

Comp 324/424 - Client-side Web Design

Spring Semester 2020 - Week 11

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HTML5, CSS, & JS - example - part 1

add grid layout

- update the layout of our Travel Notes application to include a grid layout
- apply this grid layout to the overall application
 - *organisation and presentation of the notes*
- remove the centred, fixed width for the body in our style.css stylesheet
- removes centre styling, results in content spanning full width of browser window
- add the grid layout to help us control this layout

```
<link rel="stylesheet" type="text/css" href="assets/styles/grid.css">
```

- then modify content categories, child elements to use new grid CSS

```
<!-- document header -->
<header>
  <div class="row">
    <div class="col-5">
      <h3>travel notes</h3>
      <h5>record notes from various places visited...</h5>
    </div>
    <div class="col-7"></div>
  </div>
</header>
```

Image - HTML5, CSS, & JS - grid layout

travel notes record notes from various places visited...	
add note <input type="text"/> <input type="button" value="add"/>	
app's copyright information, additional links...	
<u>Grid Layout - Updated Header</u>	

HTML5, CSS, & JS - example - part 2

add grid layout

- update our main content to position the note-input and note-controls

```
<!-- note input -->
<section class="note-input">
  <div class="row">
    <div class="col-12">
      <h5>add note</h5>
      <input><button>add</button>
    </div>
  </div>
</section>
<!-- note controls for delete... -->
<section class="note-controls">
  <div class="row">
    <div class="col-12">
      <button id="notes-delete">Delete all</button>
    </div>
  </div>
</section>
```

- still need to amend style.css to remove additional fixed styling

Image - HTML5, CSS, & JS - grid layout 2

travel notes

record notes from various places visited...

add note

add

Delete all

note

app's copyright information, additional links...

Grid Layout - mixed grid and fixed

HTML5, CSS, & JS - example - part 3

add grid layout

- fix mixed rendering by removing width, margin, and padding for `.note-controls`

```
/* note controls */  
.note-controls {  
  border-bottom: 1px solid #dedede;  
  display: none;  
}
```

- continue to update Travel Notes app
 - *modify output for notes*
 - *add further options for users*

DEMO - Travel Notes - grid layout with media queries

HTML5, CSS, & JS - example - part 4

add flex to grid layout

- an additional option to consider - flex layouts
 - *a recent W3 working draft*
 - *aims to provide efficient way to align and proportion content*
- known as **Flexbox Layout**
 - *idea is to apportion width and height for content*
 - *proportions relative to container even when their size is unknown or dynamic*
- flex layout could, in theory, replace a full grid layout
 - *considered more a complement to overall grid structure*
- defined flex container expands items to fill the container's available space
 - *can also shrink them to prevent any possible overflow*
- think of a flex layout as supporting multiple directions
 - *direction agnostic*
- many properties available for flex
 - *focus upon styling flex container and any flex items*

HTML5, CSS, & JS - example - part 5

add flex to grid layout

- we might specify CSS properties for a flex container

```
.flex-container {  
display: flex; /* defines container as flex */  
flex-direction: row; /* defines positioning of items added to container */  
flex-wrap: wrap; /* defines whether to wrap items to another line */  
justify-content: flex-start; /* defines start point and distribution of items */  
}
```

- allows us to position our container starting at the left
 - *items contained in a row*
 - *contained items wrapping to additional lines if necessary*
- many additional options available for each property
- also add rulesets for specific styling of items within a flex container
- we could add properties to a flex item such as
 - *specify the order of the flex items*
 - *whether a particular item can grow or shrink relative to content*
 - *default size of an item before any remaining space is distributed*
 - *individual alignment for a given item...*

HTML5, CSS, & JS - example - part 6

add flex to notes

- flex container and items useful for organising and positioning our notes
- due to uncertainty about content, size, and general note requirements
 - *flex positioning and styling removes the need for assumptions or fixed sizes*
- we can start to modify the styling and rendering of our notes using flex

```
/* flex item */  
.flex-item {  
  flex-basis: 300px; /* default size before extra */  
  flex-grow: 1; /* all items will be equal */  
}
```

- gives us a default smallest size for each note
- then the ability for each note to grow to fill the row as required
- also work with responsive layouts
 - *due to the minimum size and the option to grow for each item*
 - *and wrap flex items per flex container*
- modify and update styles as we develop travel notes app

DEMO - Travel Notes - grid layout with flex notes

Image - HTML5, CSS, & JS - Flex Notes

travel notes

record notes from various places visited...

memo...

search...

add note

add

Donec sit

canes

nice

monaco

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app's copyright information, additional links...

