## Creating your own Orx-based Project using 'init'

Orx supports the creation of your own game projects by providing a very useful script called: init

Depending on your operating system, init will create a project for Visual Studio, Codelite, Code::Blocks, XCode, and gmake.

This is available in the root of your Orx folder. <sup>1)</sup>

There are two commands:

- init.sh for Mac or Linux
- init.bat for Windows.

#### **Interactive Mode**

cd your way into the orx folder and type the init command without any parameters or double click the file from your desktop. You will enter interactive mode:

c:\Work\orx>init

== No argument, switching to interactive mode

\* Project name (relative or full path)?

You only need to specify a full path or relative path in order to create and name a project. For example, you could enter a direct path like:

C:\Work\MyGame

Then the folder above will be created, and MyGame will be name of the Solution / Workspace / or Project.

In the same way you could enter a relative path. For example on Linux or Mac:

~/Documents/MyGame

After pressing Enter, choose one or more extensions (more on this in the next section).

### **Getting Help**

To see all commandline options:

```
$ ./init --help
== Usage: C:\workspace\orx\init.bat name [+/-bundle] [+/-cheat] [+/-c++]
[+/-imgui] [+/-mod] [+/-movie] [+/-nuklear] [+/-remote] [+/-scroll] [+/-
```

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```
sndh]
```

```
- name: Project name (relative or full path), required
  - bundle: orxBundle support (resources can be automatically packaged and
encrypted)=[yes], optional
  - cheat: Secret pass/cheat code support=[no], optional
  - c++: Create a C++ project instead of C=[yes], optional
  - imgui: Dear ImGui support (https://github.com/ocornut/imgui)=[no],
triggers [+c++], optional
  - mod: MOD (Protracker), XM (FastTracker 2) & S3M (Scream Tracker 3)
decoding support=[no], optional
  - movie: Movie (MPEG-1) decoding support=[no], optional

    nuklear: Nuklear support

(https://github.com/immediate-mode-ui/nuklear)=[no], optional
  - remote: orxRemote support (resources can be stored on a web server,
HTTP-only)=[no], optional
  - scroll: C++ convenience layer with config-object binding=[yes], triggers
[+c++], optional
  - sndh: SNDH (Atari ST) decoding support=[no], triggers [+c++], optional
```

There are additional options to create a Scroll-based or ImGui-based project (or both).

### **Screen Output**

You will see the following as the various projects and solutions are created for many IDEs:

```
c:\Work\orx>init c:\temp\MyGame
[ 12:56:59 ] Initializing [ MyGame ] in [ c:\temp\ ]
[ 12:56:59 ] == Creating files:
 + MyGame\.editorconfig
 + MyGame\build\premake4.lua
 + MyGame\data\config\MyGame.ini
 + MyGame\data\config\MyGamed.ini
 + MyGame\data\config\MyGamep.ini
 + MyGame\data\sound\appear.ogg
 + MyGame\data\texture\logo.png
 + MyGame\src\MyGame.cpp
[ 12:57:01 ] Generating build files for [ windows ]:
  * gmake
Building configurations...
Running action 'gmake'...
Generating windows/gmake/Makefile...
Generating windows/gmake/MyGame.make...
Done.
  * codelite
Building configurations...
```

Running action 'codelite'... Generating windows/codelite/MyGame.workspace... Generating windows/codelite/MyGame.project... Done. \* codeblocks Building configurations... Running action 'codeblocks'... Generating windows/codeblocks/MyGame.workspace... Generating windows/codeblocks/MyGame.cbp... Done. \* vs2013 Building configurations... Running action 'vs2013'... Generating windows/vs2013/MyGame.sln... Generating windows/vs2013/MyGame.vcxproj... Generating windows/vs2013/MyGame.vcxproj.user... Generating windows/vs2013/MyGame.vcxproj.filters... Done. \* vs2015 Building configurations... Running action 'vs2015'... Generating windows/vs2015/MyGame.sln... Generating windows/vs2015/MyGame.vcxproj... Generating windows/vs2015/MyGame.vcxproj.user... Generating windows/vs2015/MyGame.vcxproj.filters... Done. \* vs2017 Building configurations... Running action 'vs2017'... Generating windows/vs2017/MyGame.sln... Generating windows/vs2017/MyGame.vcxproj... Generating windows/vs2017/MyGame.vcxproj.user... Generating windows/vs2017/MyGame.vcxproj.filters... Done. [ 12:57:01 ] Init successful!

### Output

The init command will create a folder MyGame in the folder path specified and will give you the following sub-directories:

- build
- data
- src

build will contain builds for all the IDEs for your operating system. Just pick the one you want to use.

data contains some sample config files, sounds and textures.

src contains a basic setup source file.

You don't need to bring in the include or lib folders from the Orx folder. Your \$(ORX) variable will enable your project to see those dependencies from the Orx folder automatically. Therefore your project can be created anywhere, and will still compile fine.

In the same way, you don't need to manually copy over orx\*.dll files (or orx\*.so) files, as your project is already configured to copy these into the bin folder for you on each compile.

That's about it. A lot of work has gone into making this as bullet proof as possible, so you should have no trouble spinning up new projects whenever you need one.

#### **Extensions**

You can also create orx/Scroll-based projects for an object oriented way of using Orx with c++.

For making Orx applications with a UI, like applications and editors, you can create Dear ImGui-based projects.

Or a combination of both.

Please note that Bundle, C++ and Scroll are included by default. Specifically exclude them if you don't want them in your project.

#### C or C++ projects

This extension allows you to specify if you want a C or C++ based project. However some extensions like scroll or imgui require +c++ and are incompatible. For example, this will give an error:

```
./init.bat /temp/projecttest +scroll -c++
[ 8:10:49 ] == [ scroll ] triggers [ +c++ ]
== Aborting, the following extensions have been both required and
prohibited: [ c++ ]
```

# Troubleshooting

Problem 1: If you receive an error compiling your own game project with something like:

#### cannot find -lorxd

This is because you either:

- Did not compile Orx itself first. The Orx library needs to be compiled so that projects created with init can make use of Orx's dll(s) that reside there. If they are missing you will get linker errors trying to find orx.dll or orx.so libraries;
- 2. Did not compile all three required configurations. Compile Debug, Profile and Release.
- 3. Previously compiled the Orx library as 32-bit, whereas you are trying to compile your own project in 64-bit or vice versa.
- 4. Previously compiled the Orx library using one compiler whereas you are compiling your project with another. For example: you can't compile your project using the Visual Studio compiler if you compiled the Orx library with mingw.

**Problem 2:** The dll files at the \$ORX location are not being copied into my game's bin folder.

Ensure you have compiled all three required Orx library configurations. Compile Debug, Profile and Release. If the post-event copy step in your game project cannot find all three files at \$ORX, then none will be copied over to your project's bin folder.

1)

This is only available with the git version of Orx. See: Cloning Orx from Github

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