**Kaitlyn Zahn**

***Assignment 2 Report***

**February 18, 2021**

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**CS 4610 Computer Graphics 1**

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**Ye Duan**

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**Link to YouTube Video**

https://youtu.be/EnbP9yn39f4

**Part A**: Understanding Events (3 points)

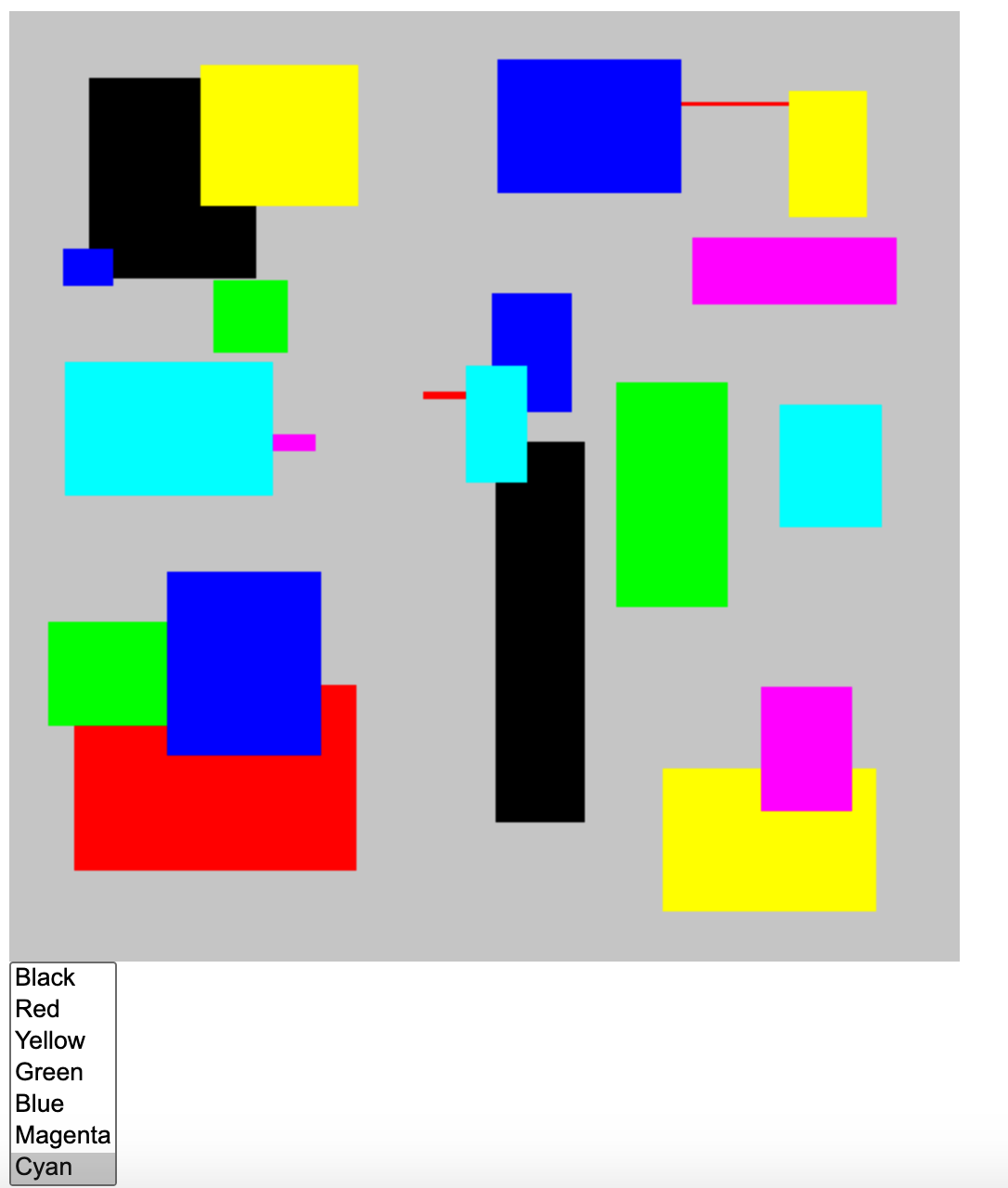
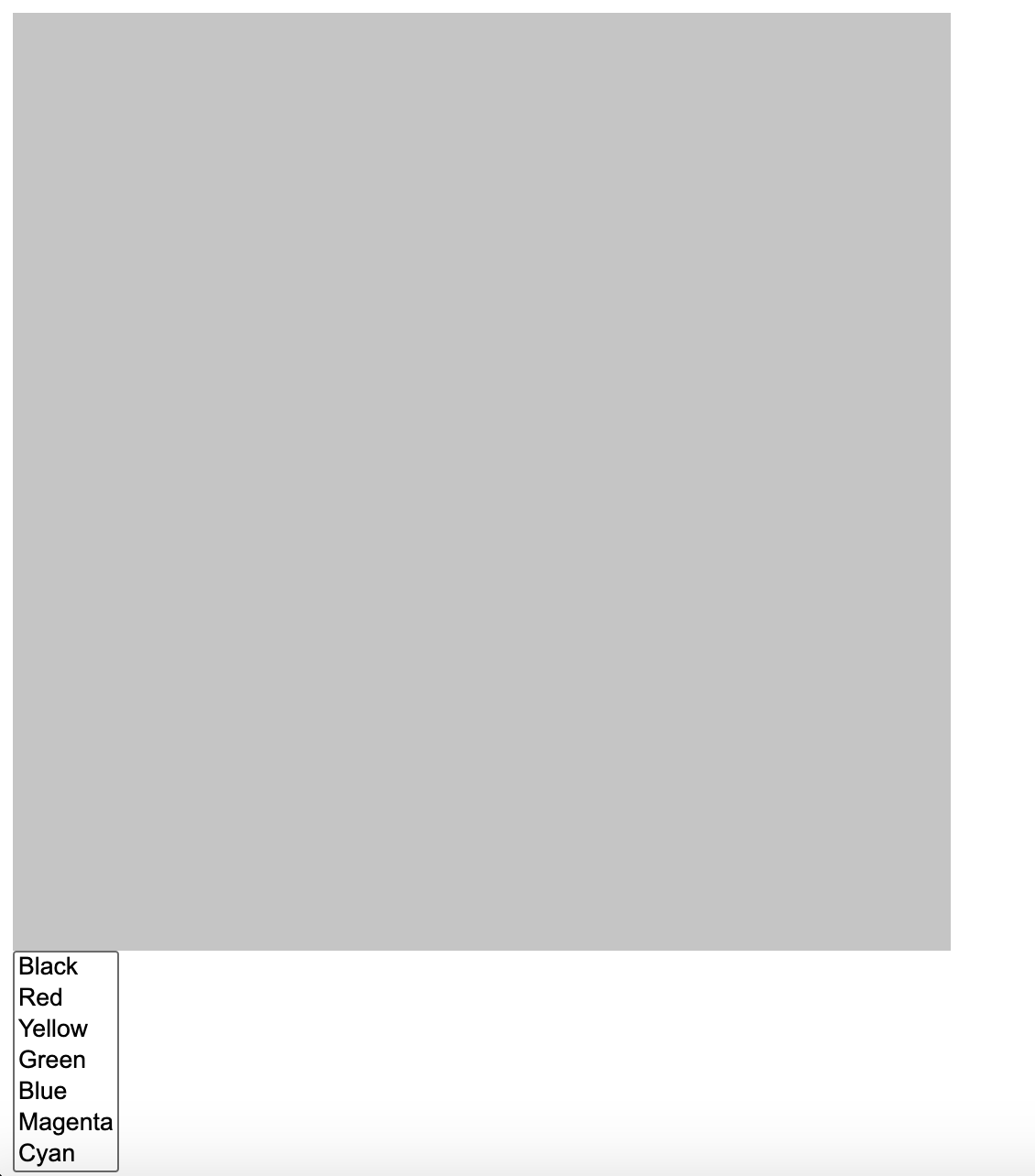
*Download and run the program Cad1*

