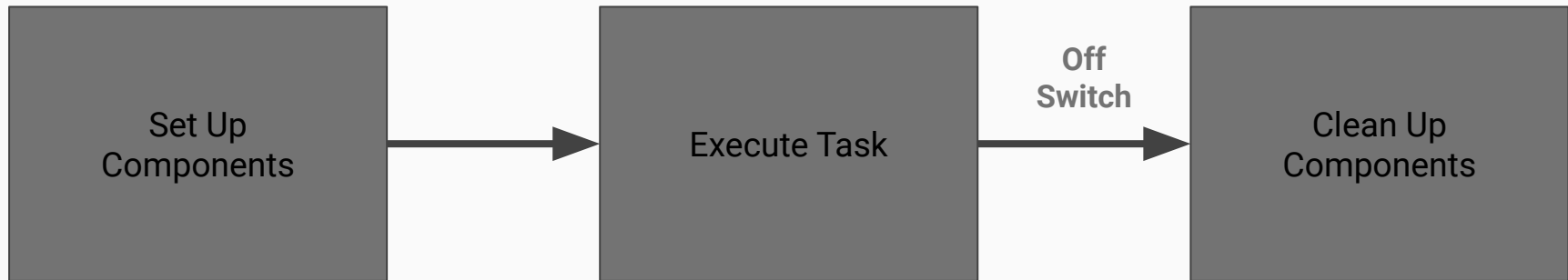


Automated Jewelry Box

Code Flow Diagram



High View



Set Up Components - PinOuts

Stepper Motor Pins:

- 5 pins (GPIO)
 - P2_2
 - P2_4
 - P2_6
 - P2_8
 - P2_10
- 3 GPIO for Buttons
 - L_Button = P2_25
 - R_Button = P2_27
 - Rand_Button = P2_29

Lights Pins:

- PWM for Control
 - Lights = P2_1
- 1 GPIO for buttons
 - Mode_Button = P2_31

Potentiometer:

- 1 analog pin
 - POT = P1_19

Set Up Components - Power Diagram

Stepper Motor and Fairy Lights

5 volts power

All Buttons

3.3 volts

Potentiometer

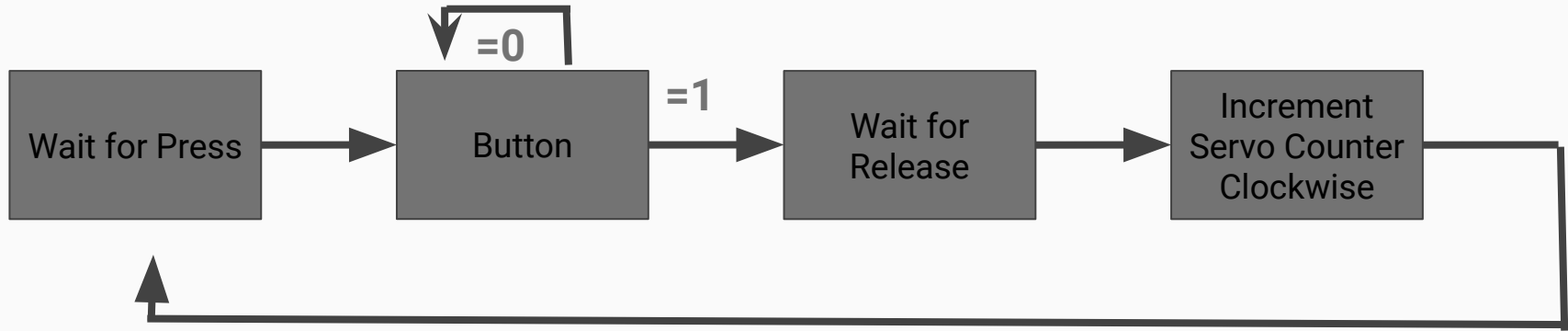
1.8 volts

Set Up Components - Object Classes

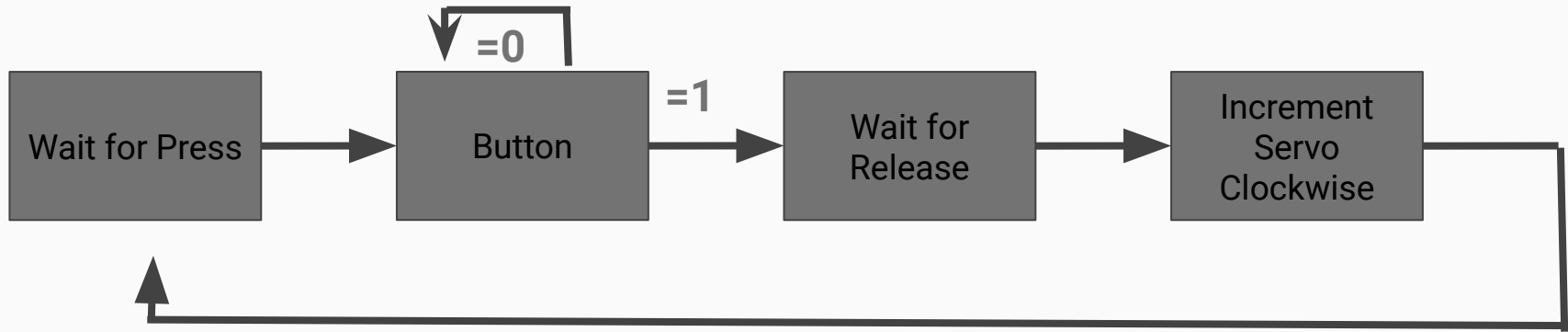
- Servo
 - L_Button
 - R_Button
 - Random_Button
- Lights
 - Potentiometer
 - Mode_Button
- Power Switch

