**Day 6 Lab Task**

**Group 3**

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Problem: Fingerprint door lock Sensor

import machine

import time

from machine import Pin,PWM

import utime

MID = 1500000

MIN = 1000000

# Define GPIO pins

FINGERPRINT\_PIN = 0 # GP0 for fingerprint sensor

pwm = PWM(Pin(27)) # GP15 for servo motor

pwm.freq(100)

pwm.duty\_ns(MID)

# Main program loop

while True:

# Check if fingerprint sensor is touched

if machine.Pin(FINGERPRINT\_PIN, machine.Pin.IN).value() == 1:

print("Fingerprint detected!")

pwm.duty\_ns(MIN)

utime.sleep(5)

print("Door Open")

pwm.duty\_ns(MID)

utime.sleep(1)

print("Door Closed")

time.sleep(1) # Small delay to prevent excessive checking