Grid Layout - flex notes

Image - HTML5, CSS, & JS - Flex Notes 2

travel notes

record notes from various places visited...

menu...

search...

add note

add

Delete all

cannes

nice

monaco

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app's copyright information, additional links...

Grid Layout - flex notes - medium

Image - HTML5, CSS, & JS - Flex Notes 3

travel notes

record notes from various places visited...

memo...

search...

add note

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cannes

monaco

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antibes

app's copyright information, additional links...

Grid Layout - flex notes - small

HTML5, CSS, & JS - example - part 7

add flex to notes

Notes with Flex and Media Queries

HTML5, CSS, & JS - example - part 1

add AJAX and JSON - load notes from json

- update our travel notes app to allow us to load some test persistent notes from a local JSON file
- initial JSON is as follows

```
{
  "travelNotes": [{
    "created": "2015-10-12T00:00:00Z",
    "note": "a note from Cannes..."
  }, {
    "created": "2015-10-13T00:00:00Z",
    "note": "a holiday note from Nice..."
  }, {
    "created": "2015-10-14T00:00:00Z",
    "note": "an autumn note from Antibes..."
  }]
}
```

HTML5, CSS, & JS - example - part 2

add AJAX and JSON - load notes from json

- add option to load notes from JSON as app initially loads
 - *use deferred promise pattern*
 - *checks source JSON as it loads via the promise*
 - then outputs the end result
- start with the following update

```
//get the notes JSON
function getNotes() {
  //.get returns an object derived from a Deferred object - do not need explicit deferred object
  var $deferredNotesRequest = $.getJSON (
    "docs/json/notes.json",
    {format: "json"}
  );
  return $deferredNotesRequest;
}
```

HTML5, CSS, & JS - example - part 3

add AJAX and JSON - load notes from json

- help us better manage logic of our notes from app's loading and execution
 - *create two separate JS files*
- our updated structure might be as follows

```
...  
|- assets  
  |- scripts  
    |- travel.js  
    |- notes.js  
...
```

- we can extend this further, as needed by app features and data

HTML5, CSS, & JS - example - part 4

add AJAX and JSON - load notes from json

- add our `.when()` function to the app's loader
 - *.when()* function accepts a deferred object
 - *in our case a limited promise*
- then allows us to chain additional deferred functions
 - *including required .done()* function
- for returned data, use standard response object to get `travelNotes`
 - *then iterate over the array for each property*
 - *for each iteration, we can simply call our createNote function*
 - *builds and renders required notes to the app's DOM*

```
//use deferred object from getJson
$.when(getNotes()).done(function(response) {
  //get travelNotes object
  var $travelNotes = response.travelNotes
  //process travelNotes array
  $travelNotes.forEach(function(item) {
    //check each property
    if (item !== null) {
      //get note
      var note = item.note;
      //create each note for rendering
      createNote(note);
    }
  }); //end foreach
});
```

HTML5, CSS, & JS - example - part 5

add AJAX and JSON - load notes from json

- simple problem - existing `createNote()` function does not accept a parameter
- need to update the logic of that function to accept and handle a parameter
- also requires a quick update to any functions and calls to the `createNote()`
 - *event handlers for creating a new note using the add button and keypress within the input field*

```
//manage input field and new note output
function createNote(data) {
  ...
  //conditional check for data
  if (data !== "") {
    //set content for note
    $note.html(data);
    ...
  }
}
```

HTML5, CSS, & JS - example - part 6

add AJAX and JSON - load notes from json

- update our event handlers for the note input button and input field keypress as follows,

```
//handle user event for `add` button click
$(".note-input button").on("click", function(e) {
  var $note_data = getNoteInput();
  //call note builder function
  createNote($note_data);
});
```

```
//handle user event for keyboard press
$(".note-input input").on("keypress", function(e) {
  //check code for keyboard press
  if (e.keyCode === 13) {
    var $note_data = getNoteInput();
    //call note builder function
    createNote($note_data);
  }
});
```

- our notes now load by default as the app starts
- note input button and keypress work as expected
- DEMO - travel notes & JSON

Working with APIs - part 1

remote api options - Flickr

- Travel Notes app loads data from a local JSON file
- add option to load different types of data using remote APIs
 - *Flickr API for images, tags...*
- basics and principles are similar to the patterns we've already seen and tested
- test a sample JSON return from the Flickr API
- JSON return - useful properties for app
 - *title*
 - *link*
 - *media (direct url for image - where available)*
 - *description*
 - *...*
- public feed for searching public photos, videos, groups, recent activity...
- Flickr API Public Feed - Cannes and France

Working with APIs - part 2

working with Flickr API

- query Flickr's public feed for photos
 - *we can use our now familiar pattern for requesting JSON*

```
//get the Flickr public feed JSON for images
function getImages() {
  //.get returns an object derived from a Deferred object - do not need explicit deferred object
  var $deferredNotesRequest = $.getJSON (
    "http://api.flickr.com/services/feeds/photos_public.gne?jsoncallback=?",
    { tags: "cannes,france,boules",
      tagmode: "all",
      format: "json"
    });
  return $deferredNotesRequest;
}
```

- need to make a few specific modifications to the request
 - *JSONP to avoid browser security restrictions*

Working with APIs - part 3

working with Flickr API

- Flickr's public feed includes options
 - *eg: a specific user ID for photos, various tags, how tags are interpreted by the search...*
- use our `.when()` function to load and render some test images from Flickr

```
$.when(getImages()).done(function(response) {  
    console.log("done..." + response);  
    //use jQuery's generic iterative function for the response...  
    $.each( response.items, function( i, item ) {  
        buildImage(item.media.m);  
        //limit test images to 8  
        if ( i === 7 ) {  
            return false;  
        }  
    });  
});
```

- DEMO - AJAX and JSON - Flickr api

HTML5, CSS, & JS - example - part 7

working with Flickr API - update travel notes

- add option to Travel Notes app to allow a user to view images from Flickr
- need to update app's HTML, CSS, and JS
- modify how our notes, and associated options, are rendered to our users
- add a search option for photos on Flickr
- render our images to match the notes
- app's structure still reflects three primary content categories
 - *header, main, and footer with slight modifications to the main category*
- main content category updated to create two distinct rows for initial content
 - *contain defined semantic containers*
- row containing `.note-input` and Flickr search option `.contextual-choice`
 - *then split this row into two columns of 6*

HTML5, CSS, & JS - example - part 8

working with Flickr API - update travel notes HTML

- updated HTML for .note-input and Flickr search .contextual-choice

```
<div class="row">
  <!-- note input -->
  <section class="note-input col-6">
    <h5>add note</h5>
    <input><button>add</button>
  </section>
  <!-- contextual choice -->
  <section class="contextual-choice col-6">
    <h5>search flickr</h5>
    <input><button>search</button>
  </section>
</div>
```


HTML5, CSS, & JS - example - part 9

working with Flickr API - update travel notes HTML

- update the HTML for rendering the images
 - *add alongside our notes*
- create another row for these containers
 - *add two section containers for .note-output and .contextual-output*
- make .note-output slightly larger to show primary app focus

```
<div class="row">
  <!-- note output -->
  <section class="note-output col-7 flex-container">
  </section>
  <!-- contextual output -->
  <section class="contextual-output col-5 flex-container">
  </section>
</div>
```

HTML5, CSS, & JS - example - part 10

working with Flickr API - update travel notes JS

- add further functionality to Travel Notes app
- split our JS logic into three files to help with organisation
 - *a main loader file, `travel.js`,*
 - *and a file each for notes and contextual options*
- updated app structure for JS

```
...  
  
|- assets  
  |- scripts  
    |- contextual.js  
    |- notes.js  
    |- travel.js  
...
```

