

LockBox Secure+

Smart Safe System

GROUP B4



Member



Bisma Alif Alghifari

2106721402



M. Najih Aflah

2106653880



Daffa Anis Fahrizi

2106731365



Ibrahim Rijal

2106633323

LockBox Secure+

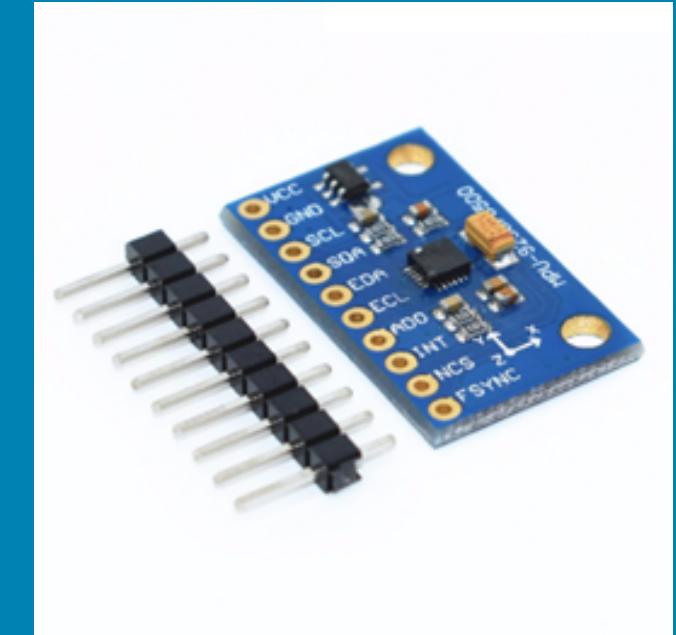
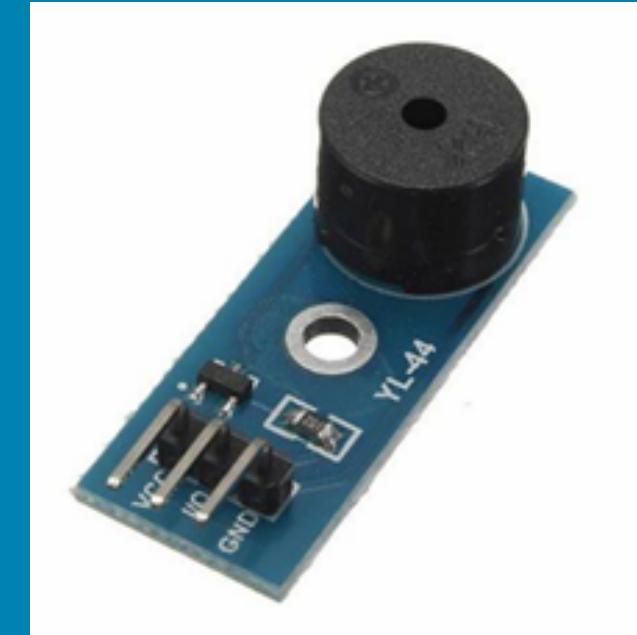


LockBox Secure+ is a smart safe equipped with cutting-edge technology and an integrated camera, ensuring the protection of valuables. It alerts promptly upon any unauthorized access attempts or movements, offering a modern and secure solution for safeguarding belongings.

