Check to see if you have OpenGL 3.0 support using GPU Caps Viewer <a href="http://www.ozone3d.net/gpu\_caps\_viewer/">http://www.ozone3d.net/gpu\_caps\_viewer/</a>

Version 1.15 can be found from here:

http://www.geeks3d.com/20120202/gpu-caps-viewer-1-15-0-opengl-opencl-cuda-graphics-card-utility/

In the middle of the page you will see the download link as

Download

Select to download the win32 version.

📕 Geeks3D	GPU Caps Viewer - GPU 1: 49°C		
GPU OpenGL CUDA OpenCL Tools About			
	GPU 1: ATI Radeon HD 3450		
	CPU RV610 Shader cores 40		
AM			
r			
Device ID	1002 - 95C5 Subdevice ID 1028 - 0342		
GPU terr	App         49.0°C / 120.2°F         Fan speed         24%		
Current do	ck core: 110 MHz, mem: 252 MHz		
Max clo	ck core: 600 MHz, mem: 500 MHz		
GPU loa	ad 0.0% Cur. VDDC 0.900 V Max VDDC 1.100 V		
Driver	8 930 0 0 - Catalyst 12 1 (12-5-2011)		
Driver	OpenCL 3 3 (ATT Radeon HD 3400 Series with 209 evt.)		
OpenGL			
OpenCL	OpenCL 1.1, CPU compute units:2@2992MHz		
CUDA	No CUDA support		
PhysX	PhysX not installed		
Multi-GPU	no multi-GPU support (1 physical GPUs)		
– OpenGL a	and OpenCL demos		
GL 4.x · Tessellation    CL GPU · 4D Quaternion Julia Se			
OpenGL demos Start  > OpenCL demos Start  >			
Build: 1.15.0 [Jan 31 2012 @ 18:56:33]			

## This shows the graphics card has OpenGL 3.3 support.

If you don't have at least OpenGL 3.0, get the Windows drivers for your graphics card from here:

From the **code** zip file you downloaded, copy the **MinGW** directory To **C:\Program Files\CodeBlocks** (or whichever directory you placed MinGW). Overwrite the files that you have in your MinGW directory:

Confirm F	older Replace	×
<b>5</b> 2	This folder already contains a folder named 'MinGW'. If the files in the existing folder have the same name as files in the folder you are moving or copying, they will be replaced. Do you still want to move or copy the folder?	
	Yes Ves to All No Cancel	

In Code::Blocks, make a **new console application**.

New from template							
	Projects Build targets	Category: <a>A</a>	l categories>			•	<u>G</u> o
File: Cus Use	Files Custom	S.	AR	- 🤹	5	-	<u>C</u> ancel
	User templates	ARM Project	AVR Project	Code::Blocks plugin	Console application		
			8				
		D application	Direct/X project	Dynamic Link Library	Empty project		
		FLTK	GLFW OpenGL	GLUT	R		
		FLTK project	GLFW project	GLUT project	GTK+ project		
		LICHT	<b>S</b>		-		View as
		Irrlicht project	Kernel Mode Driver	Lightfeather proiect	Matlab project	•	C List
	TIP: Try right-dicki	ng an item					
	<ol> <li>Select a wizard type first on the left</li> <li>Select a specific wizard from the main window (filter by categories if needed)</li> <li>Press Go</li> </ol>						

Once you have created your project you should copy **InitShader.cpp** from the **code** zip file in the **common** directory to your project's directory. Add that file to your project by right clicking on the project's name and selecting to **Add files**.



Select InitShader.cpp and then select Open.



Press OK

Multiple selection	
Select the targets this file should belong to:	Wildcard select         Toggle selection         Select All         Deselect All         Selected: 2
OK Cancel	

Now InitShader.cpp is in your project.



Select a sample project to work from. Replace the code in main.cpp with whichever sample project you decide to work with. In our example, we will be working with CHAPTER02\_CODE\WINDOWS\_VERSIONS\ example3.cpp

Once you have copied this file into main.cpp locate the following lines:

// Load shaders and use the resulting shader program
GLuint program = InitShader( "vshader23.glsl", "fshader23.glsl" );

This tells the InitShader to make use of the following files **vshader23.glsl** and **fshader23.glsl**. You need to have them in your project directory. Please copy them to the directory where you stored you main.cpp file. Each program will use different shader files, so please make sure the proper files are copied before you run your program or you will get runtime errors.



From the Code::Blocks menu select Project, Build Options.



From the Build Options select #defines and type into the box:

FREEGLUT\_STATIC GLEW\_STATIC

Project build op	ntions
testing	Selected compiler
Debug Release	GNU GCC Compiler
	Compiler settings Linker settings Search directories Pre/post build steps Custom variables "Make" commands
	Policy: Append target options to project options
	Compiler Flags Other options #defines
	<u>O</u> K <u>C</u> ancel

In the linker settings tab, select to Add.

Project build o	ptions
testing	Selected compiler
- Debug Release	GNU GCC Compiler
	Compiler settings Linker settings Search directories Pre/post build steps Custom variables "Make" commands
	Policy: Append target options to project options
	Link libraries: Other linker options:
	Add Edit   Letter   Copy selected to
	<u>O</u> K <u>C</u> ancel

## For the W.E.B. Building on Campus (or Windows 7), you add the following libraries:

C:\Program Files (x86)\CodeBlocks\MinGW\lib\windows\libfreeglut.a

C:\Program Files (x86)\CodeBlocks\MinGW\lib\windows\libglew32.a

C:\Program Files (x86)\CodeBlocks\MinGW\lib\libopengl32.a

C:\Program Files (x86)\CodeBlocks\MinGW\lib\libgdi32.a

C:\Program Files (x86)\CodeBlocks\MinGW\lib\libwinmm.a

If you are on XP, Vista, or a system that uses the path C:\Program Files, for CodeBlocks, add in the following libraries **instead**:

C:\Program Files\CodeBlocks\MinGW\lib\windows\libfreeglut.a

C:\Program Files\CodeBlocks\MinGW\lib\windows\libglew32.a

C:\Program Files\CodeBlocks\MinGW\lib\libopengl32.a

C:\Program Files\CodeBlocks\MinGW\lib\libgdi32.a

C:\Program Files\CodeBlocks\MinGW\lib\libwinmm.a



Select No.

When done press **OK**.

Test the project by pressing F9. Hopefully you get the following window

