COS30031 Spike03 Frameworks report

The three frameworks I selected

* Allegro
* Raylib
* Simple Direct Media Layer (SDL)

# Summaries

## Allegro 5

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Description automatically generated

Allegro is a cross-platform library aimed mainly at multimedia and video game programming. It handles common low-level tasks such as user input, drawing images and playing sounds etc. and generally abstracting away the underlying platform.

## Raylib

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Description automatically generated

Raylib is a simple and easy to use library to enjoy video game programming. Focused on being minimalistic and learned from a cheatsheet and examples rather than large wiki’s.

It is a very modular library that has been setup and named very well.

## SDL 3

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Description automatically generated

Simple Direct Media layer is a development library designed to provide low level access to audio, joystick, keyboard and graphics hardware. It is used in emulators and video playback software along with games.

# Comparison

|  |  |  |  |
| --- | --- | --- | --- |
| Features | Allegro | Raylib | SDL |
| Code Language | C/C++ | C/C++ | C/C++ |
| Supported Languages  (language bindings stated by website) | 9 | 60+ | 16 |
| Multi-platform | yes | yes | yes |
| Graphics access | OpenGL/Direct3D | OpenGL | OpenGL/Direct3D |
| Audio recording support | yes | yes | yes |
| Video Playback | yes | no | yes |
| shaders | yes | yes | yes |
| Low-level polygon drawing | yes | yes | yes |
| 3D | No Support | Supported | No Support |

Raylib is fully focused on providing a game library over the other two. It is even more modular than the other two.

It’s downside is that it does not have as extensive of a wiki, preferring to rely on a cheat sheet and examples, which is the best way in theory to teach/guide code, in practice however, it will fall short without easy access to specific functions on a wiki, preventing simple searches.

Allegro and SDL both perform a similar role of handling multimedia things along with games with both not supporting 3D rendering.