Getting the Ray Tracer up and running

With Visual Studio 2008/2010

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7/11/2012

http://www.raytracegroundup.com/

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Microsoft Visual Studio 2010

The following instructions are designed for Microsoft Visual Studio 2010 Express Edition C++, Professional, Premium and even Ultimate edition. Note some of the Visual Studio Interface may be slightly different on your edition of Visual Studio. Screenshots taken using Visual Studio 2010 Professional

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Step 0: Download and Install

You can choose to download Professional or Express Edition of Visual Studio.
If you have a copy of Ultimate or Premium the rest of the tutorial will be similar however download will not be covered.

Professional Edition through Microsoft's Dreamspark Program

As a student you are currently eligible (as of writing February 2012) to install the Professional Edition of Visual Studio 2010 from Microsoft's Dreamspark (http://www.dreamspark.com).

Once registered and verified with Dreamspark you can download Visual Studio 2010 Professional here: https://www.dreamspark.com/Product/Product.aspx?productid=4

Express Edition C++

Microsoft's Visual C++ 2010 Express Edition is a free tool that can be obtained from the Microsoft website. You will need to register your copy (free) of Visual C++ 2010 Express to continue using after 30 days.

http://www.microsoft.com/visualstudio/en-us/products/2010-editions/visual-cpp-express

Once you have downloaded one of the above, run the installer and follow the prompts.

Note: You may have to install additional Service Packs to Visual Studio, you will be prompted on the first run if this is necessary, just follow the download link and install it.

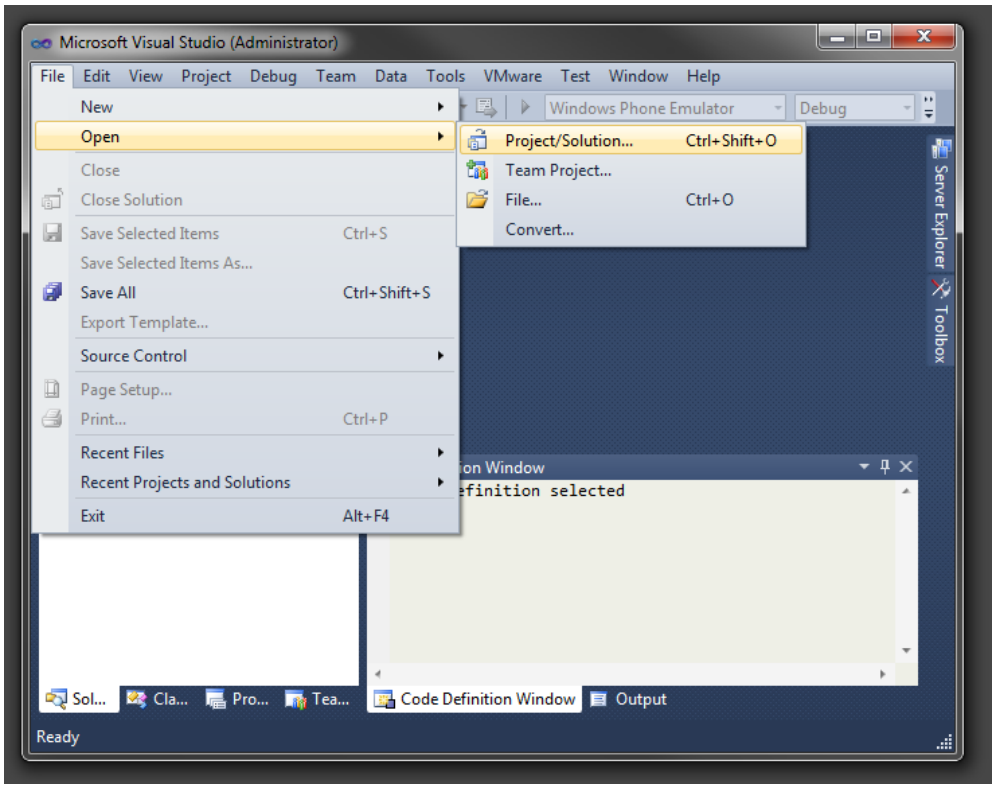
Step 1: Unzip the project files

The project files are compressed as a zip archive. To decompress the files, a zip file archiver tool is required. If you don't already have one on your system, a powerful open source tool which will do the trick can be downloaded from: http://www.7-zip.org

