

CS 251
Fall 2007
Voicu Popescu
Assignment 1
Due Friday August 31st, 11:59PM

A simple C++ application: 2D graphics

1. Take the simple 2D graphics application developed in class and get it to work in your favorite C++ environment
 - a. Use 08.24 code archive on our website
 - b. Keep the image resolution at 120x90 or less
2. Implement a constructor for the Segment class that reads the parameters from a text scene description file (see Circle class for guidance)
3. Implement an axis aligned rectangle class (see Circle class for guidance)
 - a. Constructors (including reading parameters from file)
 - b. Rasterization method
4. Make and render a scene that has at least
 - a. 3 segments,
 - b. 3 axis aligned rectangles,
 - c. and 3 circles
5. **Extra-credit:** a general rectangle class (1%)
 - a. The input should be the top left point, the width, the height, and the direction of one of the sides
6. **Extra-credit:** a triangle class (2%)
7. **Extra-credit:** a camera class (3%)
 - a. The view is modeled with a general rectangle, and with a resolution
 - b. The camera should allow projecting points
 - c. Illustrate the camera by rendering the scene from a general view
8. **Extra-credit:** make the program display in a graphics window (3%)
9. Turn in instructions:
 - a. Assignment specific
 - i. Turn in your scene file
 - ii. When the program starts it should render your scene
 - b. General: see website