

Notes - Application Development - Client-side

Travel Notes - Part 4

- Dr Nick Hayward

A brief outline of application development for client-side publication.

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- Add grid layout
 - update controls layout
 - fix mixed rendering
- Flexbox layout
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Intro *Travel Notes* is a basic application to help showcase development patterns and concepts for *client-side* applications.

We may consider its development using two comparative options for JavaScript implementation. This allows us to compare a popular JS front-end library, *jQuery*, and custom plain JavaScript.

This application allows a user to create text notes, organise and render them in a grid and flexible layout, and query a remote API for contextual information. In this example, the user may search for images, which may be associated with the text notes created in the app.

In *Part 4*, we may add the following functionality to this app

- update design and layout of app
- add Grid layout
- add Flexbox layout
- add Flex to notes
- ...

Add grid layout We'll now update the layout of our *Travel Notes* application to include a grid layout.

We can apply this grid layout to the overall application, and the organisation and presentation of the notes.

The first change is to remove the centred, defined width for the `body` in our `style.css` stylesheet. For now, we are simply styling the background, font-size, and font-family for the body of the document.

```
body {  
  background: #fff;  
  font-size: 15px;  
  font-family: "Times New Roman", Georgia, Serif;  
}
```

Naturally, this removes the centre styling, and results in our content spanning the full width of the browser window. However, this also means that we can end up with very long, stretched elements within our application. We'll now add the grid layout to help us control this layout.

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

and then modify the content categories, and child elements, to use the 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>
```

We can position our header as a split between the headings, and grid for future options such as a search option, menu, and so on.



Figure 1: Grid Layout - Updated Header

update controls layout Then, we can 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>
```

However, if we simply update the existing HTML without also modifying the earlier CSS for these sections we end up with a mixed mess of grid and defined width layout.



Figure 2: Grid Layout - mixed grid and fixed

fix mixed rendering To fix this mixed rendering, we can simply remove the defined width and positioning for the `.note-controls` class.

```

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

```

We can then continue to update our application, modify the output for our notes, and start to add further options for our users. We won't modify the layout of the notes until their initial content has been updated.

- DEMO - [Travel Notes - grid layout with media queries](#)

Flexbox layout There is also an additional option to consider, a recent W3 working draft, that aims to provide a more efficient way to align and proportion content.

Known as **Flexbox Layout**, the idea is to apportion width and height for content in a given container even when their size is unknown or dynamic.

Whilst a flex layout could, in theory, replace a full grid layout, it is currently being considered more as a complement to an overall grid structure.

With this in mind, the general concept is to assign flex to a container, which then enables it to alter the height or width of a contained item to best fill the available space. A defined flex container expands items within to fill the container's available space, or shrinks them to prevent possible overflow.

Also, we can think of a flex layout as supporting multiple directions, in effect it is direction agnostic.

There are many properties available in CSS for **flex**, which focus upon styling the flex container and any contained flex items.

add flex to grid layout So, we might specify the following properties for a new flex container,

```
.flex-container {
  display: flex; /*defines container as flex*/
  flex-direction: row; /*defines directions 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*/
}
```

There are many additional options available for each property, but for many use cases this allows us to position our container starting at the left, in a row, with contained items wrapping to additional lines if necessary.

We can also add rulesets for specific styling of items within a flex container. For example, we could 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, and individual alignment for a given item.

add flex to notes By now, hopefully you should have noticed that a flex container and items could prove useful for organising and positioning our notes. In particular, as we are not certain about content, size, and general note requirements, flex positioning and styling removes the need for assumptions or fixed sizes.

Therefore, 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 */
}
```

For our notes, this gives us a default smallest size for each note, and then the ability for each note to grow to fill the row as required. This will also work with responsive layouts, using media queries, due to the minimum size and the option to grow for each item, and wrap flex items per flex container.

We can obviously continue to develop and modify these initial styles as we modify and improve our travel notes application.

- DEMO - [Travel Notes - grid layout with flex notes](#)

Demos

- DEMO - [Travel Notes - grid layout with media queries](#)
- DEMO - [Travel Notes - grid layout with flex notes](#)

Resources

- [jQuery](#)
 - [jQuery](#)
 - [jQuery API](#)
- [JS](#)
 - [MDN - JS](#)
 - [MDN - JS Objects](#)
 - [W3 Schools - JS](#)
- [What is AJAX? - YouTube](#)

travel notes

record notes from various places visited...

meta...

search...

add note

add

[Delete all](#)

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Figure 3: Grid Layout - flex notes - desktop

travel notes

record notes from various places visited...

menu...

search...

add note

add

Delete all

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Figure 4: Grid Layout - flex notes - medium

travel notes

record notes from various places visited...

menu...

search...

add note

add

Delete all

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cannes

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Figure 5: Grid Layout - flex notes - small