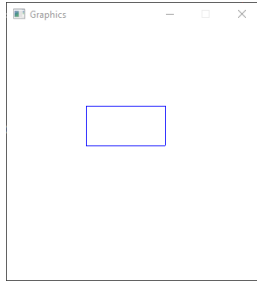


SDL Lab Using the SDL Manager

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



The steps to follow are:

1. Copy the solution SDLRectangle in the Public folder to your desktop.
2. Add a **Win32 Project** SDLManager as described on the current assignment. Run the SDLDriver to make sure you've done this correctly. You should get the black circle in a Graphics window.
3. Add a new **Win32 Project** SDLRectangle to your solution. There should now be 3 projects in your solution.
4. Set the paths, dependencies, and library files as follows:
 - a. Add include path(s) to VC++ Directories "Include Directories"

Include Directories

```
C:\Program Files %28x86%29\SDL2.0.3\include  
$(SolutionDir)\SDLManager
```

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

Library Directories

```
C:\Program Files %28x86%29\SDL2.0.3\lib\x86  
$(SolutionDir)\SDLManager\Debug
```

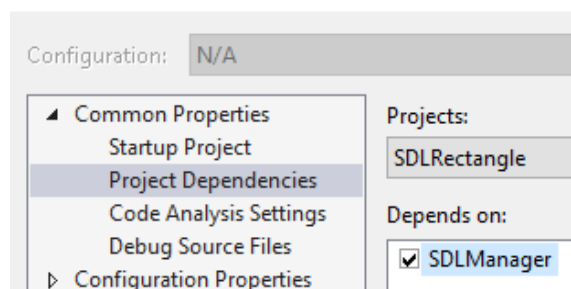
- c. Add Additional Dependencies

Additional Dependencies

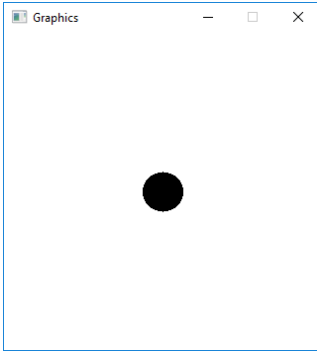
```
SDL2.lib  
SDL2main.lib  
SDL2_gfx.lib  
SDL2_ttf.lib  
SDL2_Mixer.lib  
SDL2_image.lib  
Color.obj  
SDLManager.obj
```

- d. Set Project Dependencies

Solution 'SDLManager' Property Pages



5. 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. You should see the following:



6. Add an `SDLRectangle` interface in `SDLRectangle.h` as follows:

```
#pragma once
//*****
// File name:  SDLRectangle.h
// Author:    Computer Science, Pacific University
// Date:     3/22/2017
// Class:    CS 250
// Assignment: Rectangle Lab
// Purpose:  Declaration for a Rectangle class
//*****
#include "SDLManager.h"
#include "Color.h"

class SDLRectangle
{
public:
    SDLRectangle (int xPos = 50, int yPos = 50, int length = 5, int height = 5,
                 const Color &rcColor = Color::BLUE);
    void render (SDLManager &rcSDLManager);

private:
    int mXPos;
    int mYPos;
    int mLength;
    int mHeight;
    Color mcColor;
};
```

7. Write the implementation for `SDLRectangle.h` in `SDLRectangle.cpp`
8. 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`.

9. Bonus #1

Overload the extraction operator to read in up to 10 `SDLRectangles` from a data file called `rectangles.txt`. Use the data file:

```
10 10 10 5
100 100 10 50
50 50 5 5
```

10. Bonus #2

Create a random color for each of the rectangles.