- underlying logic for the notes will remain the same
 - *move loading of default notes to the `travel.js` main loader file*
- updates for searching, returning, and rendering images from Flickr
 - *added to the `contextual.js` file*

HTML5, CSS, & JS - example - part 11

working with Flickr API - update travel notes JS

- test Flickr API in our app using some set data for image tags
 - *respond to the user clicking on the search button*
 - *submit our query to Flickr*
 - *process the returned JSON for the images*
 - *render them for viewing*
- request and process our images using the familiar pattern

```
//get the Flickr public feed JSON for images
function getImages(data) {
  var img_tags = data;
  //.get returns an object derived from a Deferred object - do not need explicit deferred object
  var $deferredNotesRequest = $.getJSON (
    "http://api.flickr.com/services/feeds/photos_public.gne?jsoncallback=?",
    { tags: img_tags,
      tagmode: "all",
      format: "json"
    });
  return $deferredNotesRequest;
}
```

HTML5, CSS, & JS - example - part 12

working with Flickr API - update travel notes JS

- returned data using standard deferred promise object
 - *add a new function to handle the processing of the images*

```
function processImages(data) {  
  $.when(getImages($img_data)).done(function(response) {  
    //use jQuery's generic iterative function for the response...  
    $.each( response.items, function( i, item ) {  
      createImage(item.media.m);  
      //limit test images to 4  
      if ( i === 3 ) {  
        return false;  
      }  
    });  
  });  
}
```

- using deferred promise object with `.when()` function chained to `.done()` function
- add jQuery's generic iterative function to help us process the response
 - *instead of standard JavaScript `.forEach()` option*
- loop through each value, and pass the image to our new function, `createImage()`
 - *ready for rendering to our app's DOM*
 - *limit number of images for testing*

HTML5, CSS, & JS - example - part 13

working with Flickr API - update travel notes JS

```
//manage new image output
function createImage(data) {
  //create each image element
  var img = $('<img class="flex-img">');
  //add image
  img.attr("src", data);
  //append to DOM
  $(".contextual-output").append(img);
}
```

- `.createImage()` function accepts a parameter for image data
- then process ready for rendering to the app's DOM
- image is added to a new `img` element with a new class of `.flex-img`
 - *creates a flex item for rendering*
- added to the new `.contextual-output` section
- rendered images displayed as thumbnails for the user
 - *complementary to the existing notes*

HTML5, CSS, & JS - example - part 14

working with Flickr API - update travel notes JS

- to add images to the app
 - *a user can enter their requested tags in the search field*
 - *then click on the search button to return any available images*
- event handler for this search button click uses the requested tags
 - *passes them as a parameter to the processImages() function*

```
//handle user event for image `search` button click
$(".contextual-choice button").on("click", function(e) {
    //test tags for testing image search
    $img_data = "cannes,france,boules"
    //process images
    processImages($img_data);
});
```

Image - HTML5, CSS, & JS - Travel Notes & Flickr

travel notes
record notes from various places visited...

menu...

search...





add note

search flickr

Cannes, a resort town on the French Riviera, is synonymous with glamour thanks to its world-famous film festival. Its Boulevard de la Croisette, curving along the coast, is lined with sandy beaches, upmarket boutiques and palatial hotels. It's also home to the Palais des Festivals, a modern building complete with red carpet and Allée des Stars – Cannes' walk of fame.

Nice, capital of the French Riviera, skirts the pebbly shores of the Baie des Anges. Founded by the Greeks and later a retreat for 19th-century Europe's elite, the city today balances old-world decadence with modern urban energy. Its sunshine and liberal attitude have long attracted artists, whose work hangs in its museums. With vibrant markets and diverse restaurants, it's also renowned for its food.

Antibes is a resort town between Cannes and Nice on the French Riviera (or Côte d'Azur). It's known for its Mediterranean beaches, annual Jazz à Juan music festival and old town enclosed by 16th-century ramparts. Luxury yachts moor at the huge Port Vauban marina, overlooked by star-shaped, 16th-century Fort Carré. The Promenade Amiral-de-Grasse walkway along Vauban's walls has views of the Alps.



app's copyright information, additional links...

