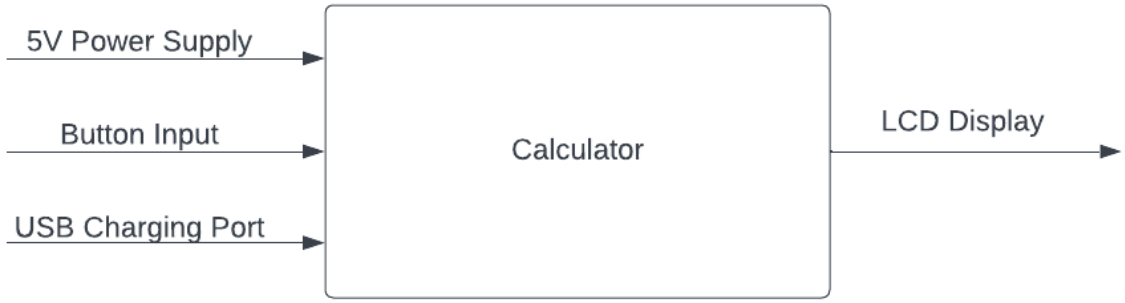
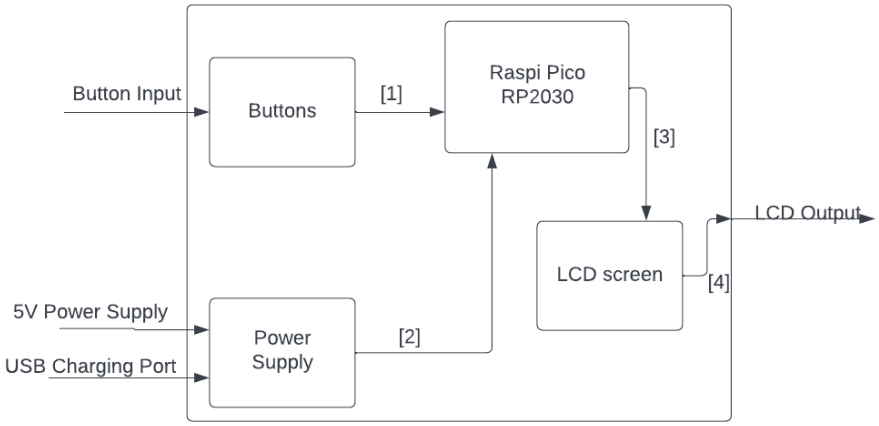
Calculator: Level 0



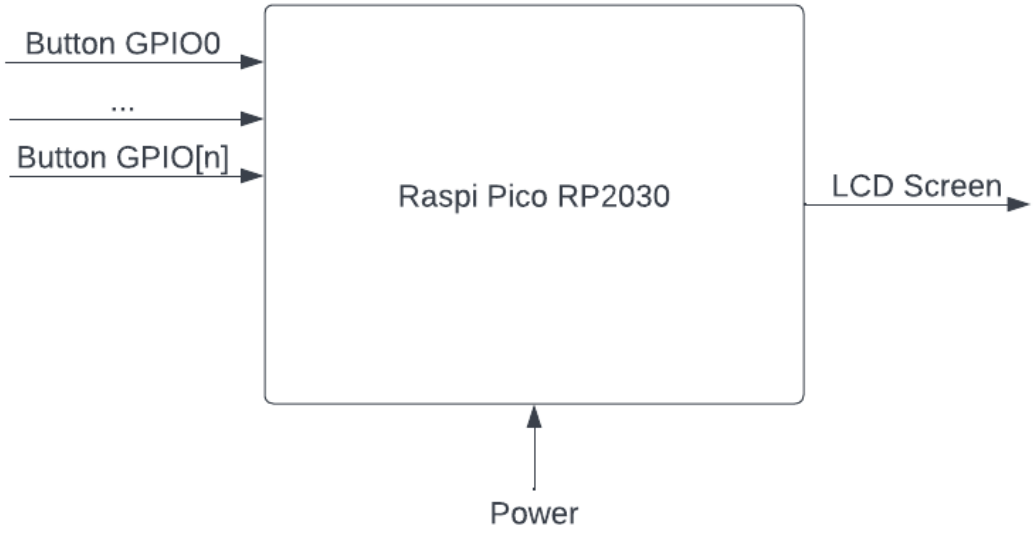
Module	Calculator
Inputs	Power: 5V DC Button Inputs: Variable Charging Port: USB 5V DC
Outputs	LCD Display: Variable
Functionality	Take input of a mathematical expression and produce a precise calculation. Button input should have user control. LCD display should output the correct calculation to show the user. The calculator can perform basic operations on decimal, hex, and binary numbers.