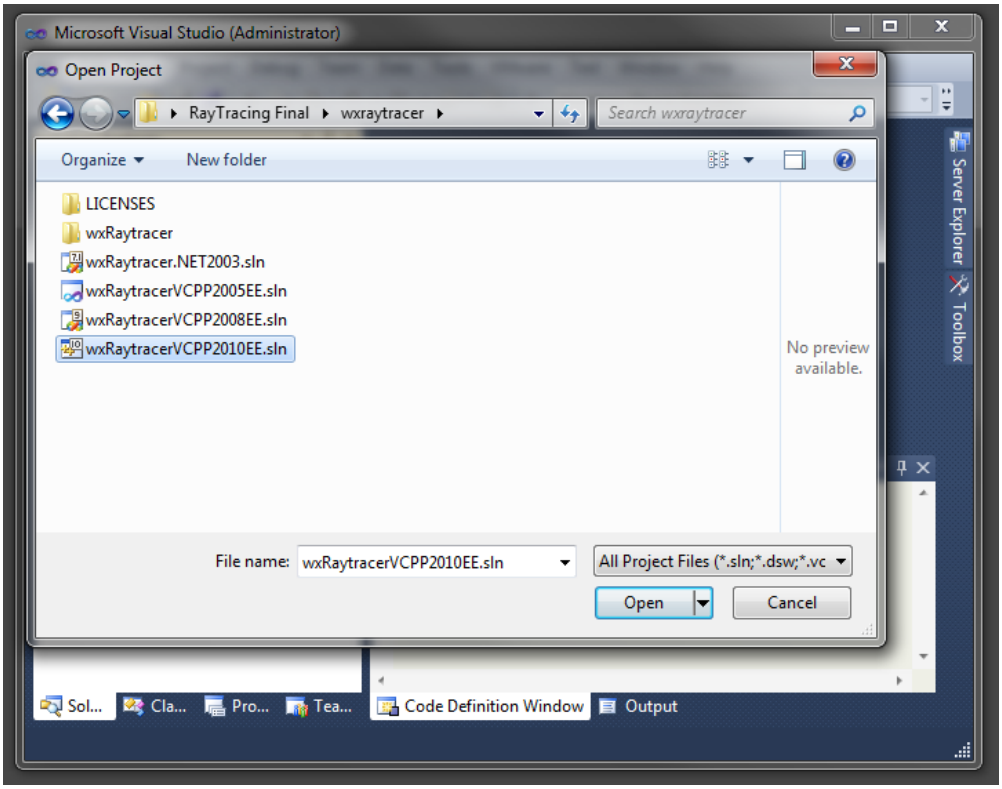
Unzip the project files to a folder you can use

Step 2: Open the Project

Select "File" > "Open" > "Project/Solution..." or use the shortcut "Ctrl+Shift+O" to open the "Open Project" dialogue. (Alternatively you can double click on the .sln file in the directory to open the Project.)

