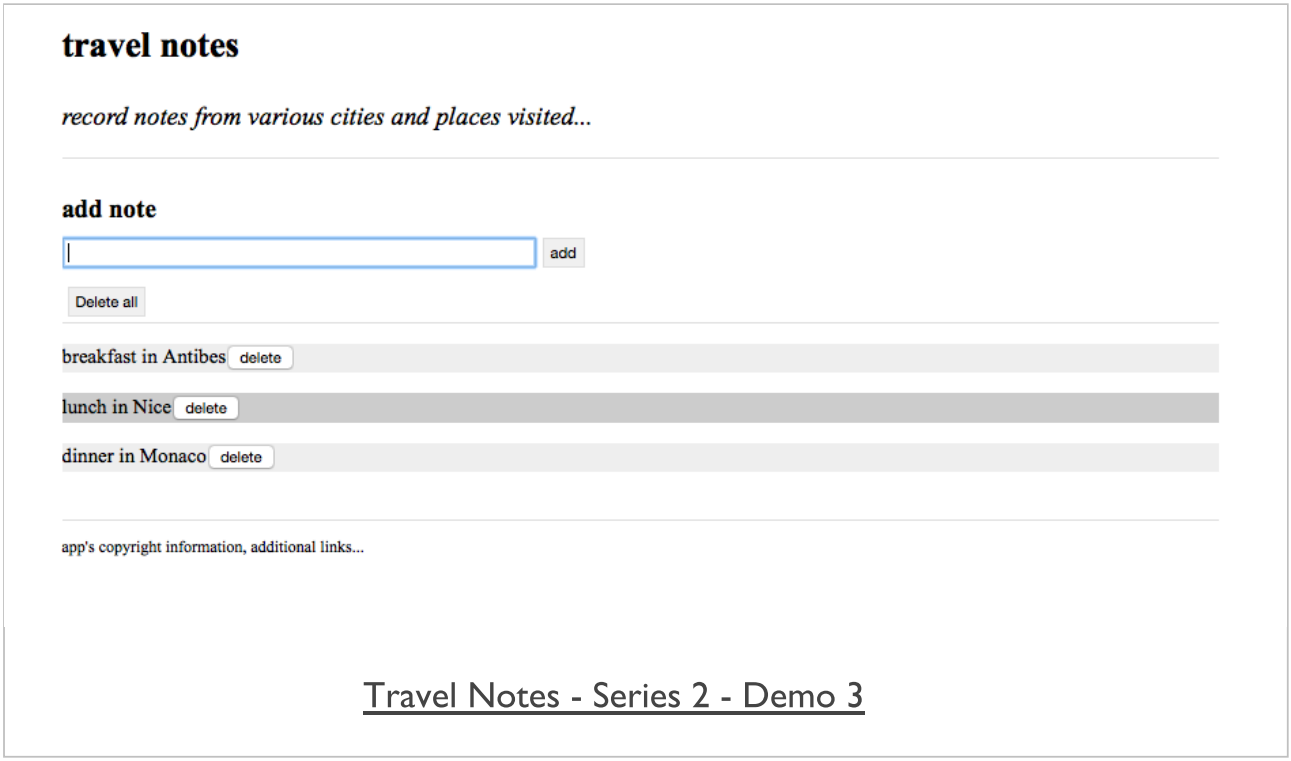
delete option - per note

- with jQuery
  - *need to bind a click event to the dynamically created delete note button*
    - plain JS option simpler
- delete button is being added to the DOM dynamically
  - *need to add handler for single note deletion event to existing DOM element*
  - *add handler to parent* `.note-output` *and then new* `button.note-delete`

```
$(".note-output").on("click", "button.note-delete" , function() {
  //delete parent note
  $(this).parent().remove();
  //set note selector
  var $note = $(".note-output p");
  //check for empty notes, and then remove note-controls
  if (checkExist($note) === false) {
    //hide note-controls
    $(".note-controls").hide();
  }
});
```

