The following is a breakdown of the first assignment into small tasks.

Task 1

Implement drawLine(vec2 p1, vec2 p2) that draws a line using Bresenham algorithm in the renderer.

Task 2

Make sure that MeshModel loads a file into the scene and implement one primitive in PrimMeshModel.

Task 3

Implement a basic drawing pipeline. This includes:

1. Loading an object into the scene.
2. Calling scene->Draw() in the display callback.
3. Implementing scene->Draw(), where the scene sends the renderer a default camera and calls all models Draw method.
4. Implement the Draw method of MeshModel. The method should send the renderer it's transformation and list of triangles.
5. Implement al the set* functions in the renderer and drawTriangles. Try to predict as much as you can various things that this function should require.

Test the pipe line. If you see triangles, pat yourself on the back. Test the pipeline on something you know. If it looks like expected, another patting is due.

Task 4

Implement some UI. Let the user load several models and several cameras. Let the user know which is the active model and camera, and allow him to change them.

Task 5

Implement transformations and the UI for them. Consult the course's book (e.g chapter 3.13).

Task 6

Handle window resizing.

Task 7

Add the remaining functionality.