Figure A.1.2 Cad1 Drawn

Figure A.1.1 Cad1 Original

*Download and run the program Cad2*

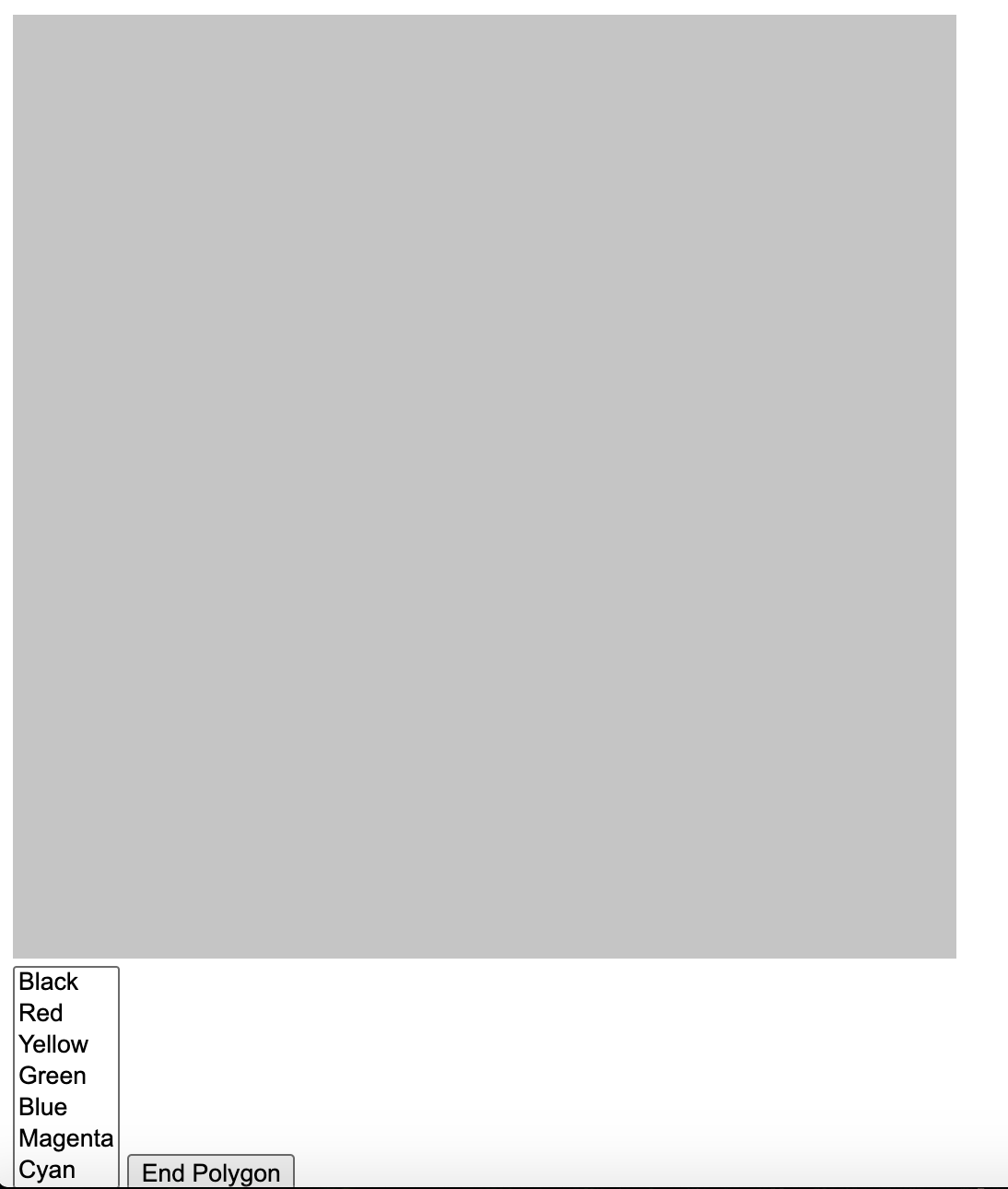
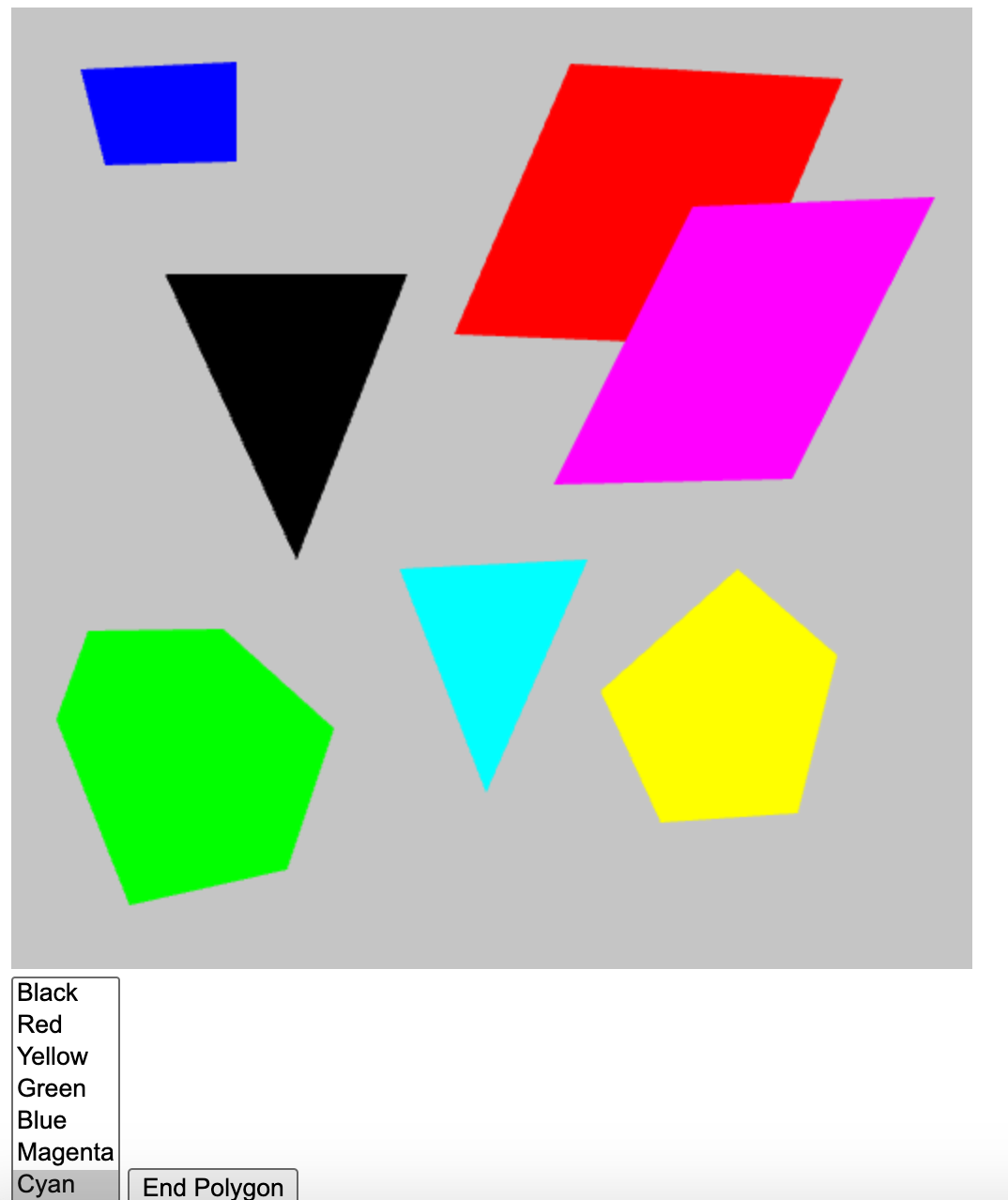
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Figure A.2.1 Cad2 Original

