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ITCS 4120
Project 1

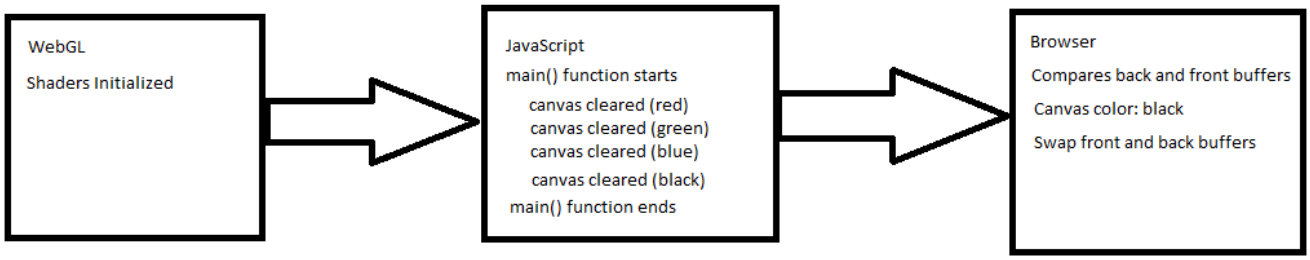
4d) v) A black canvas

vii) A black canvas

ix) The canvas cycles through the 2D array of four colors: red, green, blue, and black. Between each color change, the browser gives an alert which halts the program until the user dismisses the notification.

x) Like with OpenGL, WebGL uses a double buffer sytem in which graphics are drawn onto a back buffer behind a front buffer which is always displayed. Unlike OpenGL, WebGL's double buffer swap system is automatically handled by the browser running the application. When the browser is in control and detects a difference between the front and back buffers, it automatically replaces the front buffer with what's on the back buffer. When the script is running, javascript is in control of the program. However, control can be passed back to the browser by certain methods, such as alert() or confirm(), or after each time the script ends - usually when main() finishes. In HelloCanvas1, the canvas is redrawn in a loop. So by the the time the browser regains control to check the back buffer, only the final color (black) is displayed in the first case. In the second, the alert() method is called which gives the browser control right after the canvas is cleared with each color. Thus, every color is displayed. Flow charts demonstrating the order of events for both cases are below.

Case 1 - (vii)



Case 2 - (ix)