Exercise 1

Classes: 26th February and 12nd March

You will implement part of the Turner Whitted Ray Tracing algorithm covered in the theoretical class. The algorithm consists in tracing primary and shadow rays to calculate local colors and shadows. Students can use the NFF (Neutral File Format) file in attachment, which contains a scene proposed by Eric Haines. The NFF format is generated through an SPD (Standard Procedural Databases) software package - http://tog.acm.org/s_p_d.cfm. You can find the NFF format description in attachment too

The NFF file has a slight difference to the original file proposed by Haines and includes a plane object:

pl p1 p2 p3; where p1, p2, p3 are the coordinates of three points.

In order to implement the Ray Tracing algorithm you will not need any particular library. You will only need to create a window to draw points. You can use the sample code in OpenGL 2.0 + glut, also in attachment, or to use the functions of Windows OS .

Using the NFF file, your algorithm should produce the following image: