COMP261 Assignment 3

Student:

Marker:

Mark:

Stage 1 out of **55**:

Implement the rendering pipeline described above without steps 3 and 4. (ie, assume that viewer is already looking along the Z axis and all the objects are within the window.)

- Reads the light source direction and all polygons from file.
- Marks all the polygons that are facing away from the viewer.
- Computes normal and reflected light intesity of every non-hidden polygon.
- Finds the edge lists of polygons.
- Renders the image to an array of colours using a Z-buffer.
- Displays the array of colours.
- A report that describes what the code does/doesn't do, any bugs, and how it was tested.

For 55, the image can still have holes and glitches and even some missing polygons, as long as it has all the parts of rendering pipeline, and there is a good report.

Stage 2 out of **15** (up to **70**):

- The renderer works correctly; No glitches or holes, the ambient light level is correctly used, and the light source is correctly used.
- Code is clean and readable.
- Report is informative and clear.

Stage 3 out of **10** (up to **80**):

- The user can navigate the render, i.e. change the viewing direction.
  - Polygons are rotated based on the viewing direction.
  - Polygons are translated and scaled to fit in the window.

Stage 4 out of **20** (up to **100**, with **5** spare marks):

- Allows multiple light sources to be added (and possibly modified) dynamically.
- Gouraud shading is used to make smooth, curved surfaces. Alternatively, Phong shading is used for an over-the-top answer.