Figure A.2.2 Cad2 Drawn

**Part B**: Implementing Mouse and Keyboard Events (7 points)

*Download the program DrawCube that will Render a 3D cube in WebGL.*

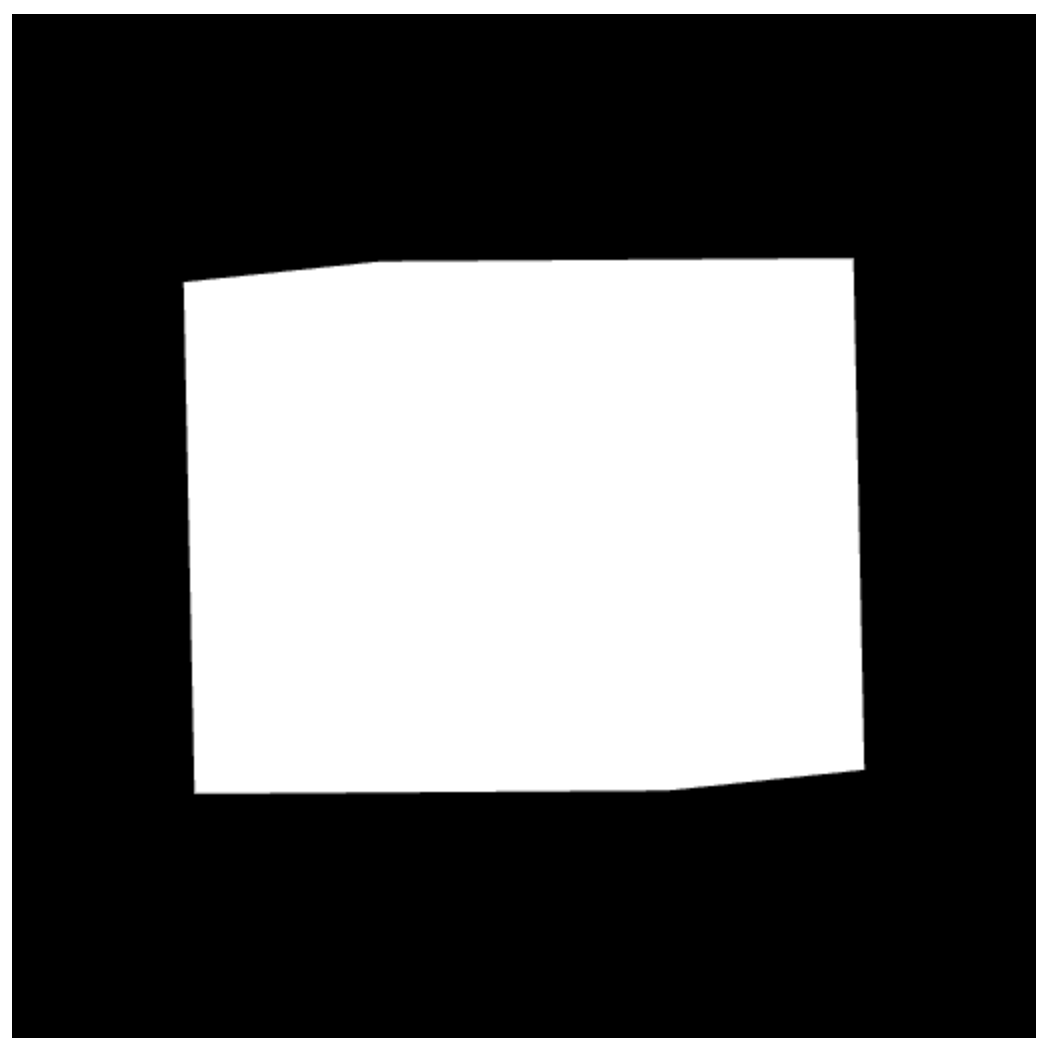
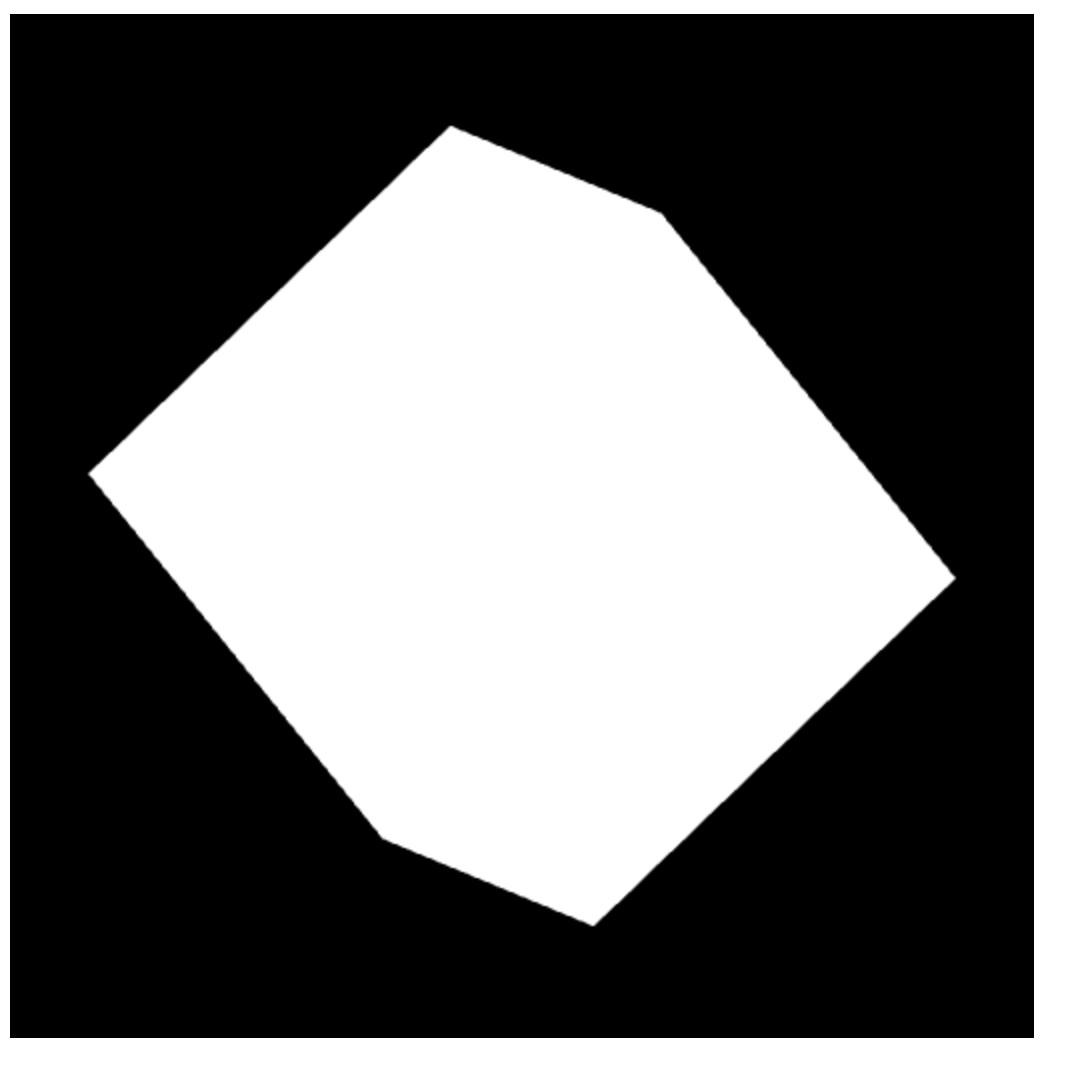
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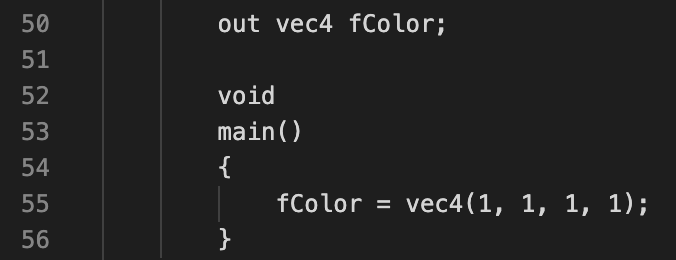
Figure B.1.2 DrawCube Original 2

