8. Seven Segment Display

Student learning outcomes

- Students will use JavaScript to draw a message using a 7-segment display.

Real world applications:

- Students will explore how to translate between one encoding of data (decimal or alphanumeric) to a different encoding (an array of seven segments).
- Students will explore the computer chips that were used to make these translations possible in hardware.

Assignment requirements:

- There will be an SVG file that has a CDATA section with JavaScript.
- There will be a dictionary that translates the various numbers and letters to their seven-segment equivalents (segments a, b, c, d, e, f, and g).
- The SVG file will display a different number based on the character assigned to it in the URL.
- There will be an associated but separate HTML file that displays a message the user typed in.
- New concepts in this lesson:
    - Creating an Array of Strings
    - Creating a large dictionary array
    - Passing data in the URL of an SVG file
    - Placing JavaScript directly into an SVG file in the CDATA section