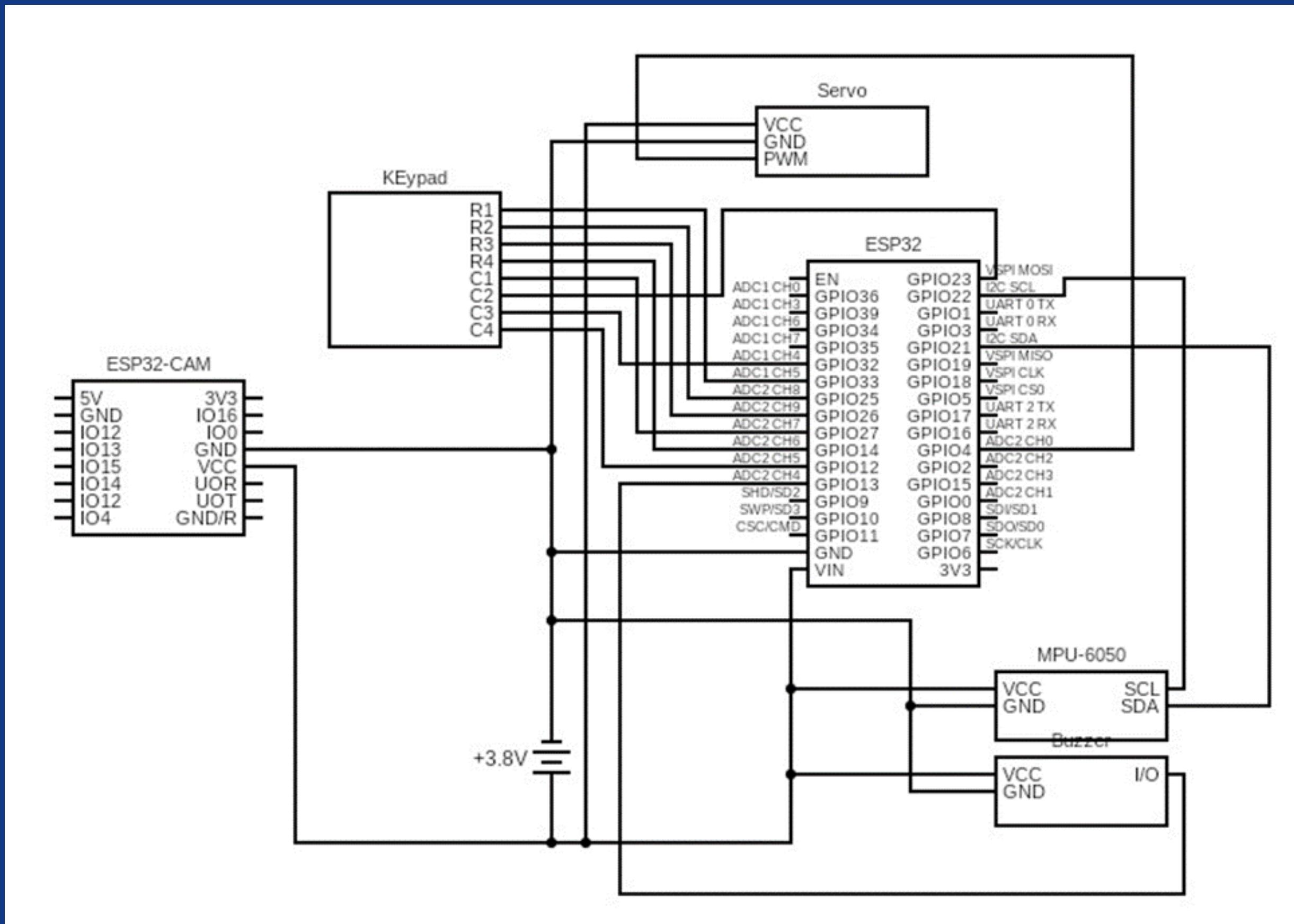
Features:

- Smart Lock Technology: Offers advanced security using a Numpad Pad for secure access.
- Integrated Camera: Captures access attempts and swiftly transmits images to owners via secure channels like Telegram.
- Motion Sensors: Detects any tampering or movement, triggering immediate alerts for added security.
- Audible Notifications: Equipped with a built-in buzzer for audible alerts, ensuring prompt responses to security threats.

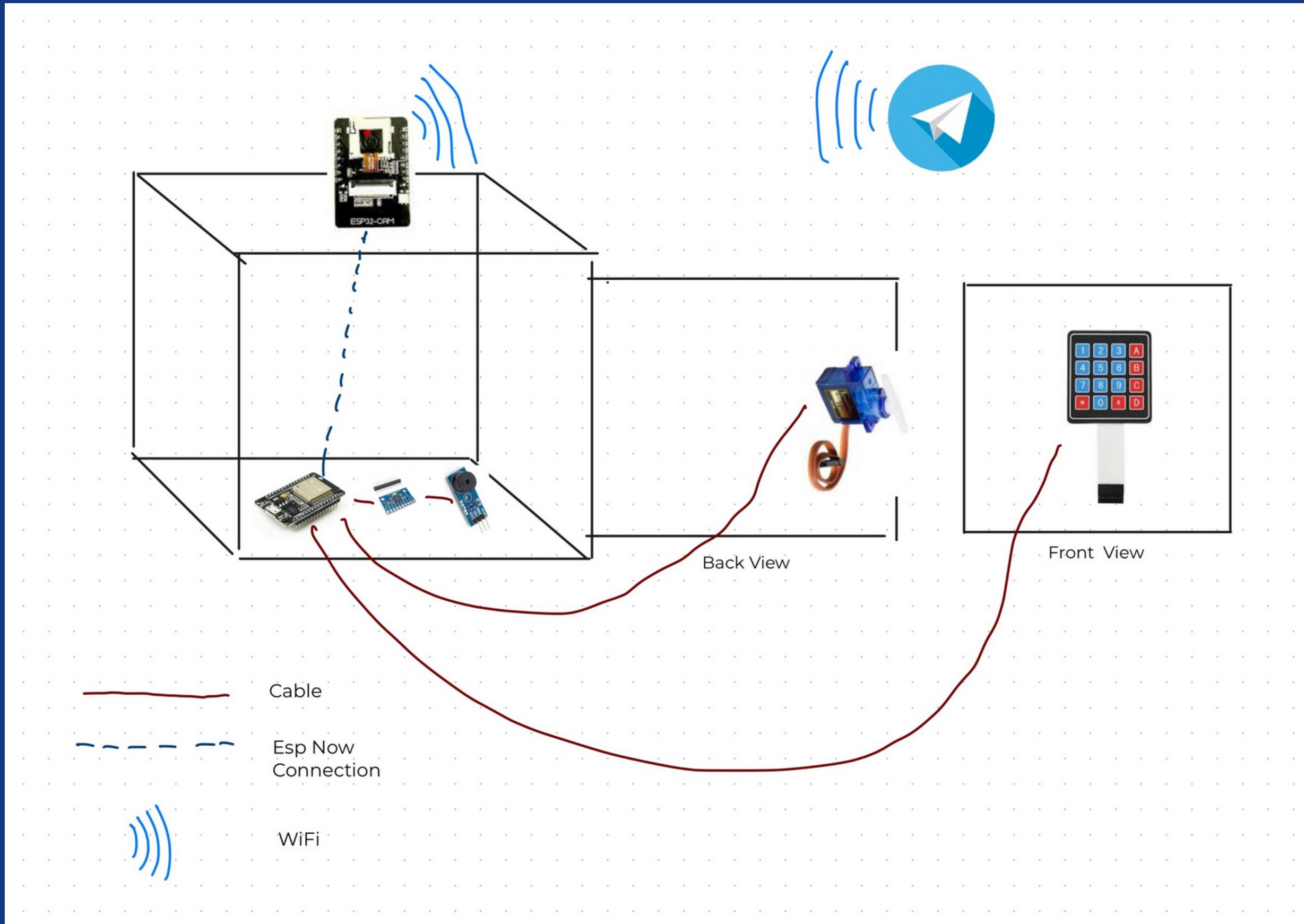
Tools and Materials



Hardware Schematic



Hardware Design



How it works

Access Control

Users input a secure code via the Keypad to unlock the safe, the user can also press “C” to close it back

