

Web Development

Unity WebGL

Programming – Game Development Foundations

Last modified 19/08/16 by Sam Cartwright

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- Unity in Web Browsers
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Unity's Browser Deployment

- One of Unity's strengths is its ability to target many different platforms
 - This includes web browsers
- Unity gives us two options to deploy to browsers:
 - WebGL
 - Now the preferred method to build for the web
 - Web Player
 - Before version 5.4 only, unsupported in Chrome

Web Player

- Runs code “natively”, so it’s fast – just like if they downloaded and installed the game.
- Requires users install a browser plugin before they can use Web Player content.
 - Browser vendors are slowly retiring native plugins. This means that Web Player content isn’t compatible with some of the major browsers.
- No longer actively supported
 - Removed from Unity as of version 5.4
- Because the Web Player is no longer supported, we will only discuss building using WebGL

Web Player – scripting restrictions

- Note that you will get compile errors if you have code which accesses restricted parts of the .NET/Mono framework.
- You can use platform dependent compilation to manage this.
 - See <http://docs.unity3d.com/Manual/PlatformDependentCompilation.html>

WebGL

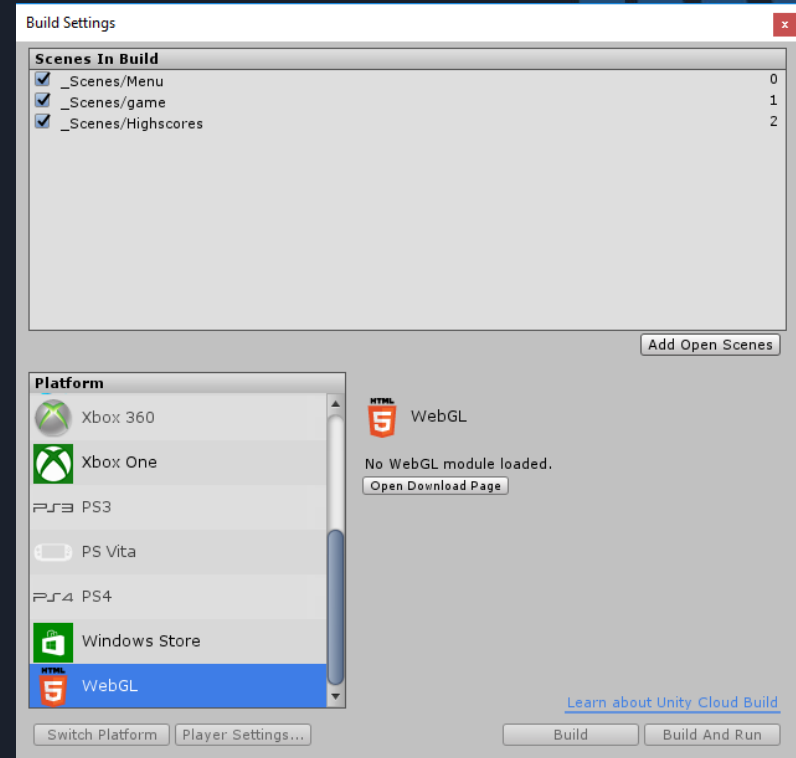
- Publishes your game as a JavaScript program using HTML5 technologies and WebGL to run your game in a web browser
- Very young and immature technology
 - WebGL is still fairly new
 - Browser support and performance inconsistent
 - Unity's WebGL build technology is in "Preview"

WebGL

- WebGL is supported in most major browsers on the desktop
 - There are differences in the level of support
 - Mobile devices are not currently supported
- Not all features of Unity are available in WebGL Builds
 - Threads
 - Debugging in MonoDevelop or Visual Studio
 - Graphics limitations (WebGL uses OpenGL ES 2.0)
 - Only basic audio

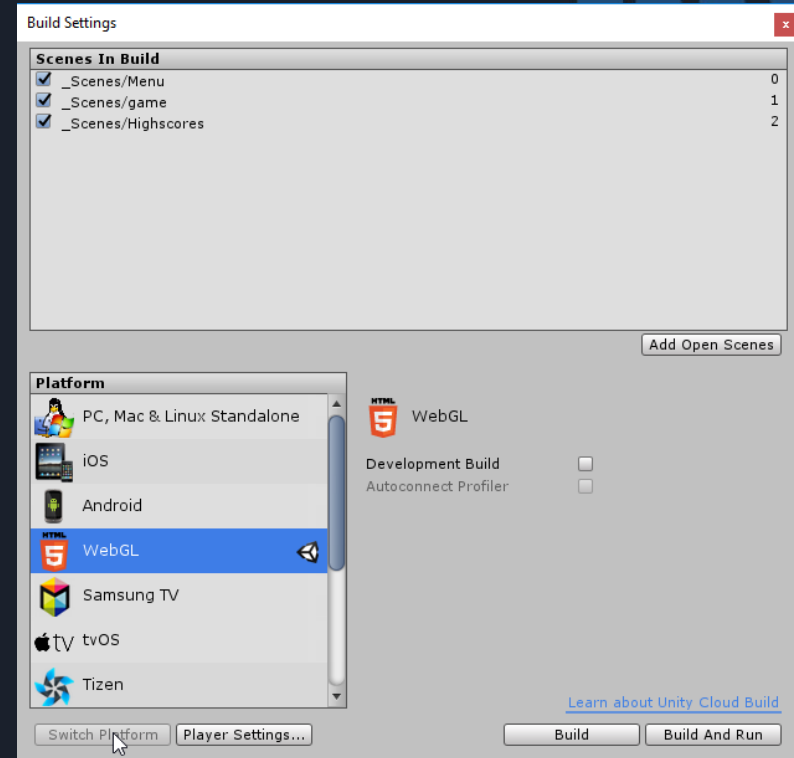
Building a WebGL Project

- First make sure you have the WebGL module installed
- Select File > Build Settings...
- If the WebGL module is not installed, you can download it from here