Travel Notes & Flickr - test loading images

HTML5, CSS, & JS - example - part 15

working with Flickr API - update travel notes CSS

- need to update and modify existing CSS
 - *helps with correct rendering of the thumbnail images*
- CSS additions are initially modest
 - *reflects integration with existing app, grid, and flex layouts*
- add new ruleset for image rendering in the `.contextual-output` section

```
/* contextual output images */
.contextual-output img {
  margin: 5px;
  padding: 5px;
  border: 1px solid #b1c4b1;
}
```

- update `.flex-container` class to change `justify-content` property to value of `space-around`
- add new ruleset for a `.flex-img` class.

```
/* flex image */
.flex-img {
  flex-basis: 150px;
  flex-grow:0;
}
```

- specify size of a thumbnail image
 - *initially restrict their ability to grow relative to flex*

HTML5, CSS, & JS - example - part 16

working with Flickr API - update travel notes JS

- we can now request, process, and render images from Flickr to Travel Notes app
 - *still need to accept and process search queries from search input field.*
- add option to check search input field
 - *then submit query to Flickr for images*

```
//get input value for image search
function getImageInput() {
  //define img value
  var img_val = "";
  //define input field
  var $img_tags = $(".contextual-choice input");
  if ($img_tags.val() !== "") {
    img_val = $img_tags.val();
    return img_val;
  } else {
    return img_val;
  }
}
```

HTML5, CSS, & JS - example - part 17

working with Flickr API - update travel notes JS

- use `getImageInput()` function with a modified `processImages()` function

```
//process image production, loading, and pass to rendering
function processImages() {
  //check img visibility for contextual-output - clear existing images
  if (checkVisible($(".contextual-output img")) === false) {
    //empty existing images
    $(".contextual-output").empty();
  }
  //get data from image search input field
  var $img_data = getImageInput();
  //use image data to get images, and pass for rendering
  $.when(getImages($img_data)).done(function(response) {
    console.log("done..." + response);
    //use jQuery's generic iterative function for the response...
    $.each( response.items, function( i, item ) {
      createImage(item.media.m);
      //limit test images to 4
      if ( i === 3 ) {
        return false;
      }
    });
  });
}
```

HTML5, CSS, & JS - example - part 18

working with Flickr API - update travel notes JS

- updated `processImages()` function then called within event handlers
 - *for the search button and a keypress in the search input field*

```
//handle user event for image search button click
$(".contextual-choice button").on("click", function(e) {
    //process images
    processImages();
});

//handle user event for keyboard press
$(".contextual-choice input").on("keypress", function(e) {
    //check code for keyboard press
    if (e.keyCode === 13) {
        //process images
        processImages();
    }
});
```

- DEMO - travel notes & Flickr

Image - HTML5, CSS, & JS - Travel Notes & Flickr

travel notes

record notes from various places visited...

meta...

search...

add note

add

search flickr







search

Delete all

Curral das Freiras is a civil parish in the municipality of Câmara de Lobos in the Portuguese archipelago of Madeira. The population in 2011 was 2,001, in an area of 25.03 km². It is situated in the mountainous interior of the island.

Câmara de Lobos (Portuguese pronunciation: [literally, Portuguese: chamber of the wolves] is a municipality, parish and city in the south-central coast of the island of Madeira. Technically a suburb of the much larger capital city of Funchal, it is one of the larger population centres and an extension of the Funchal economy.

Funchal is the largest city, the municipal seat and the capital of Portugal's Autonomous Region of Madeira. The city has a population of 111,892, making it the 6th largest city in Portugal, and has been the capital of Madeira for more than five centuries. Because of its high cultural and historical value, Funchal is one of Portugal's main tourist attractions. It is also popular as a destination for New Year's Eve, and it is the leading Portuguese port on cruise liner dockings.



app's copyright information, additional links...

Travel Notes & Flickr - different layout

HTML5, CSS, & JS - example - part 19

working with Flickr API - update travel notes JS

- room for improvement, updates, abstraction, and general refactoring of the existing code
- return to this issue when we consider refactoring the code in general
 - *there are still a few simple features we need to add*
- for example,
 - *add images to the .contextual-output section, resize .note-output section*
 - moves focus to the current images
 - *check loading progress of the notes and images*
 - show feedback to the user
 - *need to output a title for the images*
 - set using the search query

HTML5, CSS, & JS - example - part 20

working with Flickr API - modify travel notes JS

- first modification is to resize the .notes-output
 - *create more space for the images*
 - *gently shift focus to the new images*
- update existing .createImage() function in the contextual.js file

```
//manage new image output
function createImage(data) {
  ...
  if (checkVisible($(".contextual-output img")) === true) {
    $(".note-output").removeClass("col-12");
    $(".note-output").addClass("col-4");
    $(".contextual-output").fadeIn("slow");
  }
  ...
}
```

- add check to ensure images are not visible in the DOM
- remove current class from .note-output section
 - *12 column class for the grid*
- add new grid class to resize .note-output to 4 columns
 - *then fade in the .contextual-output class*
 - *set in the app's HTML to a class of .col-8*

HTML5, CSS, & JS - example - part 21

working with Flickr API - modify travel notes JS

- next modification is some initial error handling
 - *checking for an empty array of images from the returned Flickr JSON*
- check `processImages()` function for an empty array of image items

```
...  
  
if (response.items.length === 0) {  
    var img = "";  
    createImage(img);  
} else {  
    //return images from items array...  
}  
  
...
```

- checks images in the items array for the promise object
- if not, send an empty variable as a parameter to our `createImage()` function

HTML5, CSS, & JS - example - part 22

working with Flickr API - modify travel notes JS

- check for empty value in createImage() function
 - *handle the simple errors as follows*

```
if (data !== "") {  
    //create each image element  
    var $img = $('<img class="flex-img">').attr("src", data);  
    //add image  
    img_output = $img;  
} else {  
    var $img_error = $('<p class="flex-item error">').html("No images available...");  
    //add error  
    img_output = $img_error;  
}
```

- we've abstracted the return variable for the image output
 - *can hold either the image or the error output...*
- add a check to see whether the .contextual-output section is visible or not
- modify the column class for the .note-output section
- then append our image output
- then show the .contextual-output section within the app
- DEMO - travel notes & Flickr

Image - HTML5, CSS, & JS - Travel Notes & Flickr

travel notes

record notes from various places visited...

menu...

search...

add note

search flickr

Curral das Freiras is a civil parish in the municipality of Câmara de Lobos in the Portuguese archipelago of Madeira. The population in 2011 was 2,001, in an area of 25.03 km². It is situated in the mountainous interior of the island.

Câmara de Lobos (Portuguese pronunciation: [literally, Portuguese: chamber of the wolves]) is a municipality, parish and city in the south-central coast of the island of Madeira. Technically a suburb of the much larger capital city of Funchal, it is one of the larger population centres and an extension of the Funchal economy.

Funchal is the largest city, the municipal seat and the capital of Portugal's Autonomous Region of Madeira. The city has a population of 111,892, making it the 6th largest city in Portugal, and has been the capital of Madeira for more than five centuries. Because of its high cultural and historical value, Funchal is one of Portugal's main tourist attractions. It is also popular as a destination for New Year's Eve, and it is the leading Portuguese port on cruise liner dockings.

No images available. Please try a different search.

app's copyright information, additional links...

Travel Notes & Flickr - error checking

HTML5, CSS, & JS - example - part 23

working with Flickr API - modify travel notes JS

- continue to modify and build our Travel Notes app
- add some metadata for the returned images
 - *using the title and link from the search query response*
- add initial metadata output in the contextual.js file
 - *modify the processImages() function*
 - *metadata from Flickr JSON response in the deferred promise object*

```
...  
//create object for search metadata  
var search_meta = {title:response.title, link:response.link};  
...
```

- then pass this to a new function, called metaOutput()

```
//prepare and render metadata for returned search...  
function metaOutput(data) {  
  if (data !== "") {  
    //search metadata from response  
    var search_title = data.title;  
    var search_link = data.link;  
    //build heading output for metadata heading  
    var metaHeading = '<h6>'+search_title+' | <a href="'+search_link+'">Flickr</a></h6>';  
    //render metadata to contextual-output  
    $(".contextual-output").prepend(metaHeading);  
  }  
}
```

- DEMO - travel notes & Flickr - initial metadata

Image - HTML5, CSS, & JS - Travel Notes & Flickr

travel notes

record notes from various places visited...

menu...

search...

add note

add

search flickr

search







Delete all

Curral das Freiras is a civil parish in the municipality of Câmara de Lobos in the Portuguese archipelago of Madeira. The population in 2011 was 2,001, in an area of 25.03 km². It is situated in the mountainous interior of the island.