Servo Code Flow

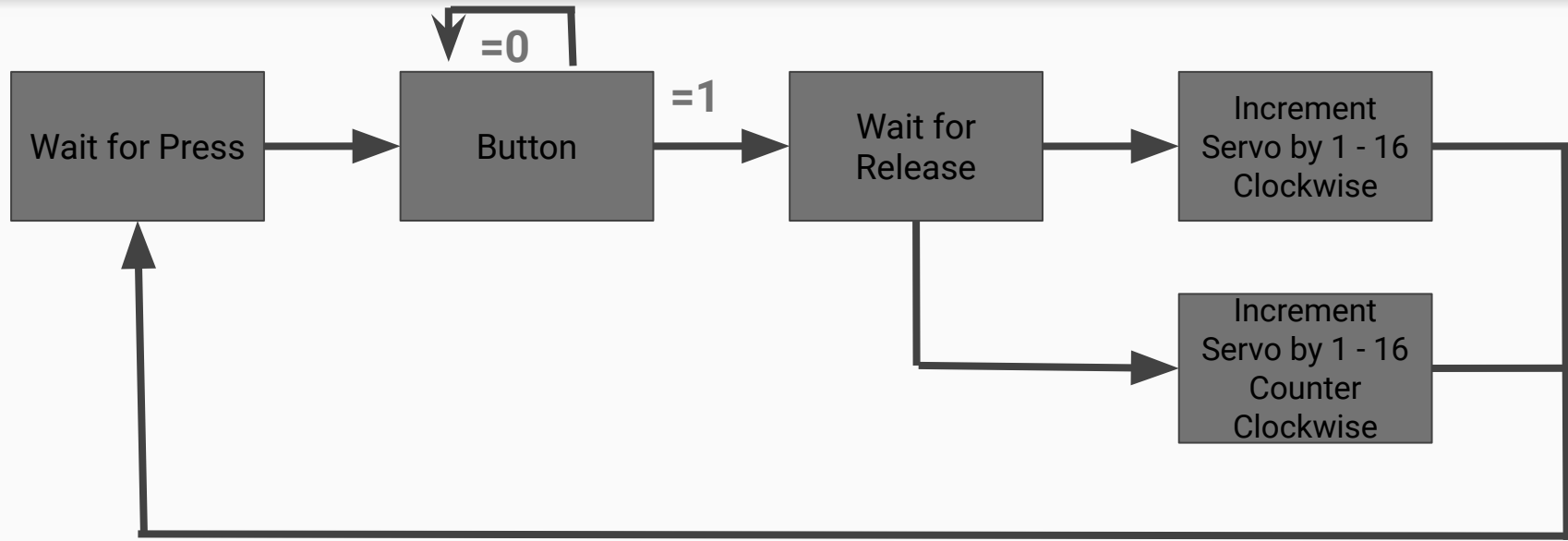
Executable Task - L_Button for Servo



Executable Task - R_Button for Servo

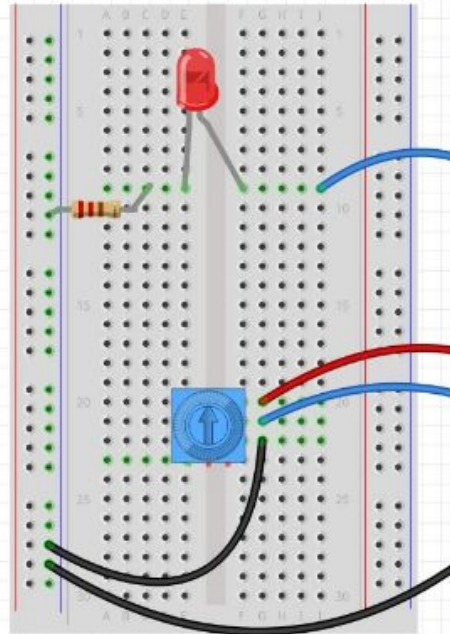


Executable Task - Random_Button for Servo



Lights Code Flow

Executable Task - Potentiometer (Brightness)

