

XNA DEVELOPMENT: TUTORIAL 1

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Code and Other Tutorials Found at <http://www.insidegamer.org/xnatutorials.aspx>

“I’ve got an Xbox 360, a PC, and a TV; now what?” Believe it or not, this is probably the best question to ask as a beginner to XNA or to programming in general. You’ve heard all your friends (and probably Microsoft execs) buzz about the greatness that is XNA but you’re still confused as to how to use XNA to create your own Xbox 360 games. This tutorial is going to help you download and install the necessary tools for beginning XNA game development so you can go from an Xbox 360, a PC, and a TV, to your own in-home game studio!

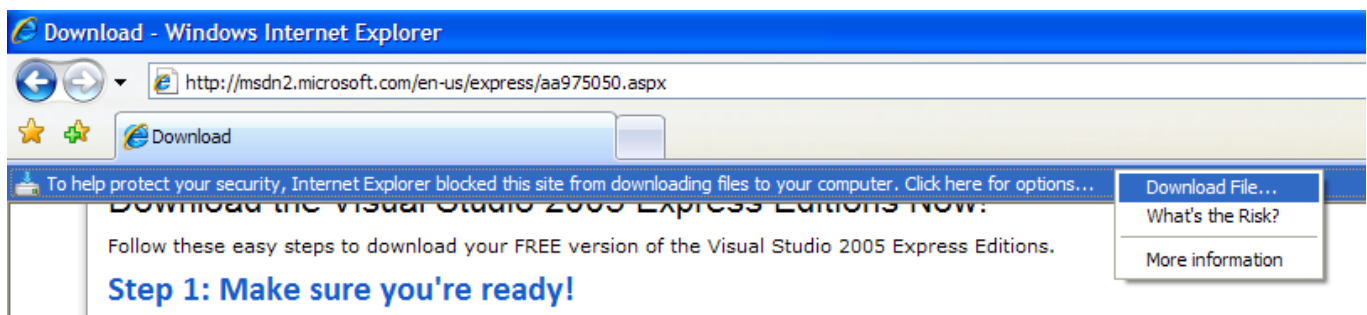
Note: I’m assuming your Xbox 360 has already been setup and is correctly working. I also assume you are using Windows XP. Vista or a lower version would be fine but there are some extra updates people using these operating systems might need. Also, links within are subject to change but are current to the time of this writing.

INSTALL MICROSOFT VISUAL STUDIO C# 2005 EXPRESS EDITION

ONLINE INSTRUCTIONS

You’ll need to program the code within XNA to produce a game and to create the code you’ll need a development environment. XNA 2.0 allows many environments such as Visual Studio 2005 Standard and Professional editions and the Visual Studio C# 2005 Express Edition environment which is what will be used in the following tutorials. Visual C# 2005 Express is very powerful and specifically tuned to provide functionality and ease of use with the complexity of a complete environment. If you are unsure your PC can handle Visual C#, please check the system requirements here: <http://msdn2.microsoft.com/en-us/express/aa718403.aspx#exall>. Visual C# Express is free and can be downloaded here: <http://msdn2.microsoft.com/en-us/express/aa975050.aspx>. Select the appropriate language from the drop down under the green “Visual C# 2005 Express Edition” box.

Note: If you are using Internet Explorer or any other pop-up blocker, you may need to disable them to allow the download to appear. In Internet Explorer, you should just see a yellow bar just above the content window which should allow the download if you click on it and click “Download File...”



This download may seem misleading at first since you are not downloading the actual studio, but a downloader that will ask you which components you'd like to install and then download and install the studio. Depending on your connection to the Internet, you might just want to leave this run while you do something else and just glance at it every now and again to catch any errors in downloading or installing. After downloading and installing Visual C# Express, make sure you register it! Without a registration key your copy of Visual C# will expire and you won't be able to use it without registering it.

OFFLINE INSTRUCTIONS

If you have a PC somewhere that doesn't have access to the internet you can still install Visual C#! Microsoft created .IMG and .ISO files you can burn to discs and use as your install disc. Follow this link to find the files: <http://msdn2.microsoft.com/en-us/express/aa718401.aspx>. I won't go into detail about burning to a CD considering Microsoft does a nice job of that on that page. Just like the online version though, you'll still need to register your install of Visual C#.

