Comp 125 - Visual Information Processing

Spring Semester 2018 - week 12 - wednesday

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Final Demo and Presentation

Dates

- Week 15 - Monday 23rd, Wednesday 25th, & Friday 27th April 2018
- Final report due 3rd May 2018 by 1pm

Final Demo and Presentation

- group project - maximum 2 persons per group
- develop an app concept and prototype
- working app (as close as possible…)
  - *must use technologies outlined during the course*
- show and explain code used to develop the app
- explain design decisions
  - *describe patterns used in design of app*
  - *layout choices…*
- show and explain implemented differences
  - *where and why did you update the app?*
  - *perceived benefits of the updates?*

Further details on course website - https://csteach125.github.io/coursework/#assessment2

Video - Design

Paper Prototyping

Rapid Prototyping 1 of 3: Paper Prototyping
Source: YouTube - Google

Video - Design

Digital Prototyping

Rapid Prototyping 2 of 3: Digital Prototyping
Source: YouTube - Google

Video - Design

Native Prototyping

Rapid Prototyping 3 of 3: Native Prototyping
Source: YouTube - Google

HTML5 Canvas - basic `canvas`

- start by creating a basic HTML5 file with a `<canvas>` element
  - *`canvas` is our container for drawing...*
- need to add a link to the external JavaScript file for the drawing logic

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>Drawing - Canvas - Basic</title>
    </head>
    <body>
        <header>
      <h3>Drawing with Canvas - Basic</h3>
    </header>
    <main>
          <!-- add canvas -->
          <canvas id="drawing" width="600" height="400"></canvas>
        </main>
        <!-- script files -->
        <script src="./assets/js/drawing.js"></script>
    </body>
</html>
```

HTML5 Canvas - basic drawing

- might begin by drawing some rectangles with JavaScript on the `canvas`
- the following JavaScript will add a rectangle

```
// define canvas
var canvas = document.getElementById('drawing');
// define context for drawing
var context = canvas.getContext('2d');

// 1. rectangle
context.fillRect(0, 0, 100, 50);
```

HTML5 Canvas - basic canvas example

- we might use the canvas to combine rectangles to create various basic shapes
- update HTML for canvas

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="UTF-8">
        <title>Drawing - Canvas - Basic</title>
    </head>
    <body>
        <header>
      <h3>Drawing with Canvas - Basic</h3>
    </header>
    <main>
      <section id="drawings">
                <header>
         <h5>rectangle & staircase</h5>
        </header>
            <!-- add canvas -->
            <canvas id="drawing" width="600" height="400"></canvas>
      </section>
        </main>
        <!-- script files -->
        <script src="./assets/js/drawing.js"></script>
    </body>
</html>
```

- Example - basic drawing - rectangle & staircase
  - *http://linode4.cs.luc.edu/teaching/cs/demos/125/drawing/basic/*

HTML5 Canvas - basic drawing

stepped pyramid

- modify our example to draw multiple shapes, thereby creating a pattern on the canvas
  - *e.g. a stepped pyramid,*

```
// 3. pattern with rectangles - stepped pyramid - x,y,width,height
for (i = 1; i < 7; i++) {
    var start = 100;
  var width = i * 30;
  var x = (start - (width / 2))
    context.fillRect(x, i * 20, width, 20);
}
```

- Example - basic drawing - stepped pyramid
  - *http://linode4.cs.luc.edu/teaching/cs/demos/125/drawing/basic2/*

References

- MDN - CSS
- CSS documentation
- W3
- CSS Flexible Box Layout Module 1
- W3Schools - CSS
- CSS