Figure B.1.1 DrawCube Original 1

*Press any key to make the cube a random color*

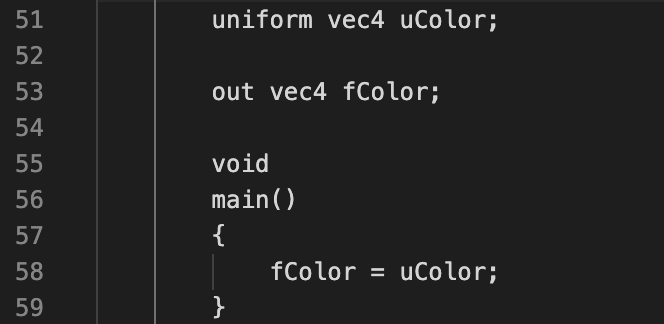
Original Code

/\*index.html line 50-56\*/

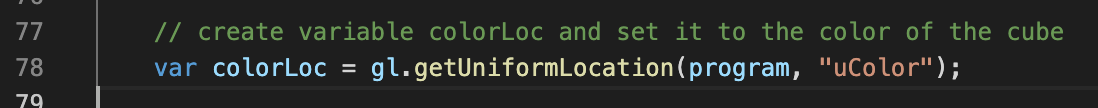
**

Modified Code

This code gets the location of the uniform from the GPU, uses the uniform to send a new color to the shader program, and uses an event listener to detect a keyboard click. If the keyboard click is random, display a random RGB value.

**/\*index.js lines 112-128\*/ /\*index.html lines 51-59\*/

/\*index.js line 77-78\*/

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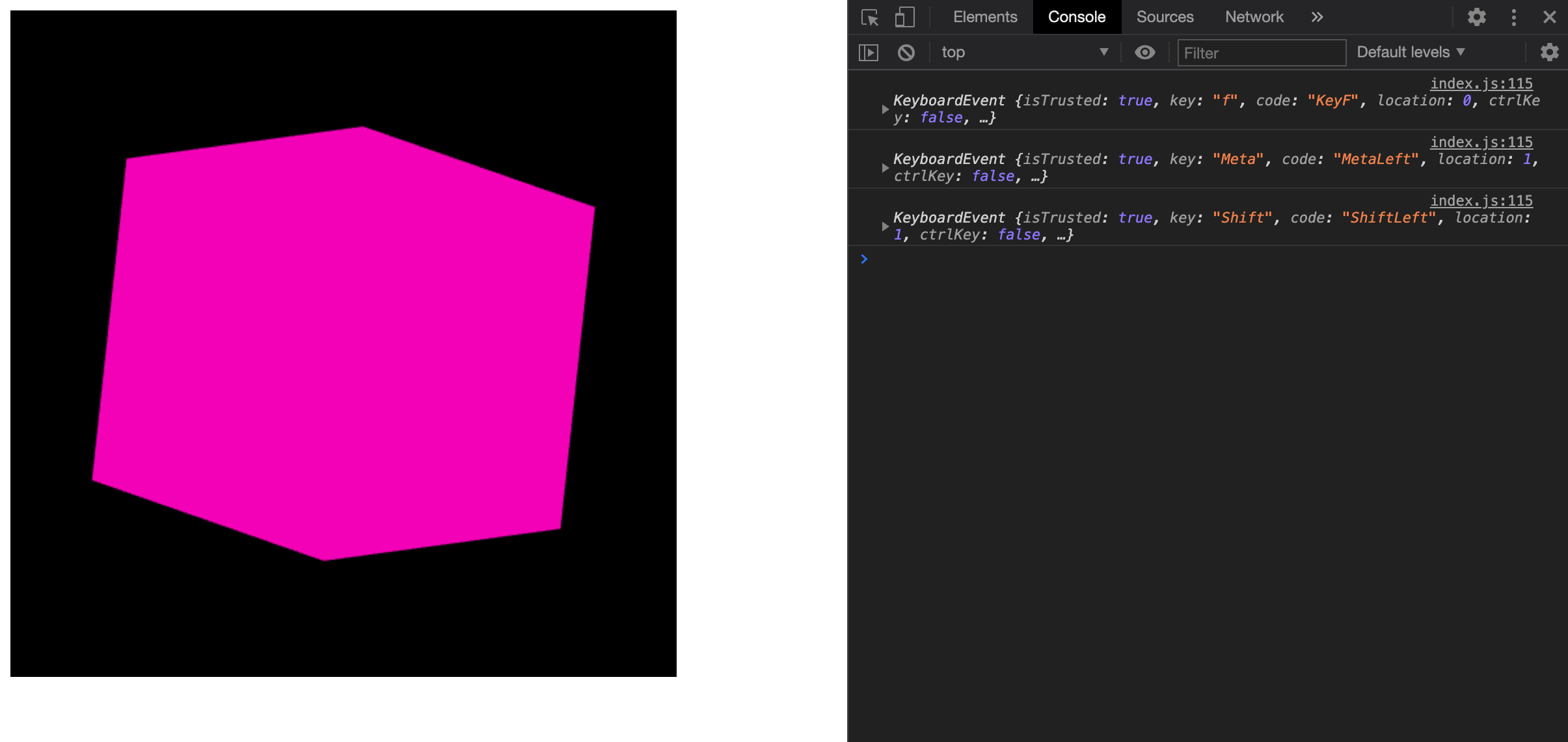
**

