

CGP3016M Advanced Games Programming

Workshop 1: Creating the Tutorial Project

Objectives

1. Create a new CMake project, which we will use for the tutorial
2. Generate Visual Studio Project Files
3. Build the project

Guide time: 30 minutes

Tools / Libraries

1. Urho3D 1.7
2. Microsoft Visual Studio 2017 Community Edition.

Create the new CMake Project

We are going to learn how to set up a new project which uses the Urho3D engine. In the following tutorials, we will use that project to do our first tutorial, but you can use the same procedure to create any new project you need (including your assignment).

The simplified instructions presented here are based on the following:

https://urho3d.github.io/documentation/1.7/using_library.html

1. Create a new directory for the CMake project. I have used:
C:\Urho3D\Urho3D-Tutorial. But you can use any name you want.
2. Create the following subdirectories (which are **CASE SENSITIVE**):
 - a. bin
 - b. CMake
3. Copy the following sub-directories from the Urho3D Engine directory (C:\Urho3D\Urho3D-1.7) into the corresponding subdirectories in your new project:
 - a. bin\Autoload
 - b. bin\CoreData
 - c. bin\Data
 - d. CMake\Modules
 - e. CMake\Toolchains
4. Copy Tutorial-Source-Start.zip to C:\Urho3D\Urho3D-Tutorial and unzip it. This contains the partially completed project files for the 18_CharacterDemo sample, plus a CMakeLists.txt file.
5. For your own projects, you can use the same CMakeLists.txt file, plus your own source code files. Open the CMakeLists.txt file in Notepad++ and inspect the first few lines:

```
# Set project name
project (UrhoTutorial)
# Define target name
set (TARGET_NAME UrhoTutorial)
```

These lines define the project name and target executable name, which you will likely want to change for your own projects.

6. Create a new directory for the VS15 project files. I have used: C:\Urho3D\Urho3D-Tutorial-VS17.

Build the Visual Studio 2017 Project Files

This works in the same way as the method you used to build the Urho engine:

1. Run the CMake gui. Select the source directory (C:/Urho3D/Urho3D-Tutorial), and the build directory (C:/Urho3D/Urho3D-Tutorial-VS17).
2. Click configure. You will likely get an **error** at this point. If so, find the URHO3D_HOME field in the options, and set it to the directory containing the VS build of the engine (probably Urho3D-1.7-VS17). Click Configure again.
3. IMPORTANT: remember to de-select the **URHO3D_ANGELSCRIPT** option, as you did for the Urho3D engine configuration.
4. Click Generate.
5. Set the UrhoProject project as the startup project.
6. You should now be able to open and build the VS project files in C:/Urho3D/Urho3D-Tutorial-VS17. When you run it, you should just see a black empty screen. We are going to rebuild CharacterDemo in the next few tutorials.

Important Notes!

1. You can use the above procedure to build new projects as you go along, including your assignment.
2. You can generate builds for other platforms from the same source code files, using CMake.