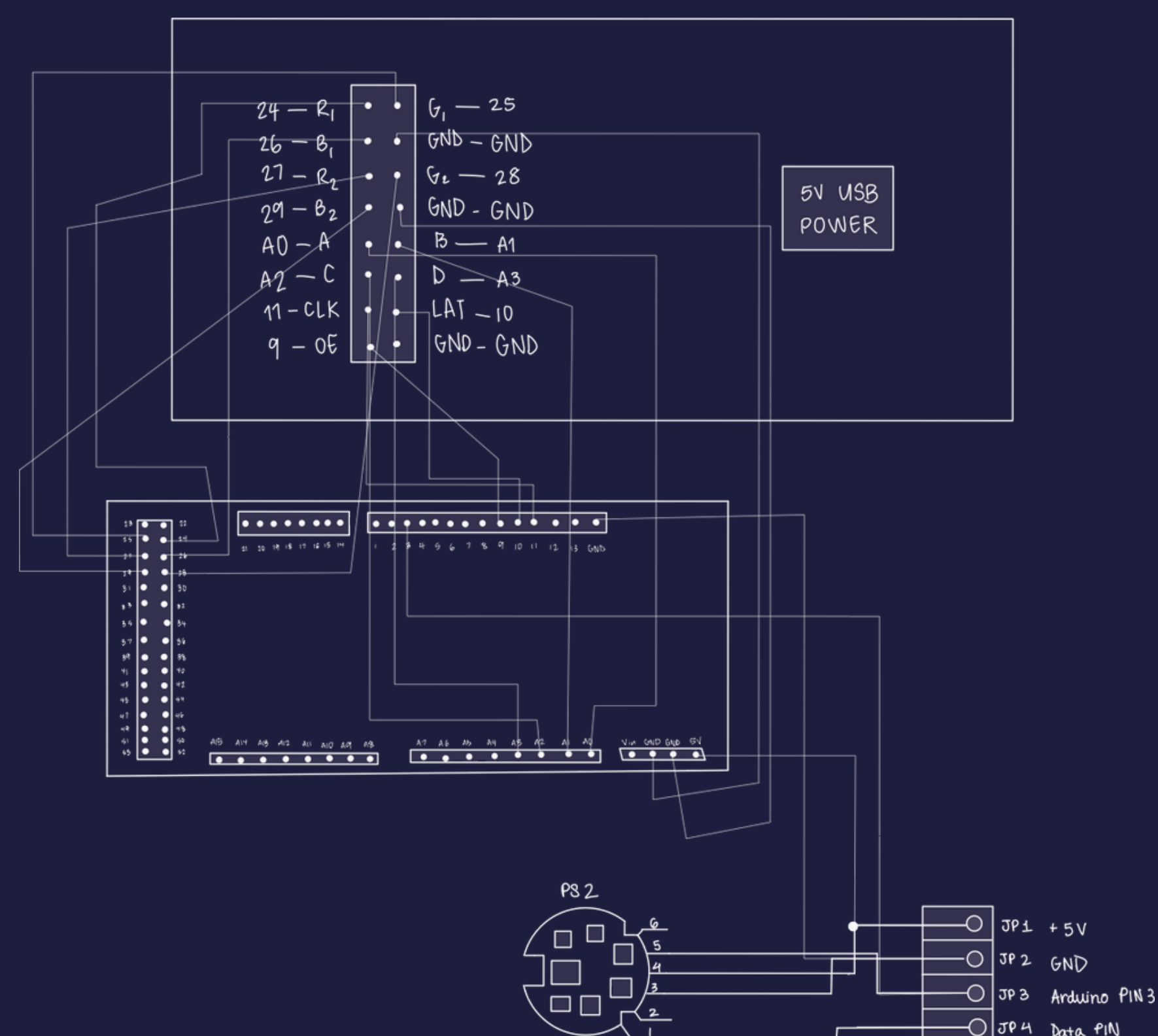# PERSONALIZED LIGHTBOX

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OBJECTIVE

The goal of our project is to use a LED Matrix in combination with a PS2 Keyboard that can take user input from the keyboard or serial monitor to display letters and symbols onto the matrix in the way that a manual light box with cards does. Our light box will have several available functions to change the colors of the text, blink the text, create flashing patterns, display shapes, etc.

SCHEMATIC + MATERIALS

- Arduino Mega
- PS2 Keyboard
- 64 x 32 RGB LED Matrix
- 5v Power Supply
- Arduino Uno Kit
- Male to Female PS2 Connector

HOW IT WORKS

This project works by including libraries that allows us to interact with the matrix and the PS2 keyboard. Using an Arduino Mega allows us to interact with both simultaneously. The PS2 library allows us to receive user input from the keyboard and print it onto the LED matrix.

ACKNOWLEDGEMENTS

FUTURE IMPROVEMENTS

Some improvements that we are hoping to make are on the software side of the project. We want to make the matrix run more smoothly with live typing functionality and add to the libraries used to create more functions for the lighttbox. The matrix and PS2 keyboards clash, so we were limited. In the future, we would like to write our own library for the matrix. Adding mobile app functionality is a possibility as well.

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