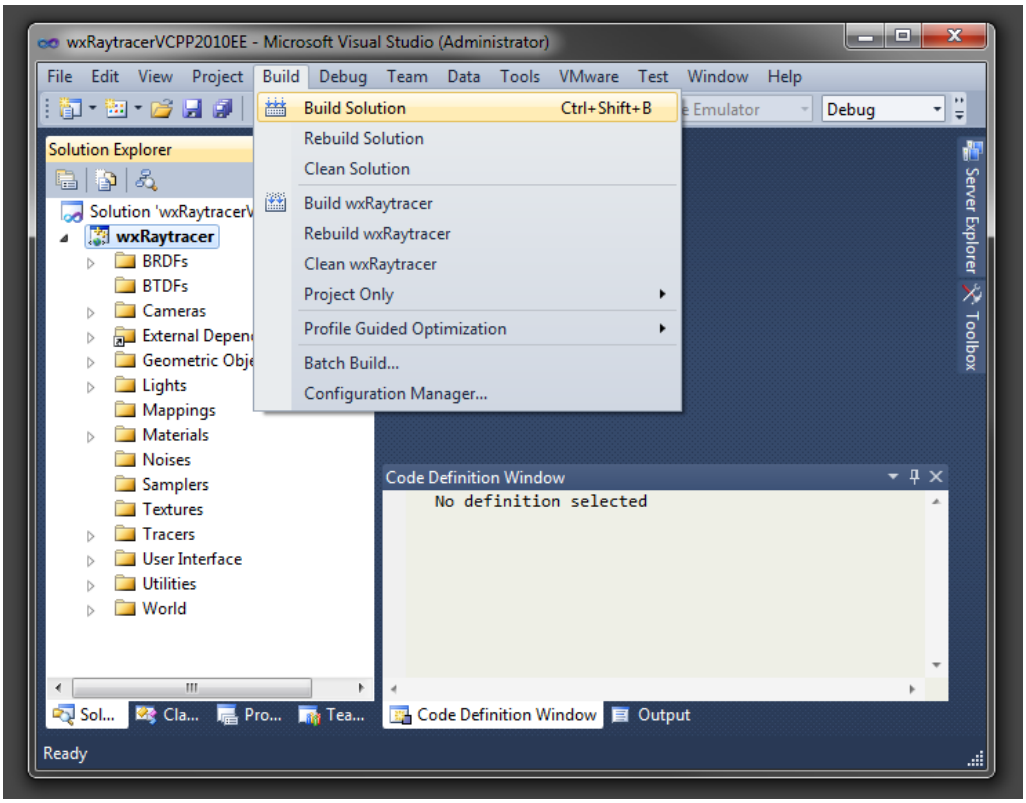


Navigate to the unzipped folder directory you just created in Step 1 and select the .sln (Solution) for the correct version of Visual Studio. In this case select "wxRaytracerVCPP2010EE.sln".



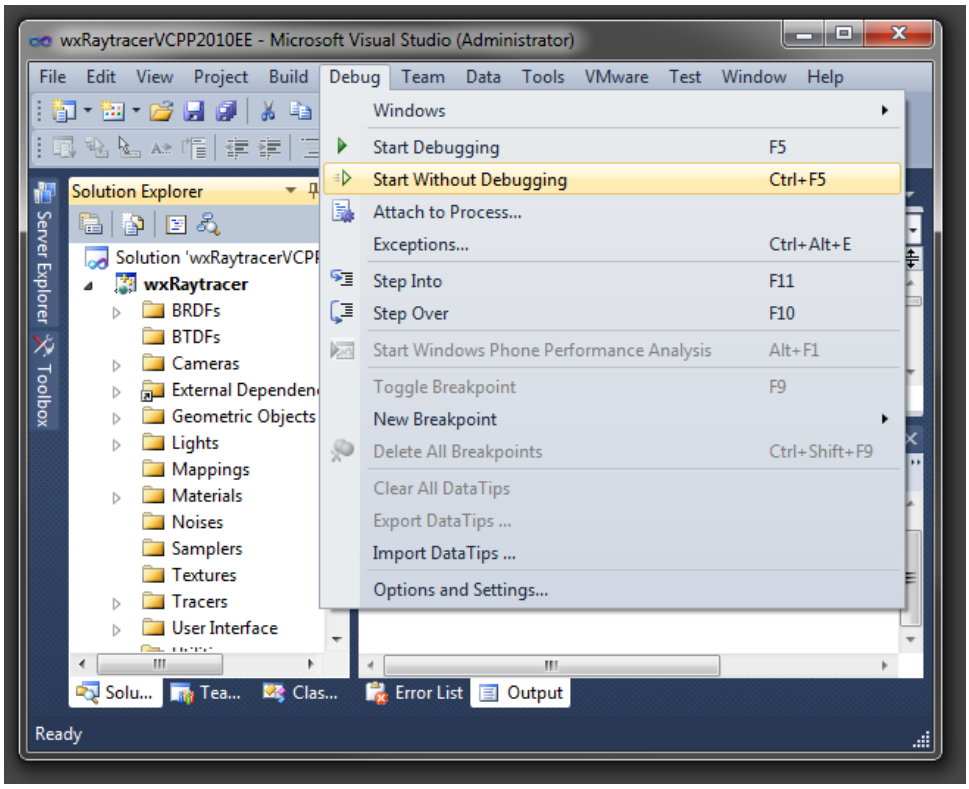
Step 3: Compile the Project

Select "Build" > "Build Solution" or hit Ctrl-Shift-B to invoke the compiler to build the code. The output from the compiler will be displayed in the "Output" window at the bottom.