REGISTERING VISUAL C#

After installing Visual C# you need to register (notice how I can't stress this enough) your copy. Registration is easy, you follow a link, type in your Windows Live ID (if you have a Yahoo! or Hotmail account you already have an ID; if you don't have one of these you can sign up for an ID here: <https://accountservices.passport.net/ppnetworkhome.srf?vv=500&lc=1033>), click a link in a confirmation email, and copy the number into Visual Studio's prompt for a registration key. If you don't receive the prompt you can get to it by opening Visual C#, clicking on the Help menu item, and on Register Product... (Figure 1)

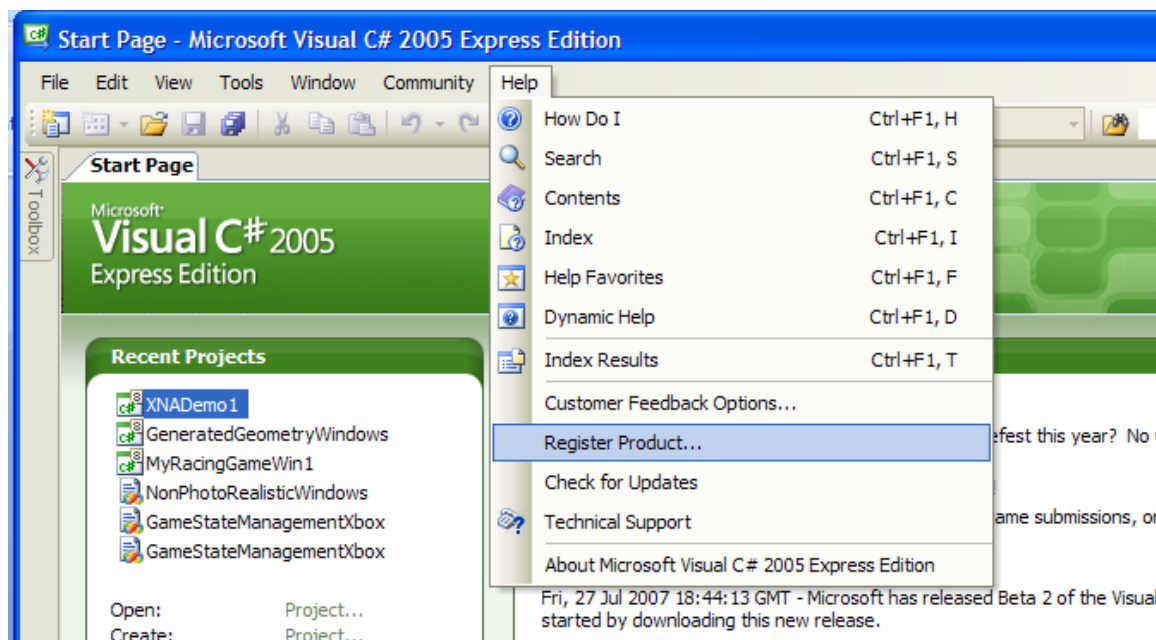


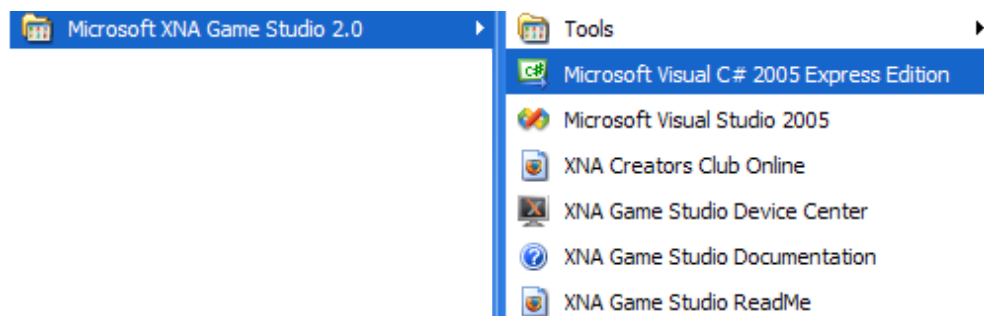
Figure 1 - Registering Visual C#

INSTALL MICROSOFT VISUAL STUDIO 2005 EXPRESS EDITIONS SERVICE PACK 1

Since its release, the Express Editions of Visual Studio have undergone some changes and have put out a service pack, or update, to the initial software. The main download page can be found here: <http://www.microsoft.com/downloads/details.aspx?FamilyId=7B0B0339-613A-46E6-AB4D-080D4D4A8C4E&displaylang=en>. Make sure to download the correct update for C# which (at the time of this writing) is the 24.3 MB VS80sp1-KB926749-X86-INTL.exe update. I won't go into detail on installing the update because the update packages are usually pretty self explanatory, plus the download site has installation instructions.

