22.12 Wrap-Up

In this chapter, we completed our discussion of JavaFX that began in Chapters 12 and 13. Here, we presented various JavaFX graphics and multimedia capabilities.

We used external Cascading Style Sheets (CSS) to customize the appearance of JavaFX `Node`s, including `Label`s and objects of various `Shape` subclasses. We displayed two-dimensional shapes, including lines, rectangles, circles, ellipses, arcs, polylines, polygons and custom paths.

We showed how to apply a transform to a `Node`, rotating 18 `Polygon` objects around a specific point to create a circle of star shapes. We created a simple video player using class `Media` to specify the video's location, class `MediaPlayer` to load the video and control its playback and class `MediaView` to display the video.

We animated `Node`s with `Transition` and `Timeline` animations that change `Node` properties to new values over time. We used built-in `Transition` animations to change specific JavaFX `Node` properties (such as a `Node`'s stroke and fill colors, opacity, angle of rotation and scale). We used `Timeline` animations with `KeyFrame`s to bounce a `Circle` around a window, and showed that such animations can be used to change any modifiable `Node` property. We also

showed how to create frame-by-frame animations with `AnimationTimer`.

Next, we presented various capabilities for drawing on a `Canvas Node` using a `GraphicsContext` object. You saw that `GraphicsContext` supports many of the same drawing characteristics and shapes that you can implement with `Shape Node`s. Finally, we showed the three-dimensional shapes `Box`, `Cylinder` and `Sphere`, and demonstrated how to use materials to apply color and images to them. For more information on JavaFX, visit the FX Experience blog at

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http://fxexperience.com/
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