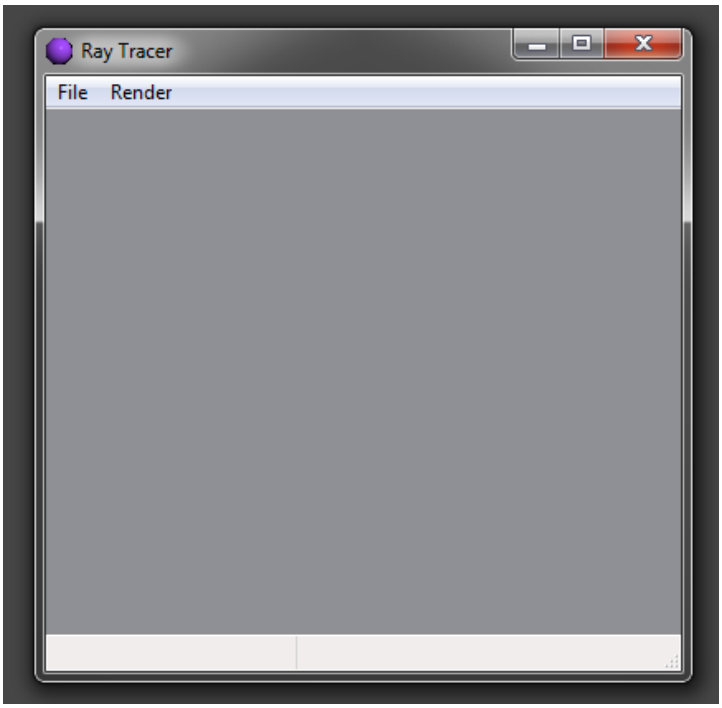


Step 4: Run the Ray Tracer

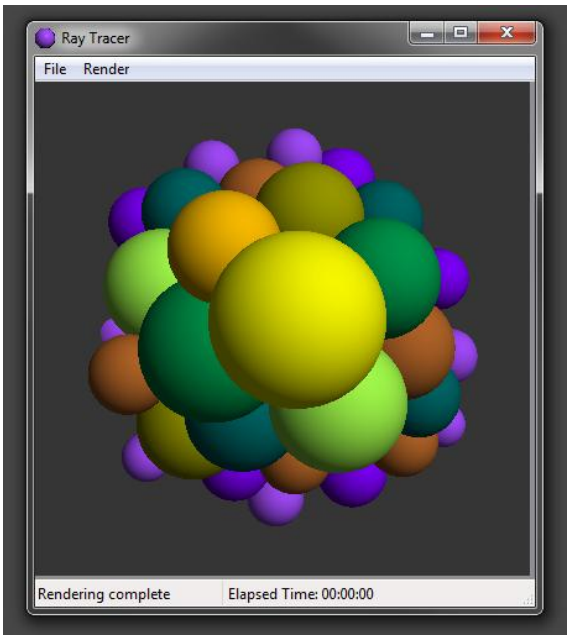
Select "Debug" > "Start Without Debugging" or hit Ctrl+F5 to start the ray tracer.
(Use F5 or Start with Debugging to include debugging information)



The following Ray Tracing Window will open:

