Recitation 4: JavaFX and HTML5 Canvas

CSE 219

Notify your recitation TA upon completion of this recitation so that they can verify your work.

In this recitation you will be introduced to rendering basic shapes and images using both JavaFX and JavaScript. We’ll see the similarities between HTML5/JavaScript’s canvas and JavaFX’s canvas.

Introduction

HTML5 standardizes dealing with dynamic Web content and multimedia by making JavaScript the default scripting language of the Web and by introducing new elements like video, audio, and canvas. In this recitation exercise we will start by seeing how we can render some basic shapes using the HTML5 canvas and then see how we can do similar rendering in a JavaFX application.

Recitation Setup

Download the two NetBeans projects from Blackboard that came with this recitation:

- Recitation4.HTML5
- Recitation4.JavaFX

Requirements

Both projects require the same thing, which is shape rendering instructions for Red Box Man.

Start by running the JavaFX project. When you do so, try holding the SHIFT key down and then left-click on the canvas. Then try holding the CONTROL key down and left-click on the canvas. You will find Red Box Man images will be rendered as well as a simple red box man head with no eyes or mouth. Click on the canvas without holding down SHIFT or CONTROL and it will be cleared. Look through the code and see if you can figure out how this happens.

Now try running the Web project and you’ll see it works the same way. So both projects are missing the completion of rendering Red Box Man using shapes rather than images. Again, for both projects, they are able to rendering the Red Box Man images at the desired locations. Your task in this recitation is to use outlined, filled shapes to render similar looking Red Box Men (including eyes with pupils and mouths). To do this, you might want to first do so in the JavaFX project since you’re familiar with the Java language. Once you have this working, try implementing it in JavaScript in the other project. Note that you should try to get the sizes and colors of Red Box Man’s features as close as possible to the provided image.

When you are done, show your progress in both the JavaFX and JavaScript implementation to a recitation TA. Note that for this exercise you only need to specify the aforementioned shape rendering. All app setup and event handling is already properly arranged.