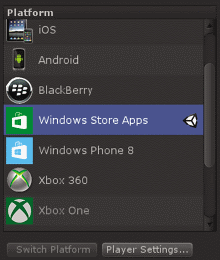
**Developing Your First Game with Unity and C#**

## What Unity Is

Unity is a 2D/3D engine and framework that gives you a system for designing game or app scenes for 2D, 2.5D and 3D. I say games and apps because I’ve seen not just games, but training simulators, first-responder applications, and other business-focused applications developed with Unity that need to interact with 2D/3D space. Unity allows you to interact with them via not only code, but also visual components, and export them to every major mobile platform and a whole lot more—for free. (There’s also a pro version that’s very nice, but it isn’t free. You can do an impressive amount with the free version.) Unity supports all major 3D applications and many audio formats, and even understands the Photoshop .psd format so you can just drop a .psd file into a Unity project. Unity allows you to import and assemble assets, write code to interact with your objects, create or import animations for use with an advanced animation system, and much more.

As **Figure 1** indicates, Unity has done work to ensure cross-platform support, and you can change platforms literally with one click, although to be fair, there’s typically some minimal effort required, such as integrating with each store for in-app purchases.



**Figure 1 Platforms Supported by Unity**

Perhaps the most powerful part of Unity is the Unity Asset Store, arguably the best asset marketplace in the gaming market. In it you can find all of your game component needs, such as artwork, 3D models, animation files for your 3D models (see Mixamo’s content in the store for more than 10,000 motions), audio effects and full tracks, plug-ins—including those like the MultiPlatform toolkit that can help with multiple platform support—visual scripting systems such as PlayMaker and Behave, advanced shaders, textures, particle effects, and more. The Unity interface is fully scriptable, allowing many third-party plug-ins to integrate right into the Unity GUI. Most, if not all, professional game developers use a number of packages from the asset store, and if you have something decent to offer, you can publish it there as well.

## What Unity Isn’t

I hesitate to describe anything Unity isn’t as people challenge that all the time. However, Unity by default isn’t a system in which to design your 2D assets and 3D models (except for terrains). You can bring a bunch of zombies into a scene and control them, but you wouldn’t create zombies in the Unity default tooling. In that sense, Unity isn’t an asset-creation tool like Autodesk Maya or 3DSMax, Blender or even Adobe Photoshop. There’s at least one third-party modeling plug-in (ProBuilder), though, that allows you to model 3D components right inside of Unity; there are 2D world builder plug-ins such as the 2D Terrain Editor for creating 2D tiled environments, and you can also design terrains from within Unity using their Terrain Tools to create amazing landscapes with trees, grass, mountains, and more. So, again, I hesitate to suggest any limits on what Unity can do.

Where does Microsoft fit into this? Microsoft and Unity work closely together to ensure great platform support across the Microsoft stack. Unity supports Windows standalone executables, Windows Phone, Windows Store applications, Xbox 360 and Xbox One.