DOWNLOAD AND INSTALL MICROSOFT XNA GAME STUDIO EXPRESS 2.0

Finally we're to the point we get to install the game stuff! The Microsoft XNA Game Studio is a set of templates that we'll be using to create games in C#. You can find the link to the XNA 2.0 download here: <http://www.microsoft.com/downloads/details.aspx?FamilyId=DF80D533-BA87-40B4-ABE2-1EF12EA506B7&displaylang=en>. The installer here is pretty basic and should be easily installed. After installation there are a couple of places you can go to find your new installed XNA Game Studio. You now have a start menu entry that is called 'Microsoft XNA Game Studio 2.0'. Within it are the Visual Studio programs you currently have XNA 2.0 installed for as well as some heavy documentation. The tools folder contains many programs to use with creating custom game content including an audio utility that will be covered in a later tutorial. I'd suggest creating a shortcut on your desktop to this studio link if you are planning on using it a lot. (Note: I have Microsoft Visual Studio 2005 also installed; your configuration may differ if you don't have the full version. In any case, these tutorials will consistently use Microsoft Visual C# 2005 Express Edition)



To see your new studio templates, click the 'XNA Game Studio Express' shortcut from the Start menu and it should open Visual C# for you. After Visual C# loads, click File -> New Project... and you should get a dialog window with all your newly gained templates (Figure 2).

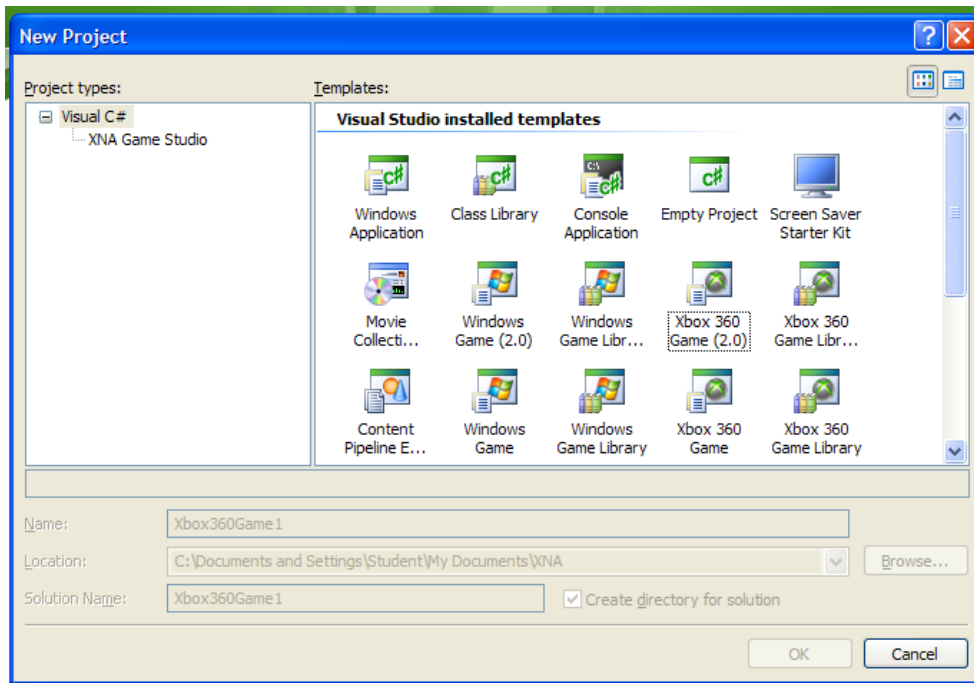


Figure 2 - XNA Templates

XNA CREATORS CLUB

We've prepped our computer for the development environment and various tools needed to build our game application. The next step is to prepare the Xbox 360 console to receive our game. In order to deploy our game onto the console, Microsoft requires you to become a member of the XNA Creators Club. This simply gives you the benefit of uploading your game to your Xbox 360 as well as debug projects on the Xbox 360 hardware. To become a member of the XNA Creators Club, start your Xbox 360 and head to the Xbox Live Marketplace. Go into the Games option followed by the All Games option. Scroll to the bottom and find the XNA Creators Club listing, highlight it and press A. Highlight and select the Memberships option and select which membership you would like (4 months for \$49, or 12 months for \$99).

Next you need to download the XNA Game Launcher which can be found in the same menu as the Memberships option. Highlight this option and select it. You may receive a warning message stating you can only use this product with the full retail version... just press A and continue the download. The XNA Game Launcher should now be found under the Games tab of the Xbox Dashboard, and within the Demos and More option.

CONNECTING YOUR PC AND XBOX 360

We've got our development tools on our PC and need to transfer whatever we create to the Xbox 360; we need to build a bridge between the two. Next we'll focus on creating a link between the two systems which should be the final step of the setup process.

First off, make sure your Xbox 360 and PC are connected to the same network. On your PC open XNA Game Studio Express and on your Xbox 360 launch the XNA Game Launcher application. XNA and the Xbox 360 encrypt data to and from the Xbox 360 and wants to make sure you are the only one editing your games. The

way we'll create this encryption (and subsequently create the bridge) is to generate a random key on the Xbox and copy that value into XNA Game Studio Express.