Figure B.2.1 DrawCube Random 1

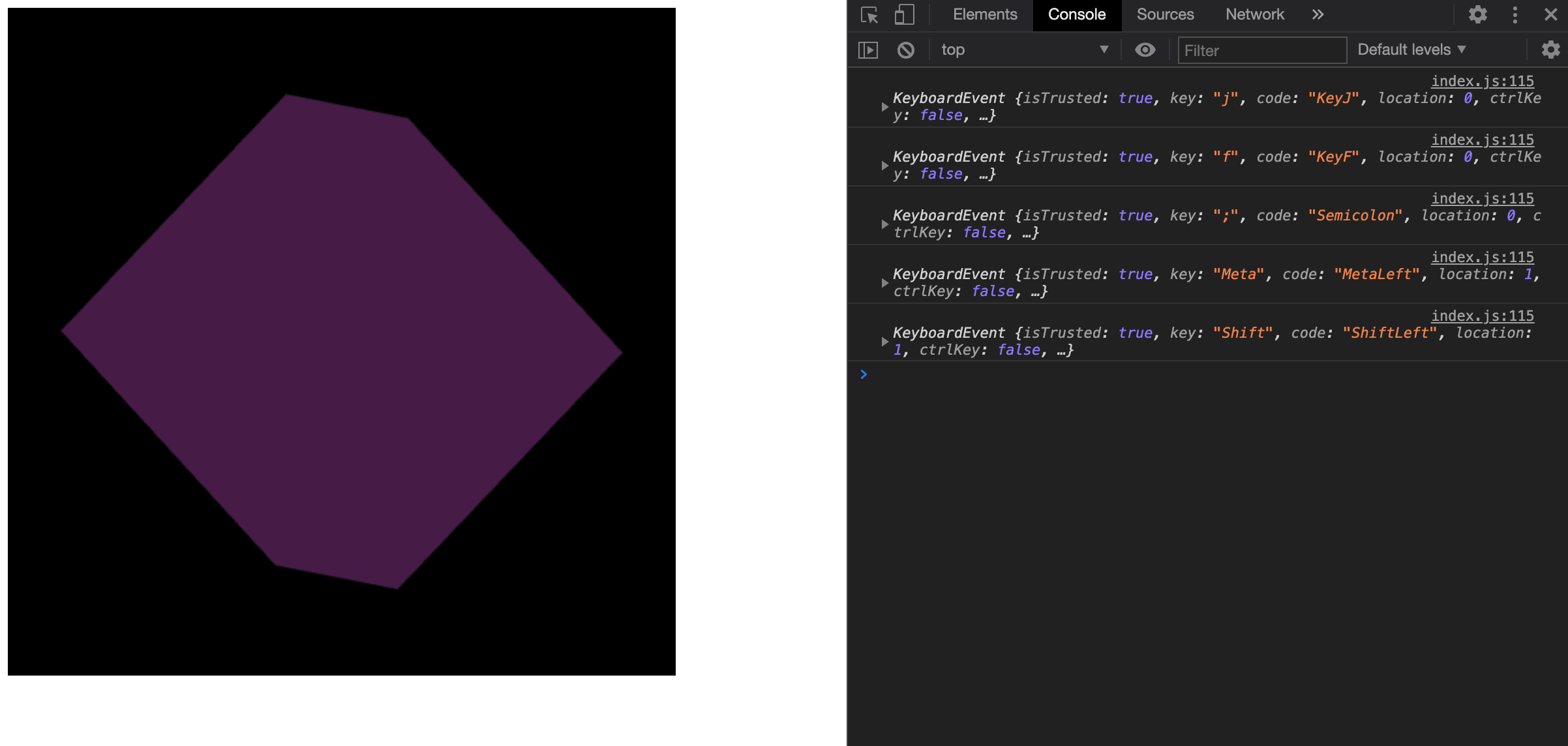
**

Figure B.2.2 DrawCube Random 2

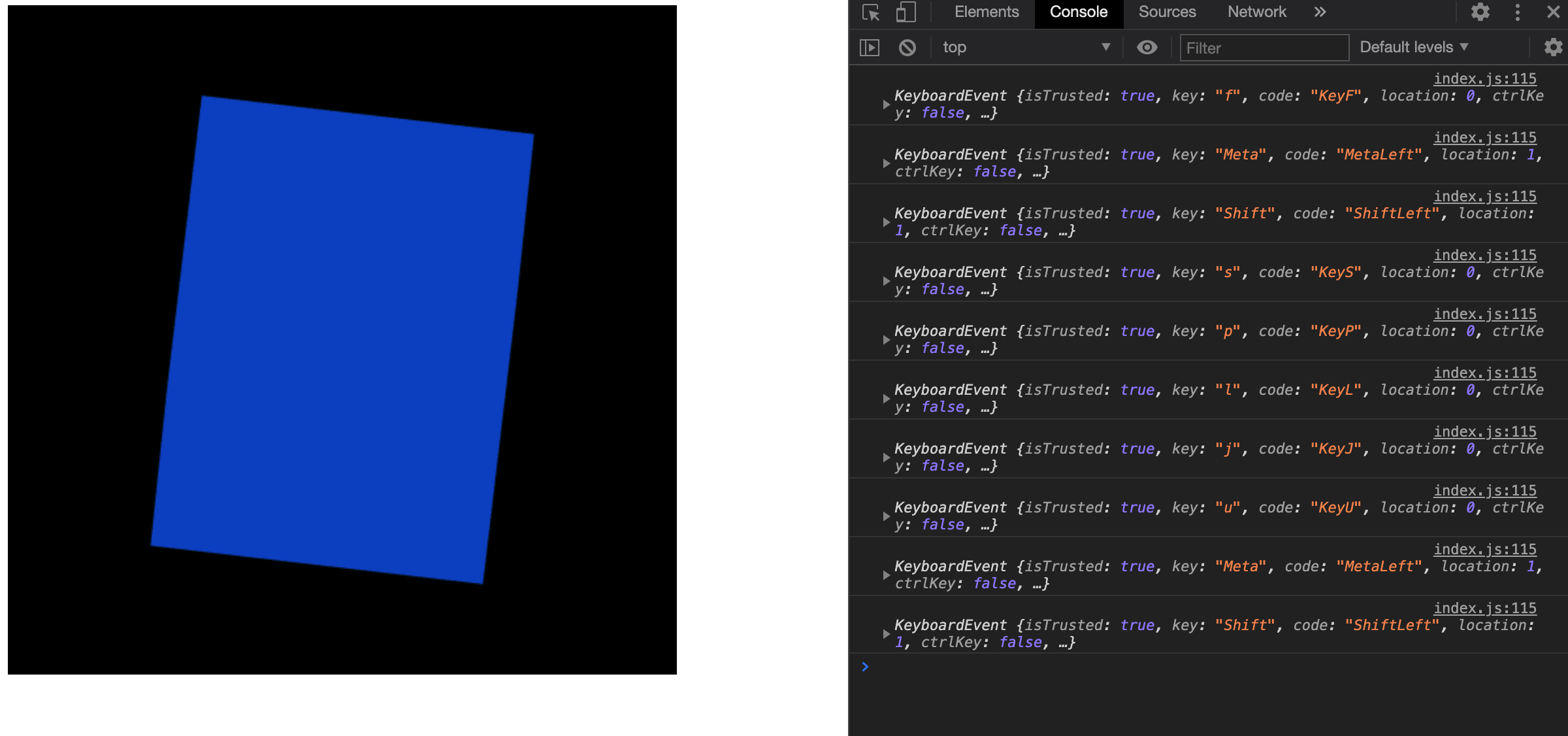
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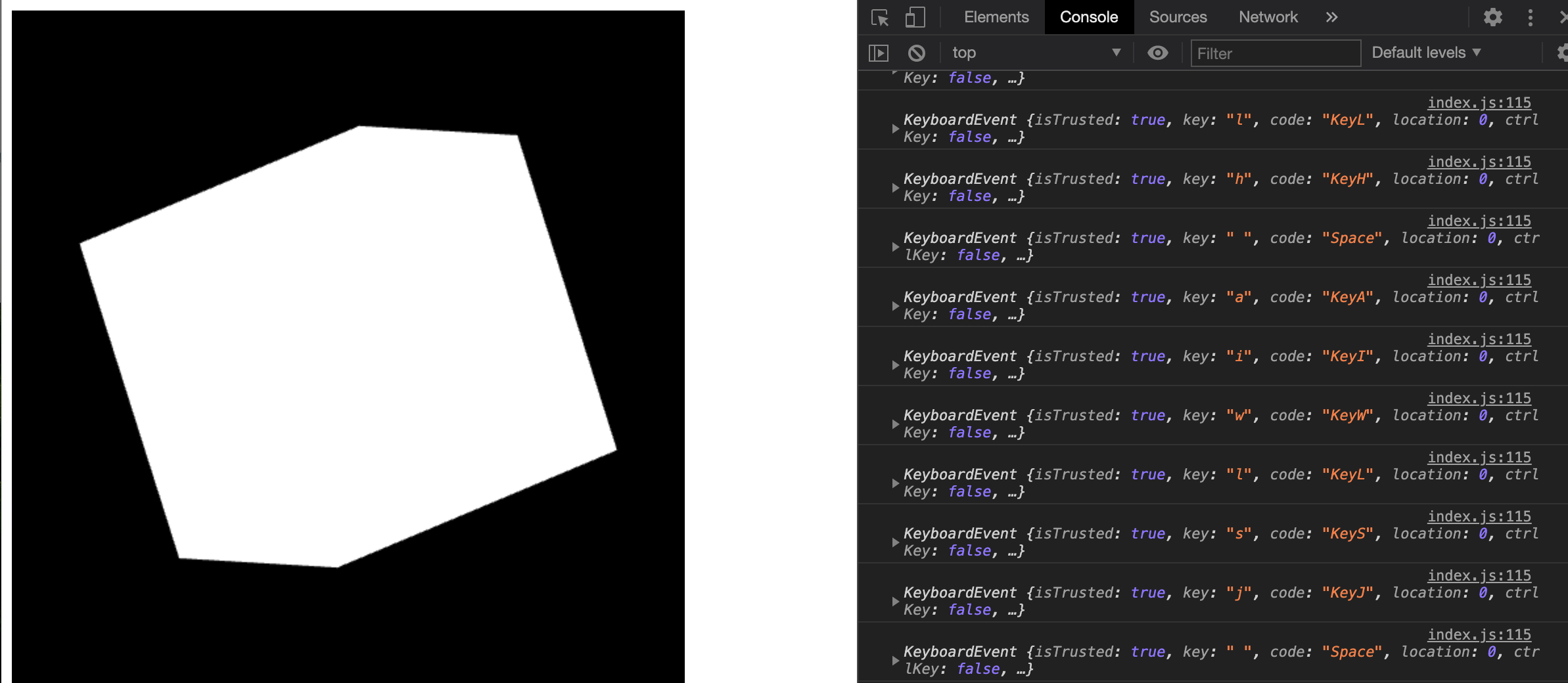
Figure B.2.3 DrawCube Random 3

*Press the spacebar key to return the cube back to white*

Original & Modified Code

See the code on page 3

