**Computer Graphics**

**IS C311**

**Lab 10 (to be submitted on 18-11-2014)**

**OpenGL Material properties and Fog**

1. Write an OpenGL program which draws the sun, a tree and a house with suitable lights of ambient, diffuse and a spotlight.
2. Use various material properties to show the difference that a combination of lights and materials causes to the scene.
3. The program should modify the following default params values in

**glMaterial**[f,i]**v**(face, pname, \*params )

* 1. GL\_AMBIENT ambient RGBA reflectance (0.2, 0.2, 0.2, 1.0)
  2. GL\_DIFFUSE diffuse RGBA reflectance (0.8, 0.8, 0.8, 1.0)
  3. GL\_SPECULAR specular RGBA reflectance (0.0,0.0, 0.0, 1.0)
  4. GL\_EMISSION RGB emitted light intensity (0.0,0.0, 0.0, 1.0)
  5. GL\_SHININESS specular exponent, range [0,128] (0)

1. Use glFog to obtain a realistic scene.
2. The house should have a brick texture. Either use an image or generate it. (ideally tree should have leaf texture and ground grass texture)

Some example code is given in

http://user.xmission.com/~nate/tutors.html