Calculator: Level 1



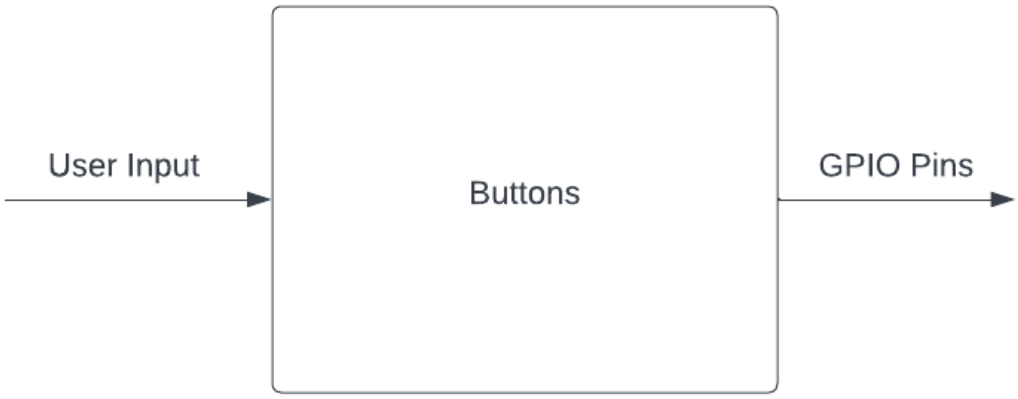
[1]: GPIO pins
[2]: 5V to power Raspi Pico
[3]: I2C data
[4]: LCD Display for user

Raspi Pico RP2030: Level 1



Module	Raspi Pico RP2030
Inputs	Button GPIO[n] Pins: Tracks I2C data coming in from each button push. Power: 5V supply
Outputs	LCD Screen: I2C data is sent to the LCD screen for display output. The LCD screen is also powered by the Raspi Pico.
Functionality	The Raspi Pico RP2030 serves as the brain of the calculator, processing all incoming information and sending it out to be displayed.

Buttons: Level 1

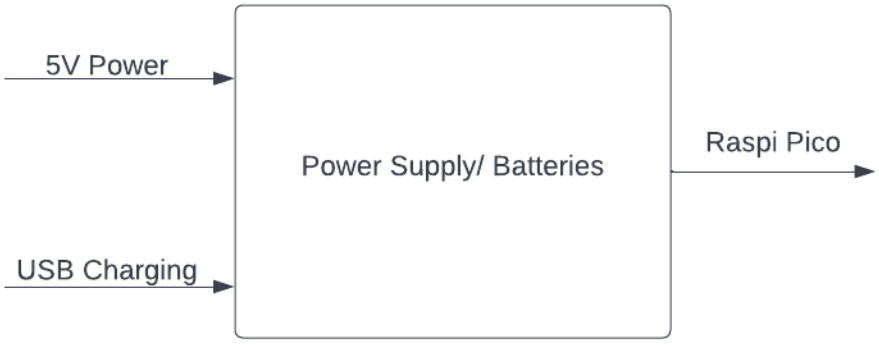


Module	25 Buttons
Inputs	User Input: 25 buttons in a 5x5 array, each representing a number, mathematical operation, or turning the device off.
Outputs	GPIO Pins: Connecting to Raspi Pico input pins for processing. Resistors: Each row/column will connect to a ohm resistor (10 total).
Functionality	The user can press any button to input the desired mathematical expression. This will be read and processed by the Raspi Pico.

LCD Screen: Level 1

Module	LCD Screen
Inputs	GPIO Pins: I2C data from the Raspi Pico.
Outputs	LCD Output: LCD display showing the precise calculation of the User's desired input operation.
Functionality	Will display the information/calculation processed by the Raspi Pico for the user to see.

Power Supply: Level 1



Module	Power Supply
Inputs	Power: 5V USB Charging: Charge the batteries through a USB input.
Outputs	Raspi Pico: Will supply the Raspi Pico with 5V for necessary function.
Functionality	Supplying the Raspi Pico with DC voltage through a chargeable battery.