- DEMO 3 - travel notes - series 2 - jQuery

Image - Travel Notes - Series 2 - demo 3



Travel Notes - Series 2 - Demo 3

HTML5, CSS, & JS - example - part 11

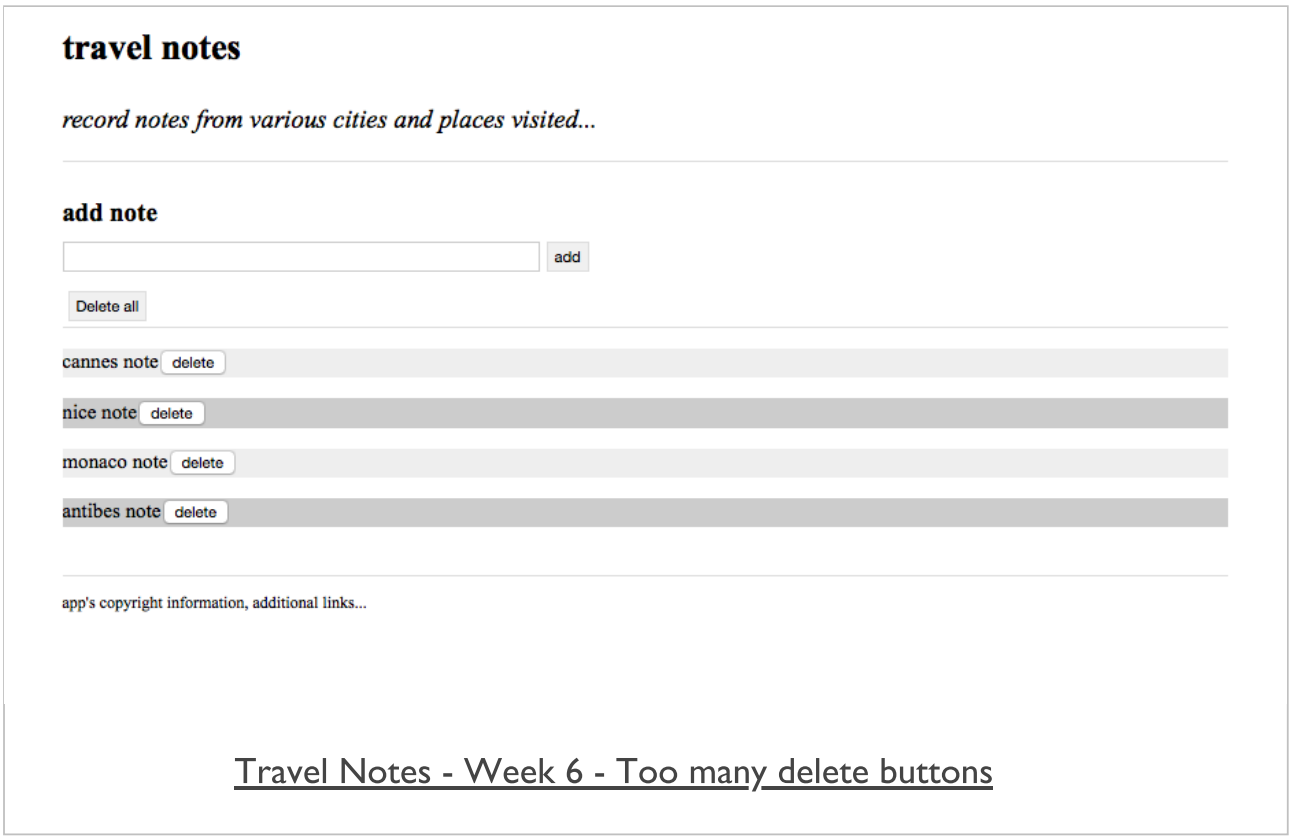
delete option - per note

- now allow our users to delete a single note
- single note option is awkward at the moment
- simply allow a user to either mouseover or select a note to show additional options
  - *showing the available delete button*
- enable a user to select their note of choice
  - *need to bind a click event to a note*

```
//handle click event per note
$(".note-output").on("click", "p", function() {
...
});
```

- user selects a note
  - *no check for previous other visible delete buttons*
  - *ensure only delete button for selected note is shown*

Image - HTML5, CSS, & JS - too many delete buttons



Travel Notes - Week 6 - Too many delete buttons