Figure B.3.1 DrawCube Space Bar



*Click on the canvas and change the color of the cube based on the click position*

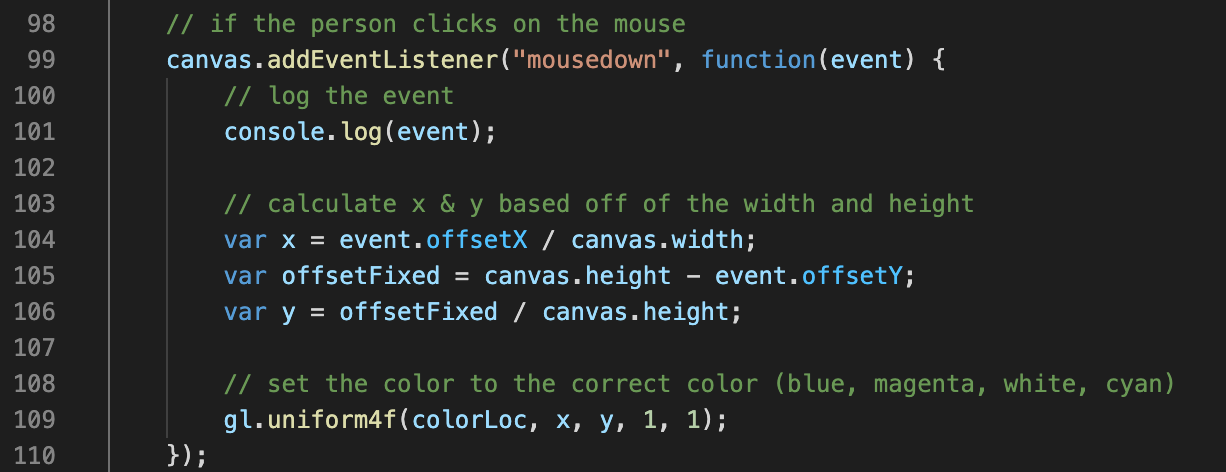
Original Code

See original code on page 3

Modified Code

This code identifies when the user clicks on the mouse, calculates the x and y values using offset and the height/width of the canvas and then changes the cube color based on the click location.

