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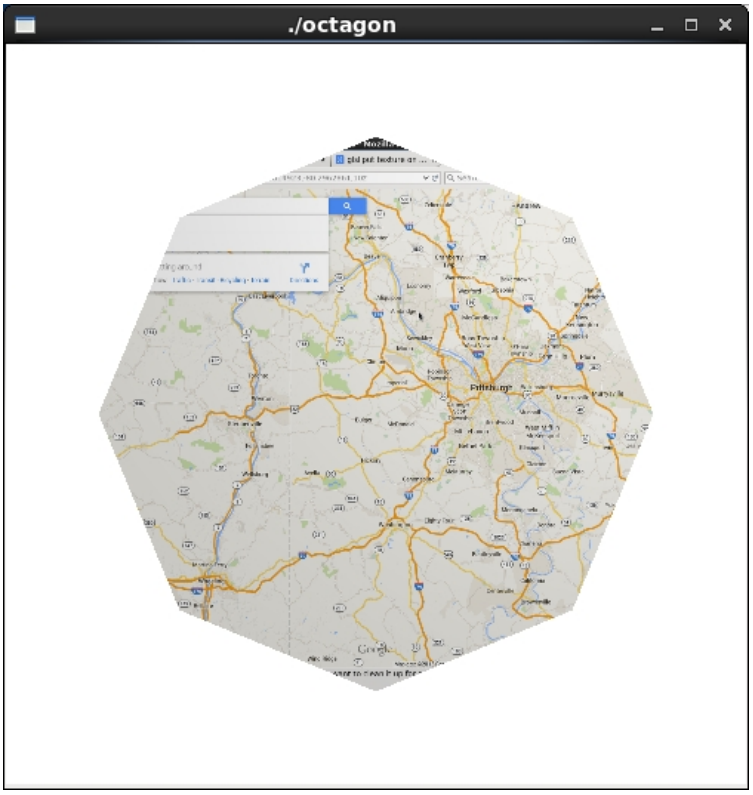
Lab 9

Write a shader program that displays a regular octagon with textured image.



Code:
//octagon.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

  glPushMatrix();
  glRotatef( anglex, 1.0, 0.0, 0.0);                //rotate the cube along x-axis
  glRotatef( angley, 0.0, 1.0, 0.0);                //rotate along y-axis
  glRotatef( anglez, 0.0, 0.0, 1.0);                //rotate along z-axis

  glActiveTexture(GL_TEXTURE0);
  glBindTexture(GL_TEXTURE_2D, texName);

  GLUquadric *qobj = gluNewQuadric();
  //  glutSolidSphere(), glutSolidTorus() do NOT have texture coordinates
  gluQuadricTexture(qobj,GL_TRUE);
```

```
  if ( objectType == 0 )
    gluSphere(qobj,0.6,32,32);
  else if ( objectType == 1 ) {
    glTranslatef( 0, 0.6, 0 );
    glRotatef( 90, 1, 0, 0 );
    gluCylinder(qobj, 0.5, 0.5, 1.2, 32, 32);          //top, base height
  } else if ( objectType == 2 )
    glutSolidTeapot(0.6f);                             //has texture coordinates
  else {
    gluDisk( qobj, 0, 1, 8, 10);
  }
  gluDeleteQuadric(qobj);

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

Report:

I have completed all parts of lab 9.