# CMSC335

Web Application Development with JavaScript

# HTML APIs

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# HTML5 Local Storage API

- **localStorage** - stores data with no expiration date
- To store data:
  - localStorage.setItem("name", "Mary");
- To retrieve data:
  - localStorage.getItem("name");
- You can only store strings. To store objects, you could use JSON. stringify
- **sessionStorage** - equivalent to **localStorage**, but data is deleted when the browser is closed
- **Example:** TodoList.html
  - Notice the use of the **contenteditable** property in the HTML
  - Try the property in other HTML elements
- To clean localStorage
  - Right click on page in Chrome
  - Select "Inspect"
  - Select "Console"
  - Type "window.localStorage.clear()"
- Reference: http://www.w3schools.com/html/html5_webstorage.asp

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# HTML5 Canvas

- **Canvas**
  - Container for graphics
  - It is a rectangular area on the page
  - You use JavaScript to draw on the canvas
  - Suited for game applications
  - You can store canvas drawing as image (jpg or png file)
- Reference and Examples:
  - http://www.w3schools.com/html/html5_canvas.asp
- **Example:** DrawingPointer.html, PickingColorForDrawing.html
- How would you create an animation of a drawing you have done?

# Detecting Keyboard Events

- **Example:** DrawingPointerKeyboard.html

# HTML5 SVG

- SVG - Scalable Vector Graphics
  - Language used to describe 2D graphics
  - Pure XML
  - SVG graphics do not lose any quality when resized or zoomed
  - Best suited for applications with large rendering areas
  - You can embed it in your HTML
- \<svg\> element → container for SVG Graphics
- Reference, Examples and comparison table available at:
  - http://www.w3schools.com/html/html5_svg.asp
- Open-source vector graphics editor
  - https://inkscape.org/en/

# HTML5 Geolocation API

- **Example:** Geolocation.html
  - Browser may block access. In Chrome you will see at the top "Location blocked" to the left of the URL
- You can try the following link on your phone

  https://www.cs.umd.edu/~nelson/geoLocationExamples/

- Reference:
  - http://www.w3schools.com/html/html5_geolocation.asp

# Regular Expressions

- **Example:** RegularExpressions.html

# FileReader API

- Using HTML5 FileReader API
- **Examples:** FileReader folder
  - **Example:** FileReadingText.html (use data.txt)
  - **Example:** FileReadingImage.html (use img1.jpg and img2.jpg)
  - **Example:** FileReadingJSON.html (use person.json)

# Sound

- **Example:** Sound folder
- Sound source can be an online reference