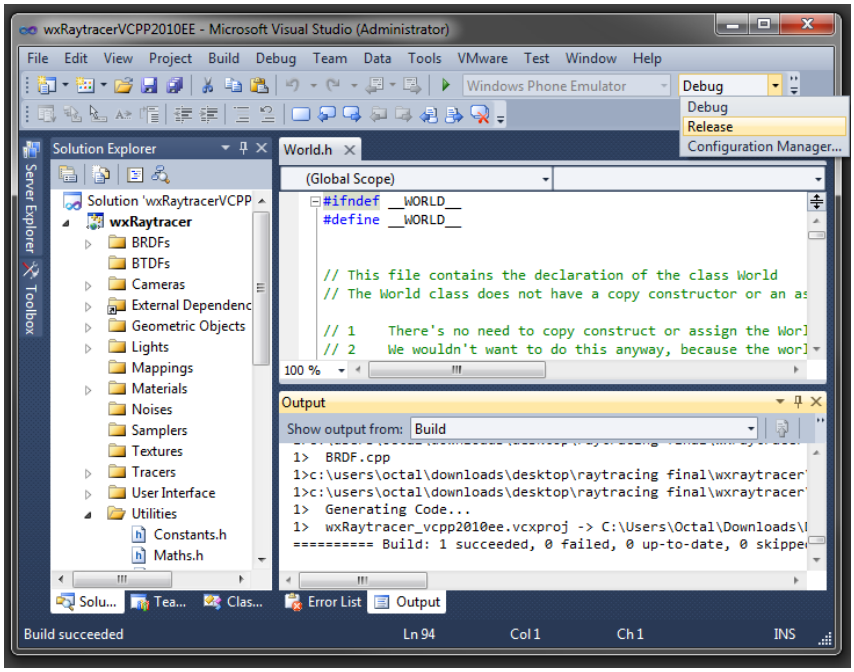


Step 5: Render your first image



Step 6: Release mode / Debug Mode

The project has two different build configurations; debug and release. While debugging, rendering less complex images or rendering a new technique for the first time you might want to use the debug configuration. When rendering larger and or very complex images however, you should change the active configuration to release mode. The reason for this is that the executable produced by the release build configuration will execute much faster and thus result in your image rendering faster. You can change the mode you are compiling / running in by changing the drop down menu in Visual Studio to the type you want.



Microsoft Visual Studio 2008

The following instructions are designed for Microsoft Visual Studio 2008 Express Edition C++, Professional, Premium and even Ultimate edition. Note some of the Visual Studio Interface may be slightly different on your edition of Visual Studio. Screenshots taken using Visual Studio 2008 Professional

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Express Edition C++

Microsoft's Visual C++ 2008 Express Edition is a free tool that can be obtained from the Microsoft website. You will need to register your copy (free) of Visual C++ 2008 Express to continue using after 30 days.

http://msdn.microsoft.com/en-us/express/future/bb421473 (Select Visual C++ 2008)

Once you have downloaded one of the above, run the installer and follow the prompts.

Note: You may have to install additional Service Packs to Visual Studio, you will be prompted on the first run if this is necessary, just follow the download link and install it.

Step 1: Unzip the project files

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Step 2: Open the Project

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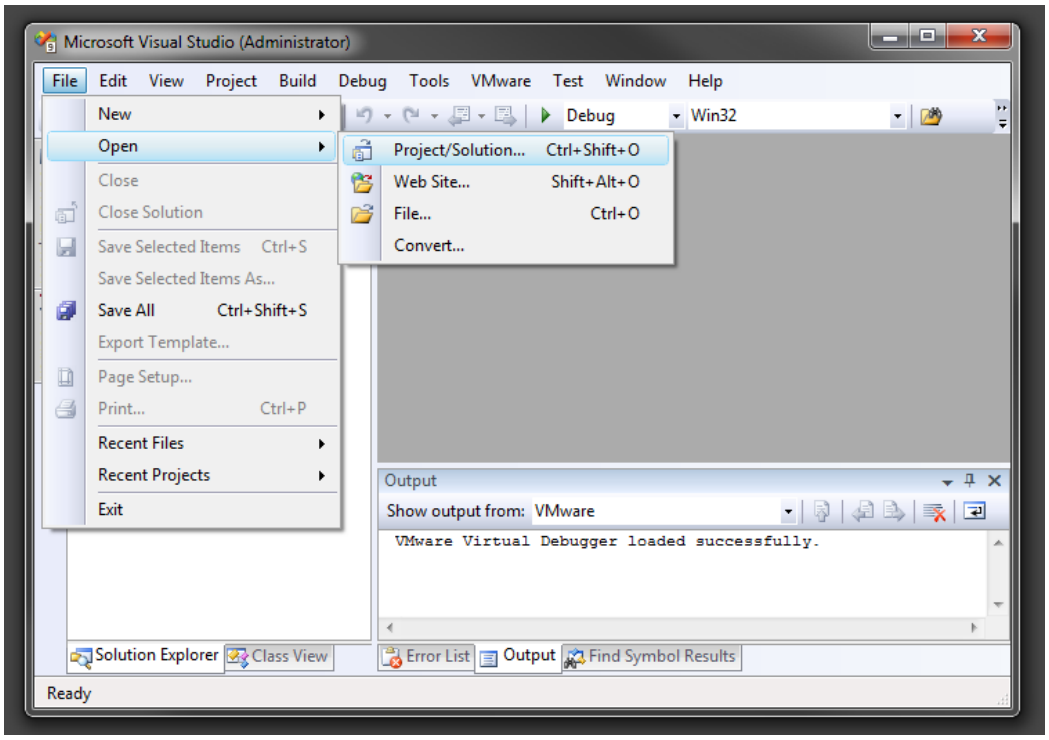

