

Aula Prática 1

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The objective of this tutorial is to present the most basic OpenGL pipeline that leads to the drawing of a triangle. The various fundamental concepts are presented in small steps such as creating adequate geometry data structures (VBO, VAO), creating simple shaders and drawing. It is important that you not only copy and run the code but carefully examine each section marked as **!![NEW]!!**. It is strongly suggested that you download and open the references at the end of this document, and read it during these exercises in order to fully understand the basic concepts of OpenGL.

1. Download the 1st Framework from the following link:
http://www.dcc.fc.up.pt/~mcoimbra/lectures/CG_1213/cg_framework_v1.zip
2. Launch Visual Studio and open the project file “cg_framework.sln”
3. Open the file “main.cpp”
4. Copy the contents of the file “step1.txt” into the “main.cpp” file
5. Read the code comments very carefully and run it (nothing very spectacular will happen ☺)
6. Repeat steps 4-5 for files “step2.txt” through “step6.txt”

Download and study the following references:

- Ed Angel, “Introduction to Modern OpenGL Programming”, SigGraph 2012
http://www.dcc.fc.up.pt/~mcoimbra/lectures/CG_1213/SIGGRAPH_2012.pptx
- Ed Angel, Dave Shreiner, “An Introduction to Modern OpenGL Programming”
http://www.dcc.fc.up.pt/~mcoimbra/lectures/CG_1213/SIGGRAPH_2011.pdf