/\*index.js lines 98-110\*/



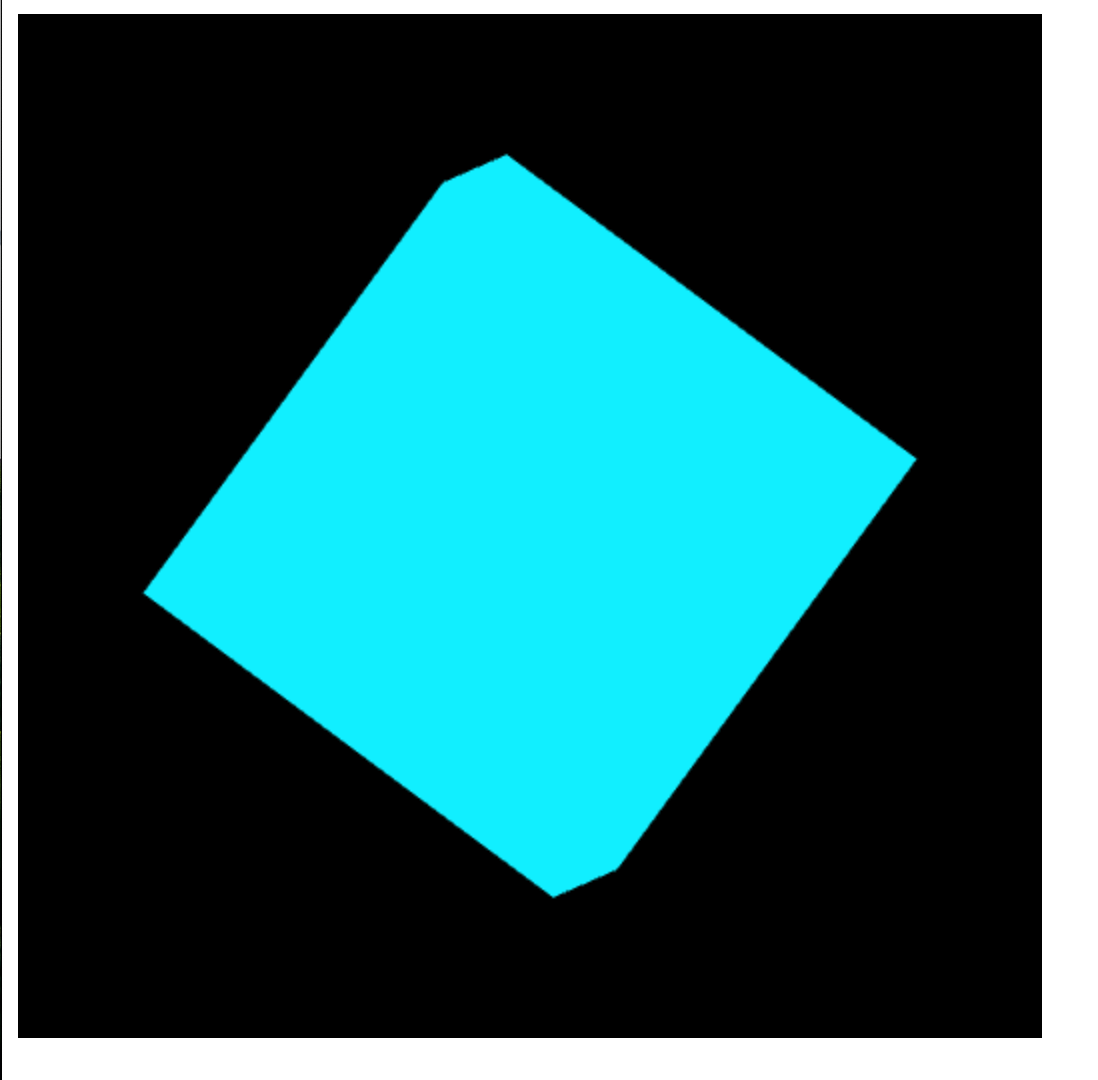
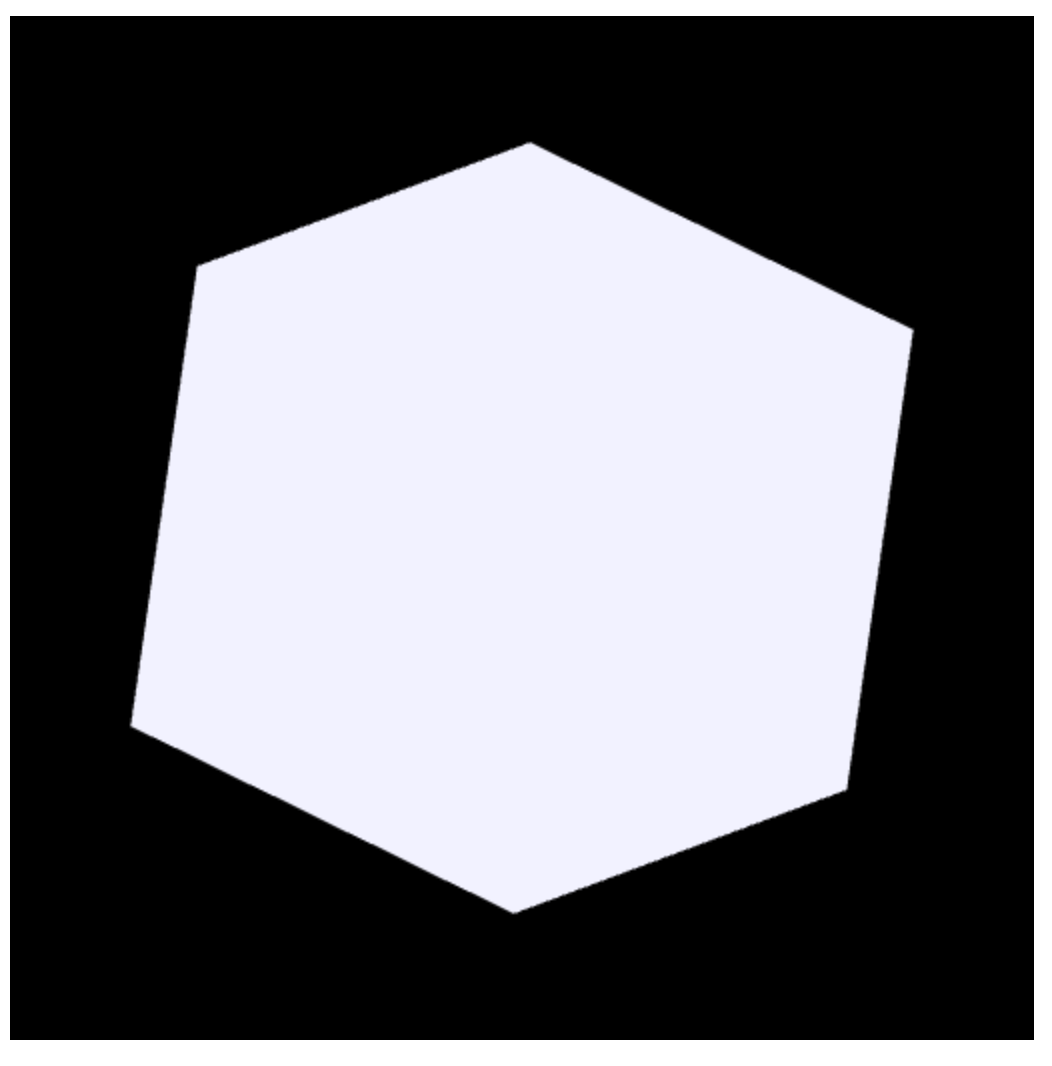
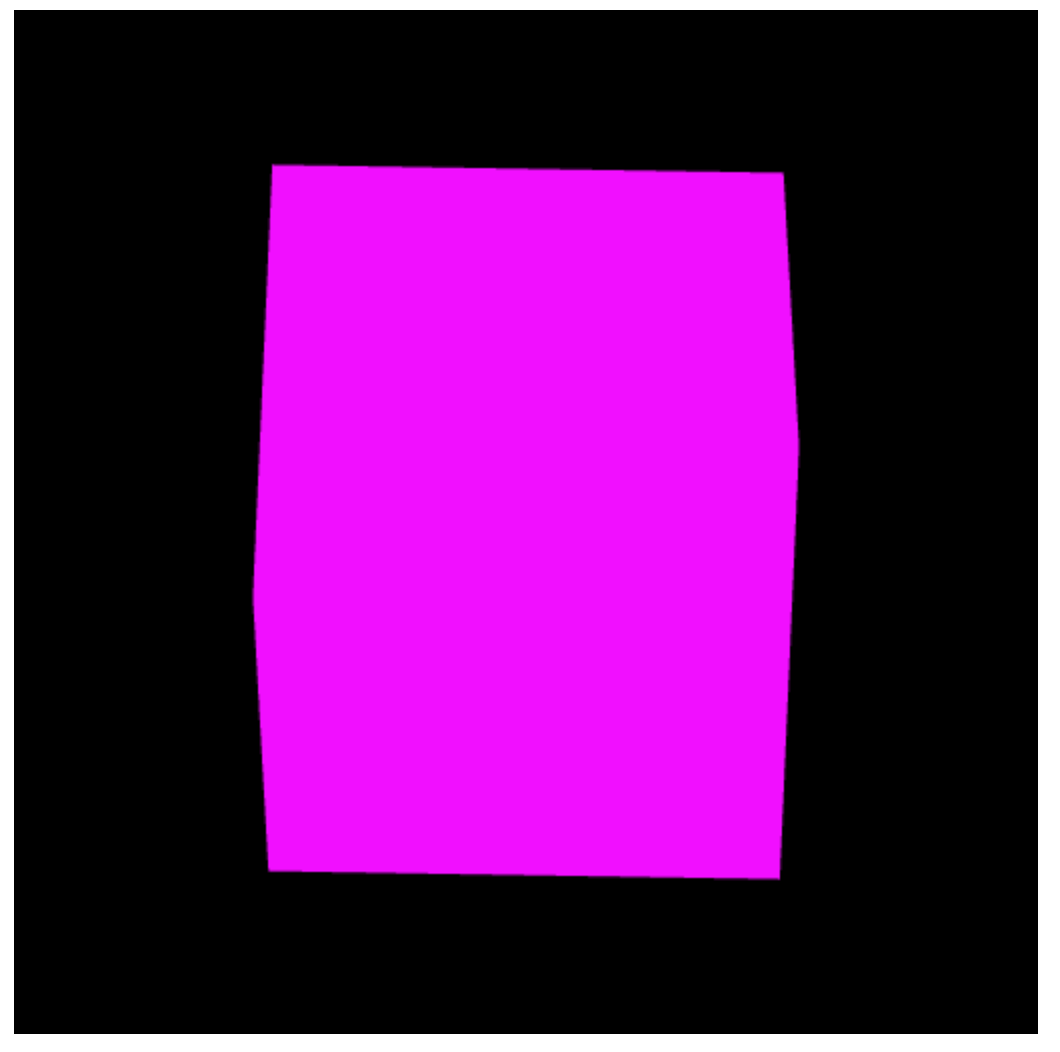


