

CS 405 Homework 2

Fall 2023

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24930

Topic:

Fragment Shaders

Introduction

The purpose of this report is understanding what fragment shader is and how you can change the color.

Methodology

```
const fragmentShaderSource = `
precision mediump float;

void main() {
    gl_FragColor = vec4(0.0, 0.0, 1.0, 1.0);
}
`;
```

In this code it is expected to change the color of red to blue. According to both Lab 3 and week 3 Wednesday lecture it showed that each `vec4(0.0, 0.0, 1.0, 1.0)` represents color and transparency.

```
void main() {
    gl_FragColor = vec4(0.0, 0.0, 1.0, 1.0);
}
```

First one represents the color of red.

```
void main() {
    gl_FragColor = vec4(0.0, 0.0, 1.0, 1.0);
}
```

Second one represents the color of green.

```
void main() {  
    gl_FragColor = vec4(0.0, 0.0, 1.0, 1.0);  
}
```

Third one represents color of blue and also in this assignment, this is what it is wanted.

```
void main() {  
    gl_FragColor = vec4(0.0, 0.0, 1.0, 1.0);  
}
```

Forth one is represent transparency. If `vec4(0.0, 0.0, 0.0, 0.0)` it shows white, if `vec4(0.0, 0.0, 0.0, 1.0)`, it shows black. In fragment color it can be mix the colors. For example, `vec4(1.0, 1.0, 0.0, 1.0)` is yellow and `vec4(0.0, 1.0, 1.0, 1.0)` opaque blue.