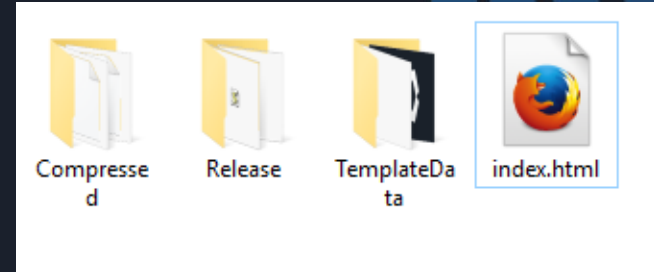
Building a WebGL Project

- Once the WebGL module is installed, click 'Switch Platform'
- Then click 'Build' to create the WebGL program



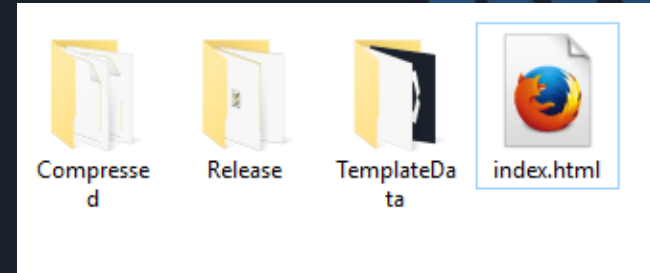
Building a WebGL Project

- File->Build Settings.
- Select “Web GL (Preview)” under Platforms.
- Press “Switch platform”.
 - This might take a while!
- Press “Build”.
 - You will need to select a folder to build to.

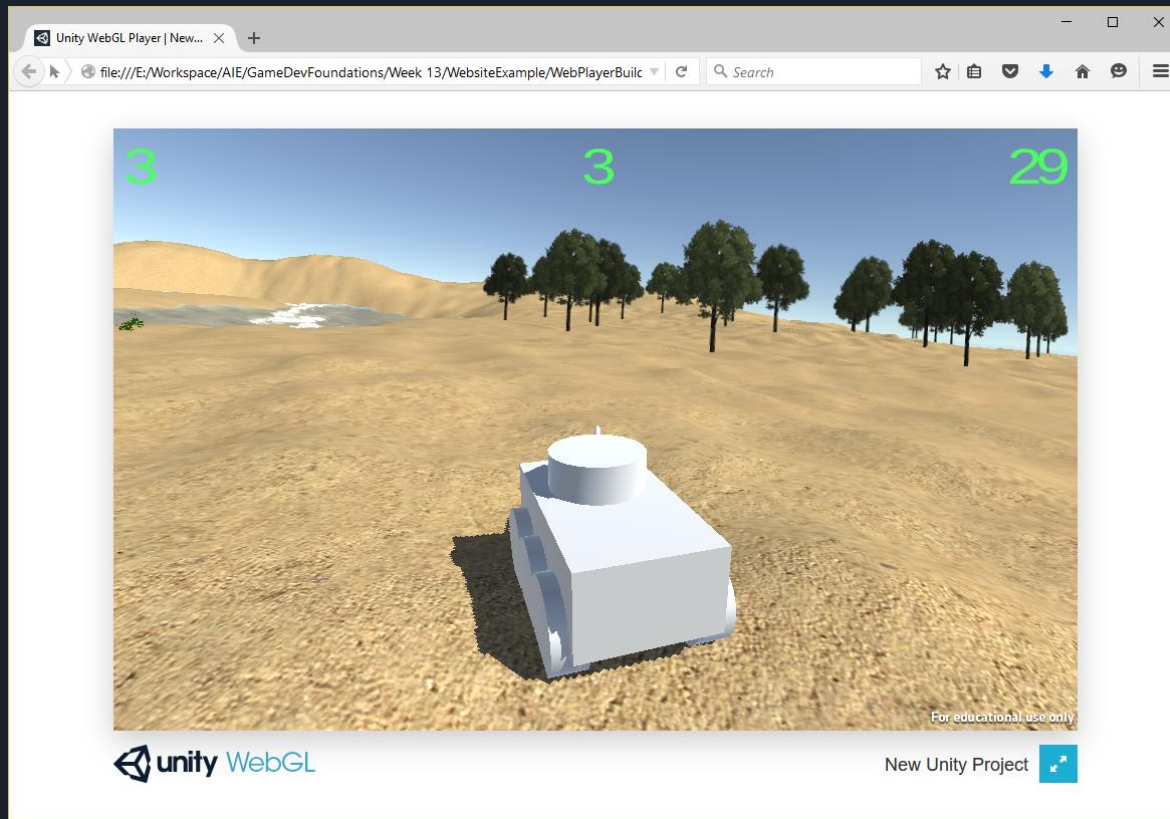


Web GL – making a build

- Unity will generate some folders and a .html file.
- Load the .html in a compatible browser.



Web GL – making a build



Summary

- Unity can build your game for deployment on the Web
 - The preferred way to do this now is with the WebGL build
 - Older versions of Unity used the deprecated Web Player
- WebGL is still fairly new, and not all of Unity's features will be available
- Making the WebGL build is a relatively easy process

References

- Unity Technologies. 2016. *Unity - Manual: Getting Started with WebGL Development*. [ONLINE] Available at: <http://docs.unity3d.com/Manual/webgl-gettingstarted.html>. [Accessed 01 September 2016].
- Unity Technologies. 2016. *Unity - Manual: Web Player*. [ONLINE] Available at: <http://docs.unity3d.com/Manual/Web.html>. [Accessed 01 September 2016].