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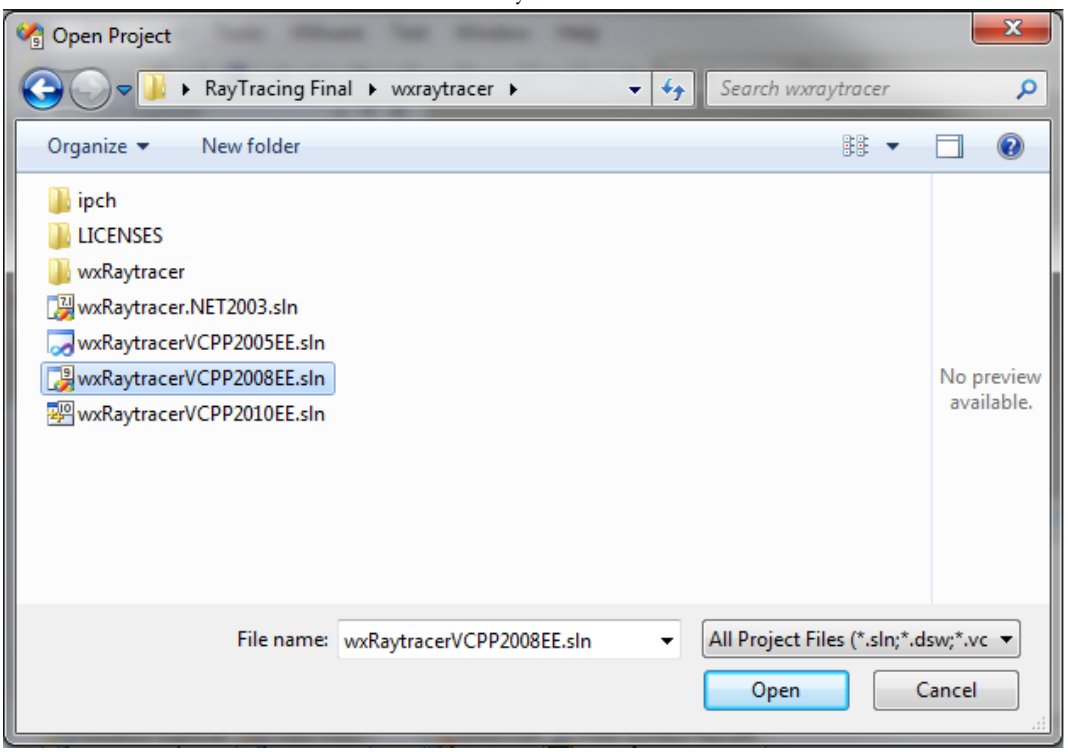

