## SDL Lab Using the SDL Manager

The goal for today's lab is to produce the following SDL picture:



The steps to follow are listed below. Steps 1 & 2 are to be done in pairs. Once completed, drop in the DropBox and I'll copy to public. Then individually complete the lab.

1. Copy the solution SDLRectangle in the Public folder of 3.23Files to your desktop, Build and Run.



- 2. Add a Visual C++|General|Empty Project SDLManager. We are changing this up a bit from the assignment!!!!!
  - a. Right-click on the project SDLManager
     Properties|Linker|System|SubSystem and select Windows (/SUBSYSTEM:WINDOWS)

Configuration:	Active(Debug)		~	Platform:	Win32	
<ul> <li>Configuration Properties</li> <li>General</li> </ul>		SubSystem			1	Windows (/SUBSYSTEM:WINDOWS)
		Minimum Required Version				
Debugging VC++ Directories Inker General Input	Heap Reserve Size					
	Heap Commit Size					
	Stack Reserve Size					
	Stack Commit Size					
	Enable Large Addresses					
Manifest File Debugging		Terminal Server				
		Swap Run From CD				No
System	Swap Run From Network				No	
Optimization Embedded IDI		Driver				Not Set

b. Set all paths for SDL and SDLManager

Configuration:	Active(Debug)				$\sim$	Platform:	Win32	
<ul> <li>Configuration Properties</li> <li>General</li> </ul>		Debugger to	launch:					
		Local Winde	ows Debugger					
Debugg	ing							
VC++ D	irectories	Comma	and					\$(TargetPath)
Linker     General     Input		Comma	and Arguments					
		Workin	g Directory					\$(ProjectDir)
Man	ifest File	Attach						No
Deb	uaaina	Debugg	er Type					Auto
System		Environ	ment					PATH=C:\SDL2\lib\x86
Configuration:	Active(Debug)			~	Plat	tform: Wi	n32	
▲ Configuratio	n Properties	✓ General						
General Executal Debugging Include VC++ Directories Referen Linker Library I General Library I Input Source		Executat						
		Include	Include Directories					? X
		Reference						*- ¥ L A
		Library [						
		Library V	\$(SolutionDir)\SDLManager					^
		Source [	C:\SDL2\include					
Manh	EE F:1-							

Configuration:	Active(Debug)			✓ Platfor	r <b>m</b> :	Win32		
Configuration	on Properties	~	General					
General			Executable Directories	Library Directories			?	×
Debuggi	ing		Include Directories					
VC++ Directories  Linker			Reference Directories				* ×	* *
			Library Directories	\$/SelutionDir)\SDI Manages\Debug				
Gene	eral		Library WinRT Directorie	C:\SDL2\lib\x86				

SDLManager Property Pages

Configuration: Active(Debug)		V PI		
Configuration Properties	Additional Dependencies			
General	Ignore All Default Libraries	Additional Dependencies SDL2.lib SDL2main.lib SDL2_gfx.lib SDL2_ttf.lib SDL2_Mixer.lib		
Debugging	Ignore Specific Default Libraries			
VC++ Directories	Module Definition File			
▲ Linker	Add Module to Assembly			
General	Embed Managed Resource File			
Input	Force Symbol References			
Manifest File	Delay Loaded Dlls	SDL2_image.lib		
Debugging	Assembly Link Resource			

- c. Copy Color.h, Color.cpp, SDLManager.h, SDLManager.cpp, SDLDriver.cpp into SDLManager.
- d. Run the SDLDriver to make sure you've done this correctly.
- 3. Add a Visual C++|General|Empty Project SDLRectangle. There should now be 3 projects in your solution.
- 4. Add the paths as in 2a) and 2b for SDLRectangle.
- 5. Set the paths, dependencies, and library files as follows:
  - a. Add include path(s) to VC++ Directories "Include Directories"

Include Directories

\$(SolutionDir)\SDLManager C:\SDL2\include \$(SolutionDir)\SDLRectangle

b. Add Library path(s) to VC++Directories "Library Directories

Library Directories

\$(SolutionDir)\SDLManager\Debug C:\SDL2\lib\x86

\$(SolutionDir)\SDLRectangle

## c. Add Additional Dependencies

Additional Dependencies

- SDL2.lib SDL2main.lib SDL2\_gfx.lib SDL2\_ttf.lib SDL2\_Mixer.lib SDL2\_image.lib Color.obj SDLManager.obj
- d. Set Project Dependencies

Solution 'SDLManager' Property Pages

Configuration: N/A			
Common Properties	Projects:		
Startup Project	SDI Rectangle		
Project Dependencies	obeneetangie		
Code Analysis Settings	Depends on:		
Debug Source Files	SDI Manager		
Configuration Properties	Social anager		

- 6. Create a driver called SDLRectangleDriver.cpp in the SDLRectangle project Source Files. Then copy the source code from SDLDriver.cpp into SDLRectangleDriver.cpp. Build and run.
- 7. Add an SDLRectangle interface in SDLRectangle.h as follows:

```
// File name: Rectangle.h
// Author: Computer Science, Pacific University
// Date:
          3/23/2018
// Class: CS 250
// Assignment: SDLRectangle Lab
// Purpose: Declaration for a SDLRectangle class
#pragma once
#include "SDLManager.h"
#include "Color.h"
class SDLRectangle
Ł
 public:
  SDLRectangle (int xPos = 50, int yPos = 50, int length = 5, int height = 5,
             const Color &rcColor = Color::BLUE);
  void draw (SDLManager &rcSDLManager);
 private:
  int mXPos;
  int mYPos;
  int mLength;
  int mHeight;
   Color mcColor;
};
```

- 8. Write the implementation for SDLRectangle.h in SDLRectangle.cpp
- 9. Create and display a Rectangle on the screen as shown in the window at the top of this lab. The window is at location (100, 100) with a size of 320x320. The rectangle is at location (100, 100) with length 100, height 50, and color BLUE.