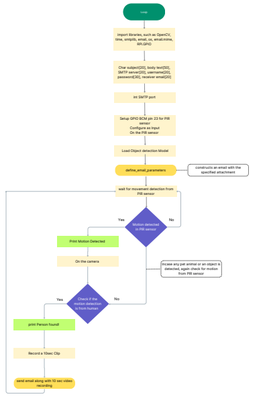
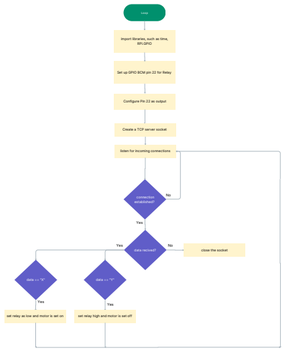
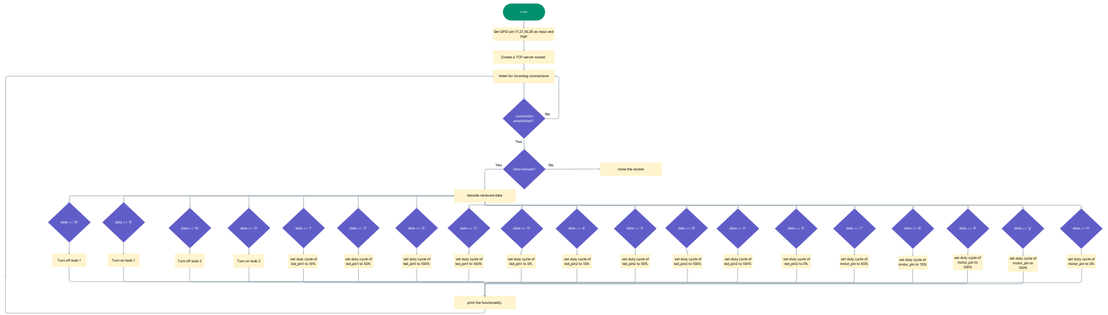

loop
import libraries, such as OpenCV, time, smtplib, email, os, email.mime, RPi.GPIO
Char output[20], body text[200], passwordEntered[20], recipient[20], sender[20], subject[20]
int SMTP port
Setup GPIO BCM pin 23 for PIR sensor
Configure Pin 23 Input
On the PIR sensor
Load Object detection Model
define_email_parameters
construct an email with the specified attachment
wait for movement detection from PIR sensor
Yes
No
sensor detectes a PIR sensor
Print Motion Detected
On the camera
Increase any pair another or an object is detected, continue to wait for motion from PIR sensor
check if the camera detectes a human object
Yes
No
print Person found!
Record a 10sec Clip
send email along with 10 sec video recording


loop
Import libraries, such as time, RPi.GPIO
Set up GPIO BCM pin 22 for Relay
Configure Pin 22 as output
Create a TCP server socket
listen for incoming connections
connection established?
No
Yes
data recieved?
Yes
No
close the socket
data == "0"
data == "1"
Yes
Yes
set relay as low and motor is set on
set relay high and motor is set off


loop
Set GPIO pin 17,27,16,26 as input and high
Create a TCP server socket
listen for incoming connections
connection established?
No
Yes
data recieved?
Yes
No
close the socket
decode recieved data
data == "0"
data == "1"
data == "2"
data == "3"
data == "4"
data == "5"
data == "6"
data == "7"
data == "8"
data == "9"
data == "10"
data == "11"
data == "12"
data == "13"
data == "14"
data == "15"
data == "16"
data == "17"
data == "18"
data == "19"
Turn off bulb 1
Turn on bulb 1
Turns off bulb 2
Turn on bulb 2
set duty cycle of led_pin1 to 75%
set duty cycle of led_pin1 to 50%
set duty cycle of led_pin1 to 100%
set duty cycle of led_pin1 to 25%
set duty cycle of led_pin1 to 0%
set duty cycle of led_pin1 to 50%
set duty cycle of led_pin1 to 50%
set duty cycle of led_pin1 to 100%
set duty cycle of led_pin1 to 0%
set duty cycle of motor_pin to 25%
set duty cycle of motor_pin to 50%
set duty cycle of motor_pin to 100%
set duty cycle of motor_pin to 0%
set duty cycle of motor_pin to 25%
print the functionality