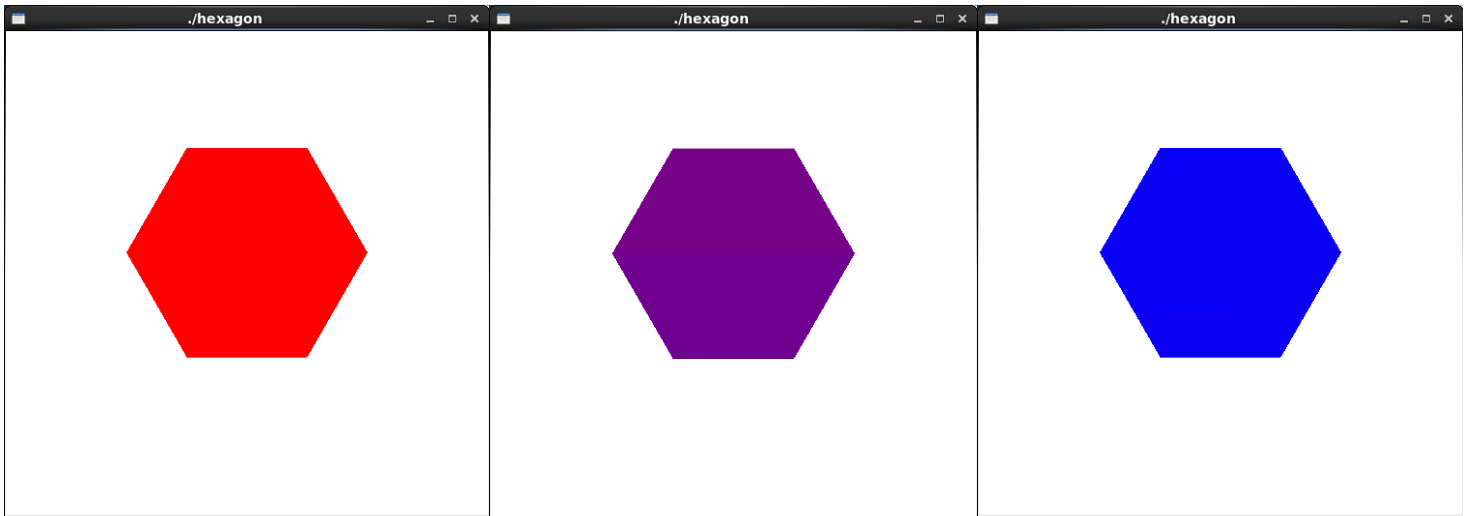


Yazhuo Liu
Lab 8

Write a shader program that displays a color hexagon. The color changes gradually from red to blue and from blue to red repetitively.



Code:

`//hexagon.cpp`

```
...
void display(void)
{
    GLfloat vec[4];
    glClear(GL_COLOR_BUFFER_BIT | GL_DEPTH_BUFFER_BIT);
    glClearColor( 1.0, 1.0, 1.0, 0.0 ); //get white background color

    int loc = glGetAttribLocation(programObject, "VertexTemp" );

    glVertexAttrib1f( loc, 1.0 ); //set initial color to red
    glBegin(GL_POLYGON);
        glVertex3f( 0,0,0 );
        glVertex3f( 1,0,0 );
        glVertex3f( 1.5,0.866,0 );
        glVertex3f( 1,1.732,0 );
        glVertex3f( 0,1.732,0 );
        glVertex3f( -0.5,0.866,0 );
    glEnd();

    glutSwapBuffers();
    glFlush();
}
...
```

```
//hexagon.vert
```

```
...
```

```
void main(void)
```

```
{
```

```
//the temperature changes from 1 to 0 and then 0 to 1
```

```
temperature = (( VertexTemp - CoolTemp ) / tempRange) + 1.0 * sin ( 0.0005 * time );
```

```
gl_Position = ftransform();
```

```
}
```

Report:

I successfully finished all parts of lab 8.