

COS30031 - Task 15

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1. What is the URL for the SDL2 Website?

<https://www.libsdl.org/>

2. What does “SDL” stand for?

Simple DirectMedia Layer

3. What license is SLD2 released under?

The Zlib license https://www.zlib.net/zlib_license.html

4. What platforms does SDL2 support?

Windows, Mac OS X, Linux, iOS and Android.

5. What language and standard (version) is SDL2 written in?

It's written in C meaning it is compatible with c++. The first release of sdl2 was written in c11 but I can't find any information if the version has been updated.

6. Where (URL) can you search the SDL API by name for particular function or type details?

<https://wiki.libsdl.org/wiki/search>

7. SDL can be downloaded as “Source Code”, “Runtime Binaries” or “Development Libraries”. What is the difference?

Source Code: This is the original uncompiled source code for SDL2.

Runtime Binaries: The compiled binary code for SDL2 that contains all the library functions that a program using SDL would need at runtime.

Development Libraries: This is the runtime binaries as well as the header files and other files you will need while developing an SDL2 project.

8. For the different download options, which one do you personally want to use with your IDE setup?

Development Libraries.

9. In simple terms, what are some of the differences between a multimedia library like SDL and a “game framework”? Think about what SDL is trying to provide compared to what a game framework tries to provide.

A multimedia library contains functions/classes and other features that a programmer can make use of to build a piece of software or a game.

A framework is made up of code that the developer doesn't directly use themselves. Instead the code the developer writes is written within or called by the framework.

An example of the two would be how using SDL we would have to write our own render and update functions and make them update/render different gameplay states etc. but if we were to use say the Unity engine we just write our code in update functions attached to objects in a scene, all of which are provided to us by the Unity engine and must work within.

10. For your particular IDE and setup, what settings are needed to make your project work with SDL2?

- **There will need to be libraries/references set. Make a clear note of what and how.**
- **Even if you use a pre-setup SDL2 project, inspect the settings/properties and note where the library and reference details are set and also check for relevant compiler/linker options.**

What needs to be configured:

- Include directories
- Dependencies
- Library Directories
- SDL2 environment variables

How to configure:

1. Download the Development Libraries and store them in a folder where you know you will be able to find them in the future.
2. Create a new Visual Studio project and go into the project settings.
3. First add the Include Directories. Go to Configuration properties -> VC++ Directories -> Edit
4. Add the directory for the “include” folder stored in the development library folder you downloaded before. This will configure the include directories.
5. Next add the dependencies under Linker -> Input -> Additional Dependencies -> Edit
6. Add: **SDL2.lib; SDL2main.lib;**
7. Next add the library directories. Go to VC++ Directories -> Library Directories -> Edit

8. Add the directory for the library with the architecture you want to use. Eg: ...\\SDL2-2.0.16\\lib\\x64 or ...\\SDL2-2.0.16\\lib\\x86
9. Make sure you have set your project configuration to match the version you included.
10. (for windows) Add the system environment variables by going to Windows Settings -> Edit the system environment variables -> Environment variables -> New
11. Add the lib directory that you added to Visual Studio before

11. What tutorials/internet resources did you find most useful when creating your demo program?

Great tutorial on how to set up SDL2 in a VS project:

https://lazyfoo.net/tutorials/SDL/01_hello SDL/windows/msvc2019/index.php

Good tutorial on the event manager and key inputs:

https://lazyfoo.net/tutorials/SDL/04_key_presses/index.php