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Recent Uploads tagged curraldasfreiras | [Flickr](#)



app's copyright information, additional links...

Travel Notes & Flickr - initial metadata

HTML5, CSS, & JS - example - part 24

travel notes - basic refactoring of JS

- as we continue to add features and modify existing code
 - *may start to see unnecessary repetition and function calls in the code*
- eg: initial error handling for our contextual images
 - *createImage() function is being called in the processImages() function*
 - *called regardless of returned image data*
- createImage() is being used unnecessarily to manage the error handling
- move check to processImages() function
 - *then call function to render necessary error message*

```
function outputError(message) {  
    var $img_error = $('<p class="flex-item error">').html(message);  
    //check for visible contextual-output - if not visible  
    if (checkVisible($(".contextual-output")) === true) {  
        $(".note-output").removeClass("col-12");  
        $(".note-output").addClass("col-4");  
    }  
    //append output to DOM  
    $(".contextual-output").append($img_error);  
    //fade in contextual-output with appended results  
    $(".contextual-output").fadeIn("slow");  
}
```

HTML5, CSS, & JS - example - part 25

travel notes - basic refactoring of JS

- updated processImages() function can call .outputError() function as needed

```
...
if (response.items.length !== 0) {
  //logic to add metadata and each image...
}
else {
  var img_error = "No images available - please try a different search.";
  outputError(img_error);
}
...
```

- use this function to output error messages for any type of contextual data
- also remove some unnecessary replication of code
 - *by adding a simple function to change an element's class*

```
//modify element class - from, to
function changeClass(element, size1, size2) {
  $(element).removeClass(size1);
  $(element).addClass(size2);
}
```

- resize a class, for example to modify our grid output
 - *call this function - pass the selector to update, original class to remove, and new class to add*

HTML5, CSS, & JS - example - part 26

working with Flickr API - modify travel notes JS

- add a modification to check for the image loading and the notes
 - *offer status feedback to the user*

```
//add initial loader spinner for ajax...  
$(".contextual-output").html('');
```

- remove it when the deferred promise object has returned

```
//remove ajax spinner  
$(".spinner").remove();
```

- DEMO - travel notes & Flickr - spinner

Image - HTML5, CSS, & JS - Travel Notes & Flickr

travel notes
record notes from various places visited...

menu...

search...

add note

search flickr

app's copyright information, additional links...

Travel Notes & Flickr - spinner

JavaScript - ES Modules

extra material

- extra notes on ES Modules
 - *general usage*
 - *custom design and structure*
 - *custom library*
 - *technical overview of module design*
- extra source code examples available
 - *general usage*
 - *custom modules*
 - *custom library example*

Demos

- Travel notes app - series 3
 - *DEMO 1 - Travel notes - grid layout with media queries*
 - *DEMO 2 - Travel notes - demo2*
- Travel notes app - series 4
 - *DEMO 1 - Travel Notes & JSON*
 - *DEMO 2 - Travel Notes & Flickr*
 - DEMO 3 - Travel Notes & Flickr - error checking
 - DEMO 4 - Travel Notes & Flickr - initial metadata
 - DEMO 5 - Travel Notes & Flickr - spinner

Resources

- Flickr
 - *Flickr API - Public feeds*
 - *Flickr API - Public feed - public photos & video*
- jQuery
 - *jQuery*
 - *jQuery API*
 - *jQuery - deferred*
 - *jQuery - .getJSON()*
 - *jQuery - JSONP*
 - *jQuery - promise*
- Various
 - *Create your own AJAX loader*
 - *W3 Selector API*
- W3
 - *W3 - CSS Flexible Box Layout Module 1*
 - *W3 - JS Object*
 - *W3 - JS Performance*