

Module 4: SVG with JavaScript

In this module, we create interactive web pages that use SVG animated by JavaScript. The pages include games, slide shows, moving images, and the use of random numbers.

1. Random Tile Grid

- This image draws a grid of tiles in different colors.
- The page includes a form where the user can change the size or number of tiles.

2. Random Circles and Shapes

- This image displays random transparent circles of different sizes.
- The image could also display other shapes such as triangles, rectangles, stars, and other polygons.
- The page could include a form that lets the user control the number of shapes, their size, and their opacity.

3. Basketball

- The page displays a basketball that moves across the screen in a realistic fashion.
- The basketball will bounce off the edge of the image.

4. Basketball version 2

- This page displays a basketball that moves in two dimensions across and up and down the screen.
- The page has controls that let the user change the color of the basketball.
- The page has controls that make the basketball move faster or slower.

5. Speedometer

- This page has an image of a speedometer with a needle that moves.
- The page will generate random numbers and move the speedometer needle to the appropriate angle.
- The page will include a sound that plays when the needle moves.

6. Gears

- The page has an image with multiple gears of different sizes.
- The gears will turn with mathematical precision.

7. Analog Clock

- This image will display an analog clock with moving hour, minute, and second hands.
- The JavaScript will part of the SVG image's CDATA section instead of within an HTML web page.

8. Seven-Segment Display

- This displays seven segments like an old-time clock radio.
- The JavaScript will part of the SVG image's CDATA section instead of within an HTML web page.
- The student will make the seven segments show all the numbers and as many letters as possible.
- The student will embed the SVG image into a web page that can display a clock or message.

9. Icon Carousel

- Students will combine their icons from Module 2 into a slide show controlled by a JavaScript timer.

10. Snow Globe

- This page will display a moving snow globe in an HTML5 Canvas element.
- The snow globe will have moving snowflakes, blinking lights and stars, and background trees of various colors.