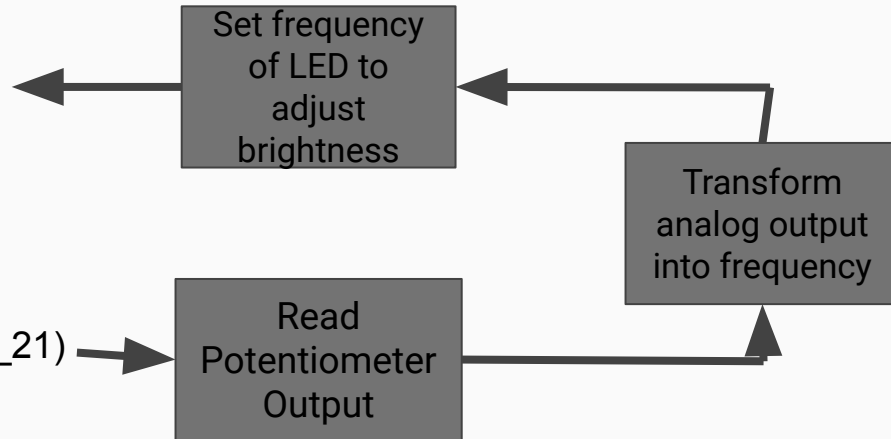


PWM0
(P1_36)

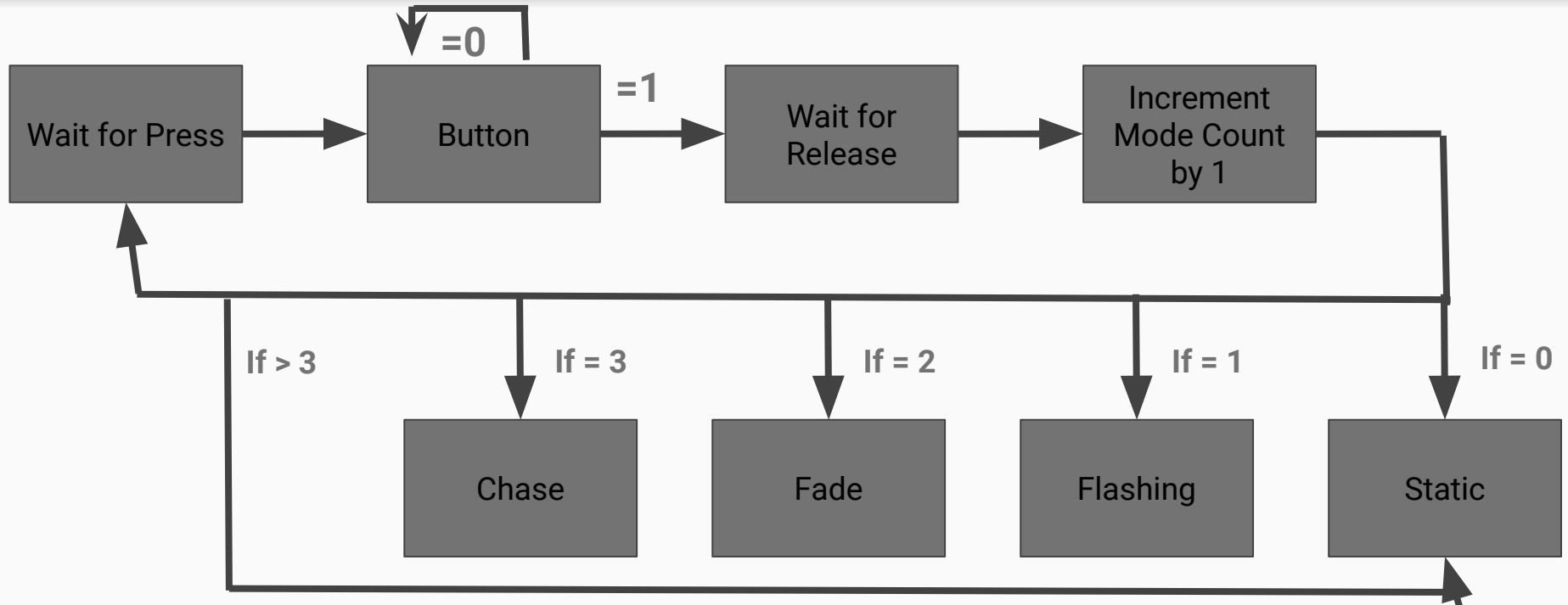
5v

AIN 1 (P1_21)

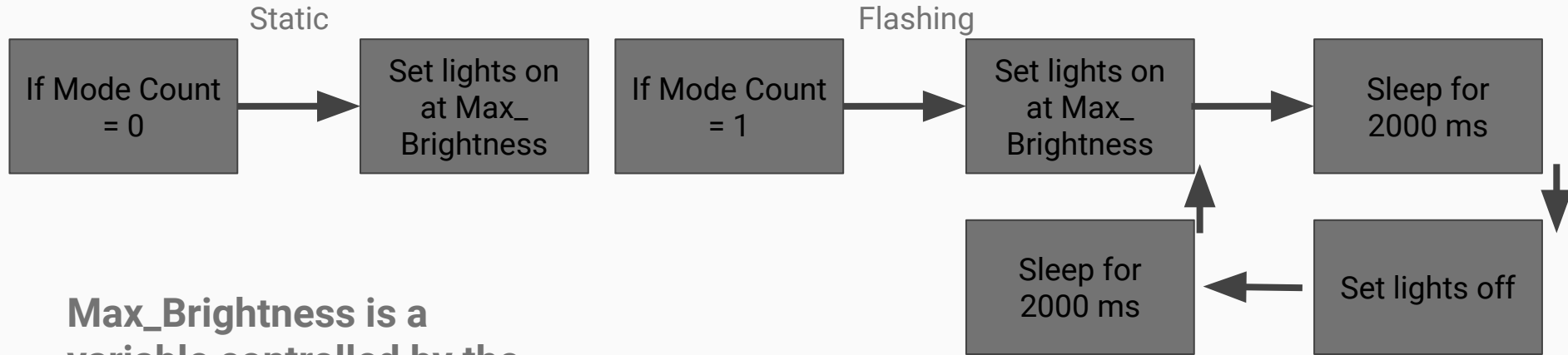
GND



Executable Task - Light Modes

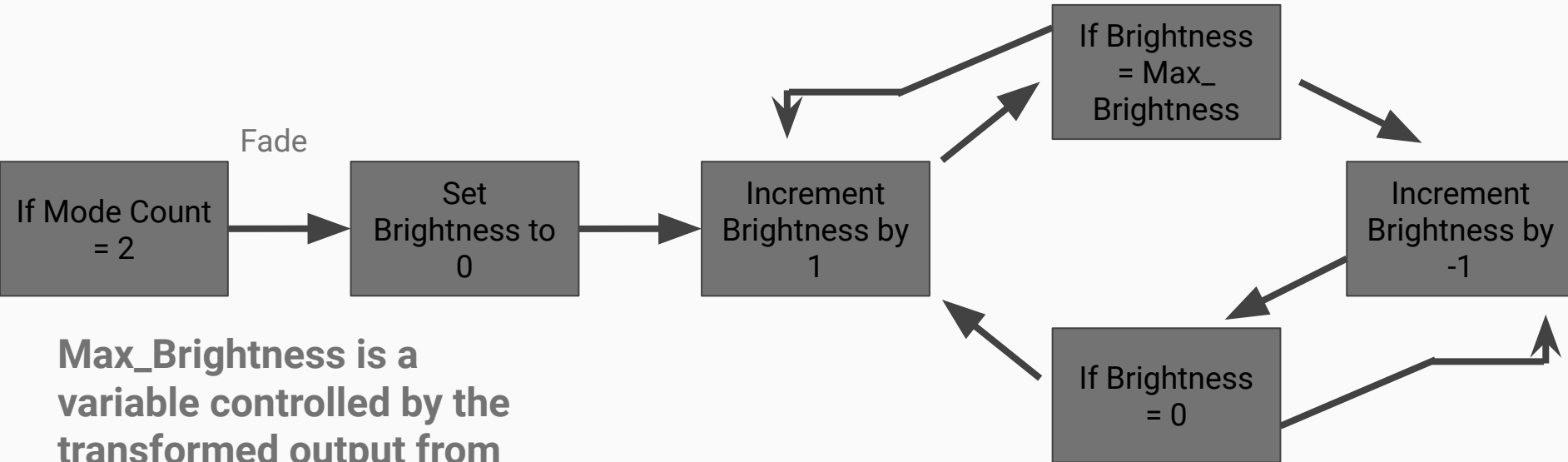


Executable Task - Light Modes



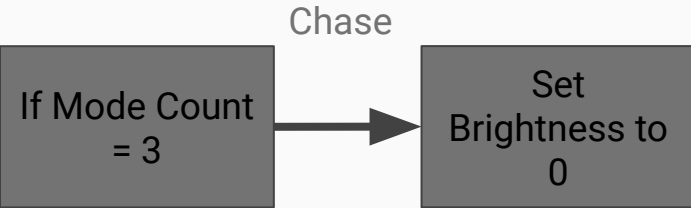
Max_Brightness is a variable controlled by the transformed output from the potentiometer

Executable Task - Light Modes



Max_Brightness is a variable controlled by the transformed output from the potentiometer

Executable Task - Light Modes



Max_Brightness is a variable controlled by the transformed output from the potentiometer