In the XNA Game Launcher menu, highlight and select the Settings option. You should now see a single option, Generate Connection Key. Notice on the right it should say [key not set]. Press A and you should see a tab appear with a randomly generated key on it. Here you can Accept the key or Cancel and generate a new key. If you're fine with the generated key, go back to your PC before accepting the key. In XNA Game Studio Express, click the Tools menu option and click Options... (the last item in the list). A dialog should appear with options related to your environment. The final entry should be XNA Game Studio Express Xbox 360. Click on this item and notice the right changes. Here is where we enter the key generated by the Xbox 360. On the right, click the Add... button and you'll get a second dialog. Here you can name the Xbox 360 Key (for reference) and enter the key found on the Xbox 360 (Figure 3). Enter these and click OK. Go back to the Xbox and make sure to accept the key by highlighting and selecting Accept New Key.

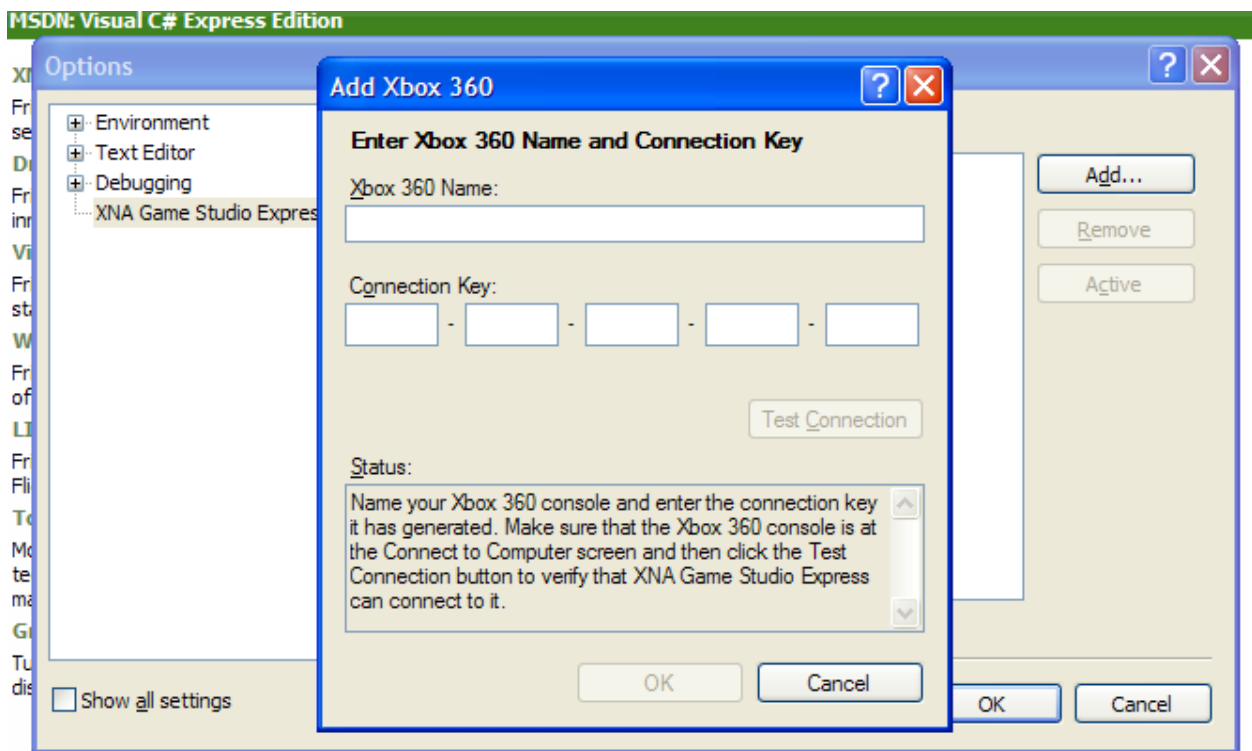


Figure 3 - Xbox 360 Key Entry Dialog

CONCLUSION

That's it! We've set up XNA on both our PC and our Xbox 360 and are ready to start developing games! It seems like a lot of work just to get your own game to run on a console but the first time you see your created game on your TV you'll know it was worth it. It's worth mentioning that for ease of compiling and running, you can simply create a Windows Game instead of an Xbox 360 Game when you select the project template and you won't need to link your Xbox 360 and development environment. Creating a project as an Xbox 360 game and then not linking the system will result in a compile-time error until the system is found on the same local network as the PC. Most of the code in the following tutorials should work under both templates with some minor adjustments.