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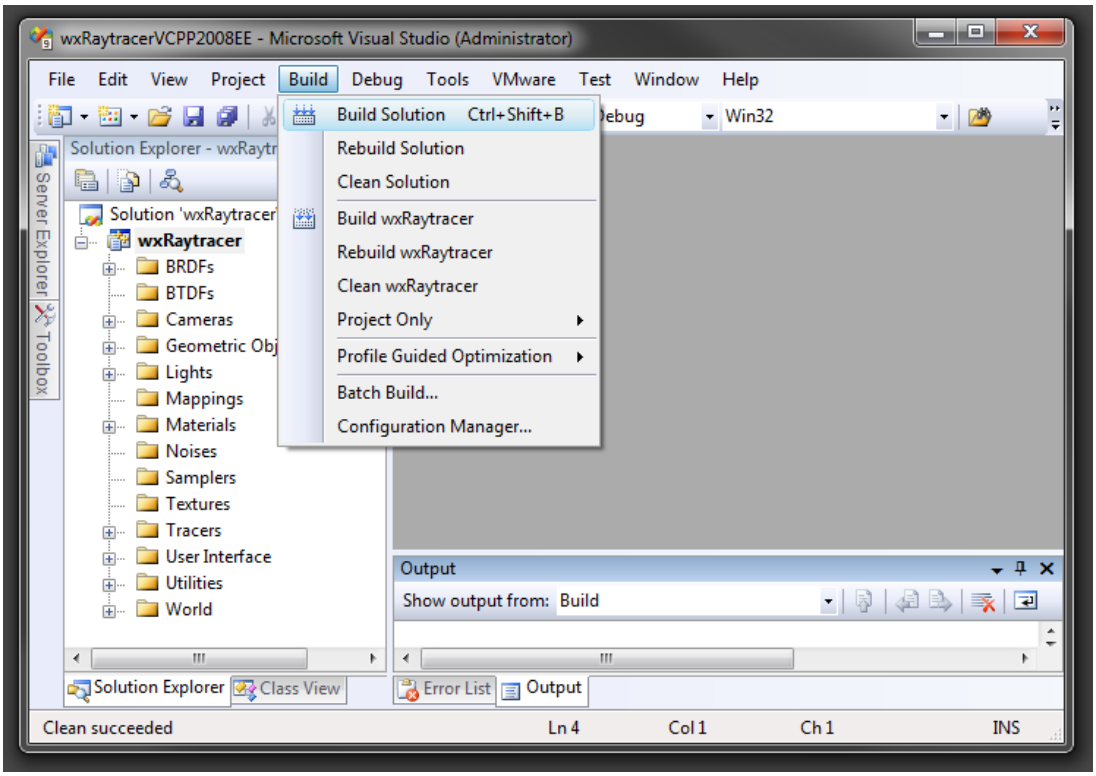

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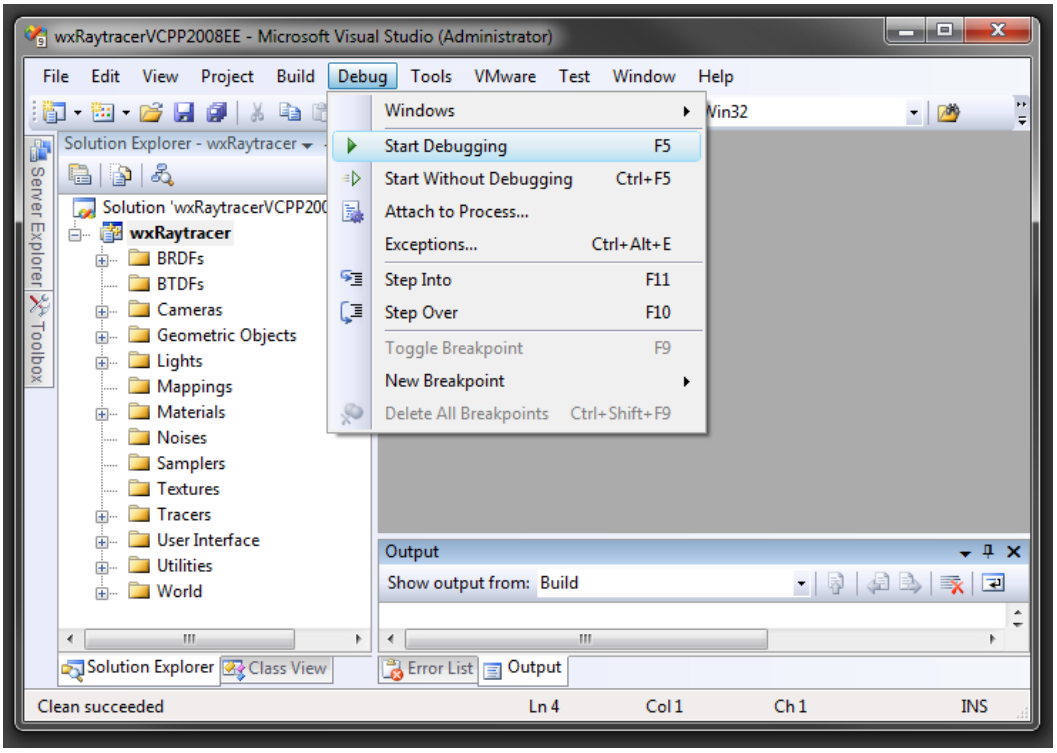

