The game that I created for the pong was a 2 player clone of Pong. I chose to use Simple Digital Media Layer (SDL) library to create my game. SDL is a cross-platform development library designed to provide low level access to audio, keyboard, mouse, joystick, and graphics hardware via OpenGL and Direct3D. I looked into Simple and FAST Multimedia Library (SFML), but ultimately I decided to go with SDL.

The program can be broken up into classes, functions,SDL pointers and objects.

The program has three classes

* Ball
* Paddle
* Textures

The ball and paddle classes have similar functions to

* Set object dimensions
* Initialize movement variables
* Setup SDL graphic info
* Event Handling

Since more than one tecture needed to be added for the program a texture dimensions were handled in this class. Other functions included:

* Render
* Set Color
* Image Loading

Next are the functions

* Init - to initialize SDL
* Load - Load up the media
* Close - to quit SDL and and release the resources
* SDL pointer
  + Game Window
  + Game render
  + Fonts
* SDL Objects
  + SDL Rect
  + Sounds Effects

This is how the program flows in main

Initialize SDL

Load media

Initial objects

Move objects

Check collision

Reset if ball off screen

Render Graphics

Quit if the play request

Free resources Close SDL

I ran into problems that I still have not figured out how to correct.

* Ball bouncing off the paddle can get predictable
* Ball speed changes

There are also some things I would like to improve

* Add scores and ~~sounds~~
* Add a splash screen and menu
* Add AI to second paddle

Unfortunately I am unable to deploy the program and create an executable, but I am still working on it. In order to run the code the SDL libraries are nneeded

SDL - <http://libsdl.org/download-2.0.php>

SDL\_ttf - <https://www.libsdl.org/projects/SDL_ttf/>

SDL\_mixer - <https://www.libsdl.org/projects/SDL_mixer/>

SDL\_image - <https://www.libsdl.org/projects/SDL_image/>