



## CENTER FOR TEXTUAL STUDIES AND DIGITAL HUMANITIES

# DIGH 401 - Introduction to Computing

Fall Semester 2013

Week 15

## Today's Class

- Presentations
- HTML 5
- CSS 3

## HTML 5 - Canvas

- WebGL can also be used with <canvas> to create complex drawings, animations, games, interactive environments.....

### [Breakout](#)

## HTML 5 - Storage

- two new objects for client side data storage
  - localStorage
  - sessionStorage
- current HTML uses cookies to store such data
- cookies are not good at storing large amounts of data
- cookies are slow and inefficient
- HTML5 data is only sent when it is specifically requested
- each website stores its own data and can only access this data
- javascript is used to store and access the data

## HTML 5 - localStorage

- store website data with no inherent time limit

```
<script type="text/javascript">  
localStorage.project="dh development";  
document.write(localStorage.project);  
</script>
```

### Example

## HTML 5 - sessionStorage

- store website data for one session
- data is deleted when the user closes the web browser window for the website

```
<script type="text/javascript">  
sessionStorage.project="dh development";  
document.write(sessionStorage.project);  
</script>
```

## HTML 5 - Form Input Types

- need to check which browsers support each available feature
- if input type is not supported by a browser then the input field will act as a standard text field
- new input types include
  - email, url, number, range, date pickers, search

```
<input type="number" name="topforty" min="1" max="40" />
```

## HTML 5 - Form Elements

- there are several new form elements
  - <datalist>, <keygen>, <output>
- <datalist> lists options available for an input field

```
<input type="email" list="email_list" name="directory" />  
<datalist id="email_list">  
  <option label="Emma" value="emma@text.com" />  
</datalist>
```

## Example

- <keygen> is a key-pair generator
  - two keys generated creating a public and private pair
- <output> combines input types to allow calculations and other Javascript actions to be performed on multiple inputs



## HTML 5 - Form Attributes

Form attributes include

- autocomplete and novalidate

Input attributes include

- autocomplete, autofocus, form, form override attributes, height and width, list, min, max, step, multiple, pattern (regexp), placeholder, and required

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## HTML 5 - Form Attributes

```
<input type="submit" formaction="demo_admin.asp" value="Submit as admin" />
```

```
<input type="submit" formnovalidate="true" value="Submit without validation" />
```

```
<input type="file" name="images" multiple="multiple" />
```

```
<input type="text" name="state_abbreviations" pattern="[A-z]{2}" title="Abbreviations of US States" />
```

### Example

## HTML 5 - Other interesting new element tags

- in addition to new elements for video, audio, graphics, and client side data storage we have elements such as

- <article>
- <aside>
- <details>
- <embed>
- <figcaption>
- <footer>
- <header>
- <hgroup>
- <mark>
- <nav>
- <section>

## CSS3 - Intro

- a work in progress but many aspects are supported by modern browsers
- still under development by the W3C
- backward compatible with CSS2
- important modules include
  - selectors, box model, backgrounds and borders, text effects, animation...

## CSS3 - Borders

- create more visually appealing borders
- add rounded corners, shadows, and set an image as the border

- Rounded corners

`border-radius: 15px;`

- Box shadows

`box-shadow: 10px 10px 10px 5px #333333;`

[Example](#)

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```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Borders</title>

<style type="text/css">
#rounded
{
border:1px solid #000000;
padding:10px 10px;
background:#ffffff;
width:300px;
border-radius:15px;
-moz-border-radius:25px; /* Firefox 3.6 and earlier */
}
</style>

</head>
<body>

<h4>Rounded corners</h4>
<div id="rounded">rounded corners</div>

</body>
</html>
```

Example

## CSS3 - Backgrounds

- extra options for controlling and positioning backgrounds
- greater control over background size and background position

background-size: 100px 100px;

background-size: 80% 80%;

background-origin: content-box;

background-image: url(bg1.jpg), url(bg2.jpg);

[Example](#)

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```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Backgrounds</title>

<style type="text/css">
div
{
border:1px solid black;
padding:35px;
background-repeat:no-repeat;
background-position:left;
}
#content_box
{
background-image:url('images/bg2.jpg');
background-origin:content-box;
}
</style>

</head>
<body>

<h4>content box</h4>
<div id="content_box">content box...</div>

</body>
</html>
```

[Example](#)



## CSS3 - Text effects

- several new text effects such as

hanging-punctuation

punctuation-trim

text-emphasis

text-justify

text-outline

text-overflow

text-shadow

text-wrap

word-break

word-wrap

## CSS3 - Fonts

- before CSS3 web designers were limited to fonts installed with OSs etc
- CSS3 allows a web designer to use any fonts
- fonts are specified and downloaded from a server location to the user
- font is made available using the `@font-face` rule and font-family name specified
- then the font-family name is referenced as normal within element CSS

```
@font-face
{
    font-family: medieval;
    src: url('junicode.ttf'),
        url('junicode.eot') format("opentype"); /* IE */
}
```

## CSS3 - Multiple Columns

- create multiple columns to organise flowing text
- currently supported by all major browser except IE

```
column-count:4;  
column-gap:40px;  
column-rule:2px #333333;
```

- other options include
  - column-fill, column-width...

[Example](#)

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```
<!DOCTYPE html>
<html>
<head>
<title>CSS3 Columns</title>
```

```
<style type="text/css">
```

```
#column1
{
-moz-column-count:4; /* Firefox */
-webkit-column-count:4; /* Safari and Chrome */
column-count:4;

-moz-column-gap:40px; /* Firefox */
-webkit-column-gap:40px; /* Safari and Chrome */
column-gap:40px;

-moz-column-rule:2px outset #333333; /* Firefox */
-webkit-column-rule:2px outset #333333; /* Safari and Chrome */
column-rule:2px #333333;
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<div id="column1">
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat. Duis autem vel eum iriure dolor in hendrerit in vulputate velit esse molestie consequat, vel illum dolore eu feugiat nulla facilisis at vero eros et accumsan et iusto odio dignissim qui blandit praesent luptatum zzril delenit augue duiis dolore te feugait nulla facilisi. Nam liber tempor cum soluta nobis eleifend option congue nihil imperdiet doming id quod mazim placerat facer possim assum. Typi non habent claritatem insitam; est usus legentis in iis qui facit eorum claritatem.

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```
</div>
```

```
</body>
```

```
</html>
```

## CSS3 - Fun additions

- element resizing with CSS3 instead of Javascript
- 2D transforms such as
  - rotate, skew, scale, translate, matrix...
- 3D transforms such as
  - transform, perspective...
- transitions allow you to apply Javascript type effects to specified element events
- animations are also available as part of CSS3

[Example](#)