ITGM 315 – Exercise 7 (OpenGL) – Spring 2012 – Tank Game

DATE DUE: start of class 19

Hand in through the Dropbox
Make sure your files are working with Visual Studio 2010!

Using OpenGL, create a simple tank game (2D really). You may use the template provided in the dropbox or create it in your own style, but you must use OOP.

Goals:
This assignment will focus on the student being introduced to OpenGL and gaining some familiarity with the general aspects of OpenGL as covered in class.

Requirements:
Minimum requirements:
- Use C++ OOP
- Modify the tank game template to include graphics output using OpenGL

  Suggestions for the steps involved in creating a simple tank game from the template given are listed in the comment section at the top of the file.
  1. First achieve movement for the tank using key sequence controls, for example you could have Tank1 driven by asdf keys and Tank2 with the number pad keys.
  2. Have the tanks stop when they hit the barriers.
  3. Have them shoot (hitting spacebar or a particular numeric key).
  4. Any extensions you might want to add (ie. more functionality such as tank dying after being hit once or a number of times (perhaps turning black), other hazards, and so on.
  5. Have at least two tanks.

Grading Guidelines:

You will be presenting your game in class (19 and 20) so make sure it is user friendly. You will be graded on how well your game works, how well it is designed and how clearly the code is written.

Be creative, have fun.

Specifically:

/30 Movement of tank with key sequence controls
       30 if moves properly, using two tanks
       20 if moves up and down, forward and back
       10 if moves forward and back (given forward already)
       0 if only moves forward (that was given)

/35 Tanks stop when they hit barriers
       35 if they stop on barriers
       20 if they stop on some barriers
       10 if they react in some way to barriers

0 if they do not react at all

/20 Shoot
20 if they shoot in the right direction
10 if they shoot, but not in the right direction
0 if they do not shoot at all

/15 Any extensions such as bouncy shells, dying tanks, improved graphics/cameras and so on