Figure B.4.1 DrawCube Click Cyan

Figure B.4.3 DrawCube Click Magenta

Figure B.4.2 DrawCube Click White

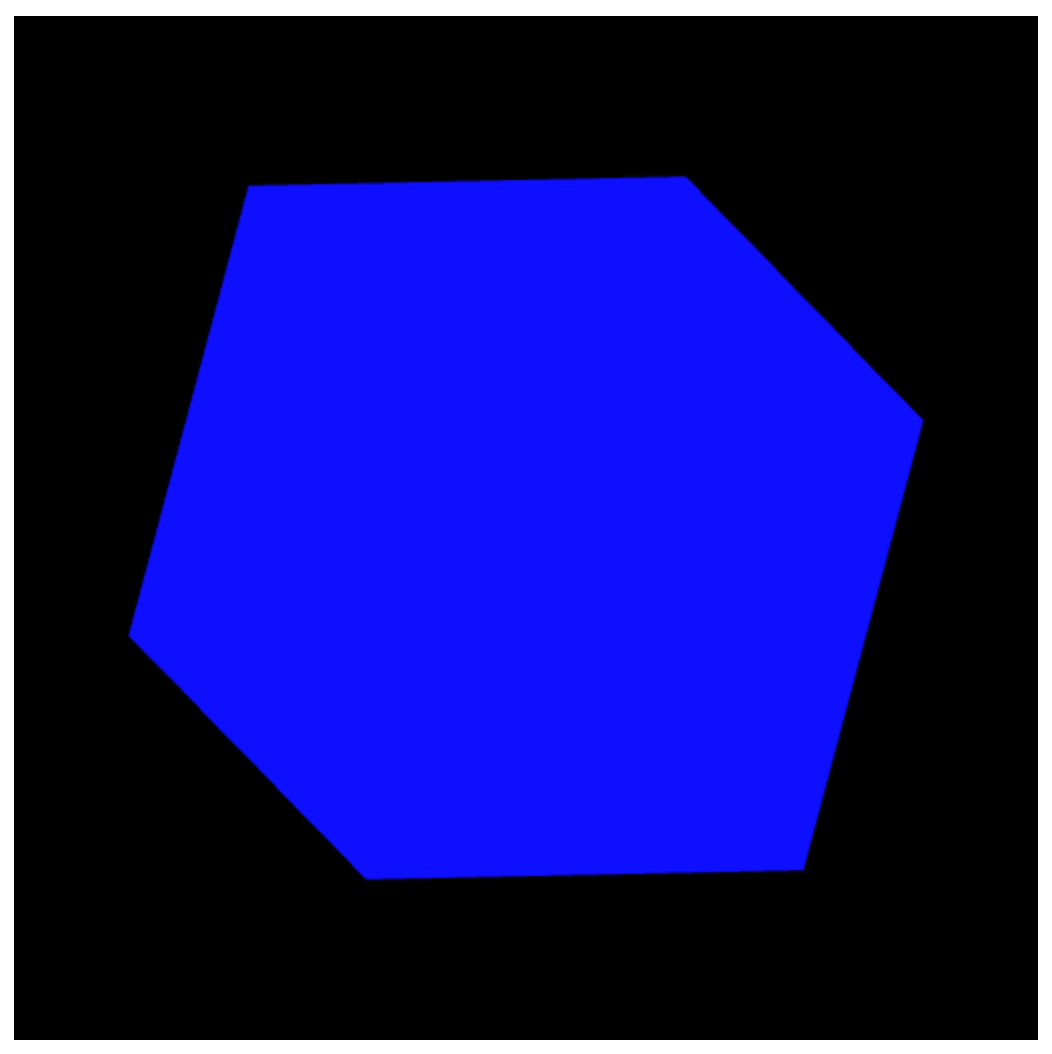


Figure B.4.4 DrawCube Click Blue