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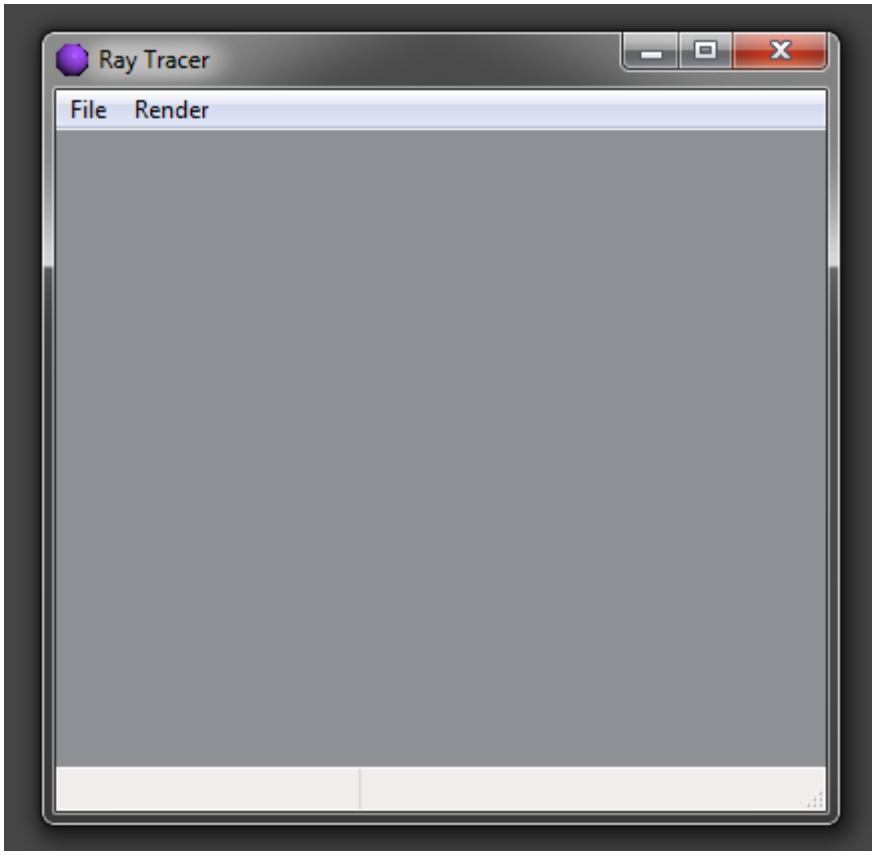
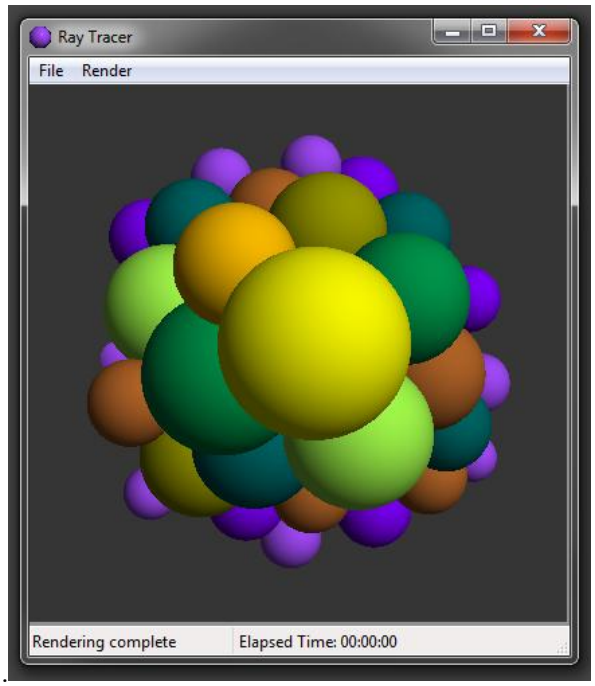


Step 5: Render your first image

Select “Render” > “Start” from the menu to start rendering



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