Motion Detection

The MPU6050 sensor detects any movements near the safe

How it works

Security Alert

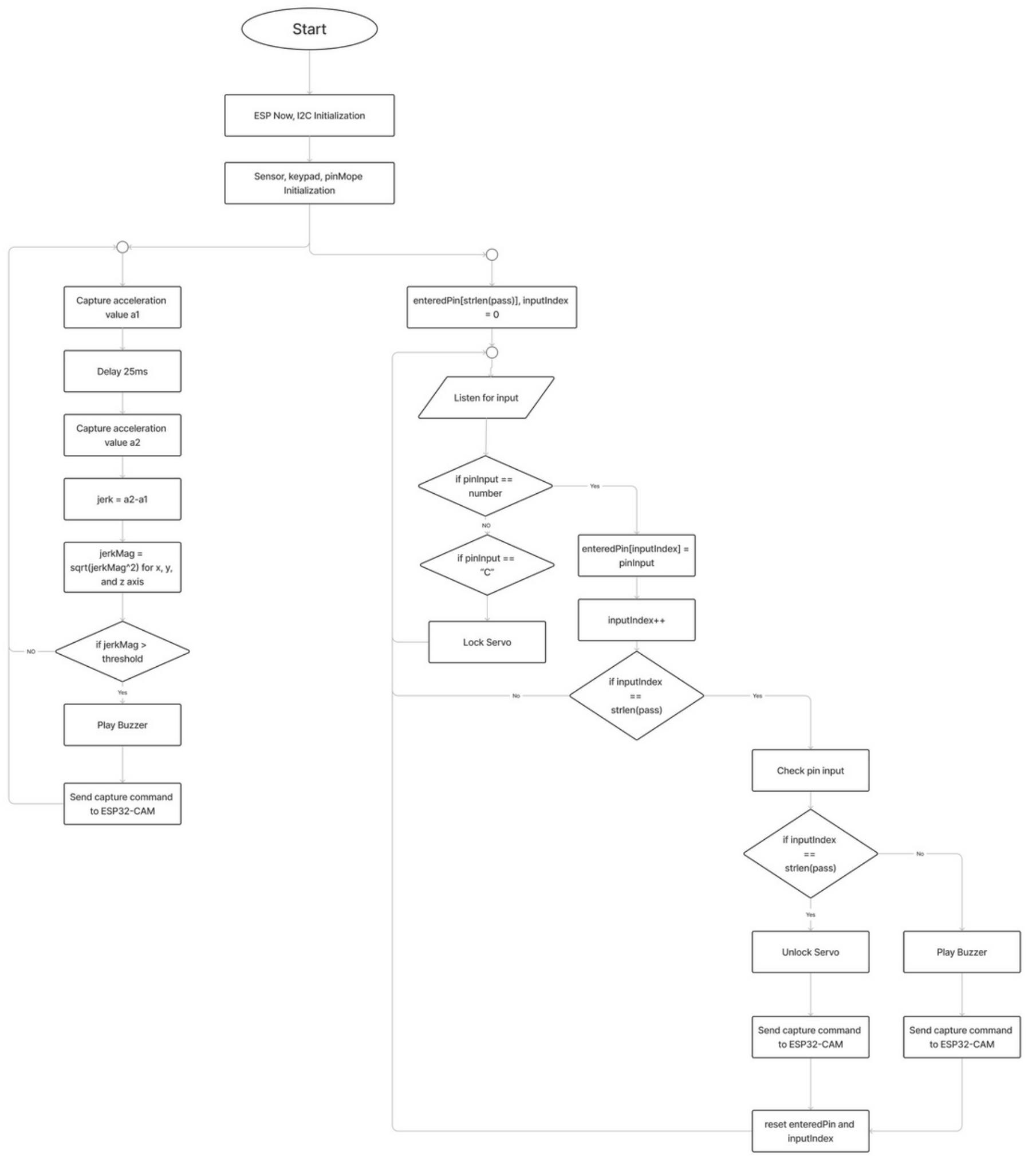
Upon unauthorized access attempts or detected motion, the system triggers the buzzer and captures images using the ESP32 Cam

Image Transmission

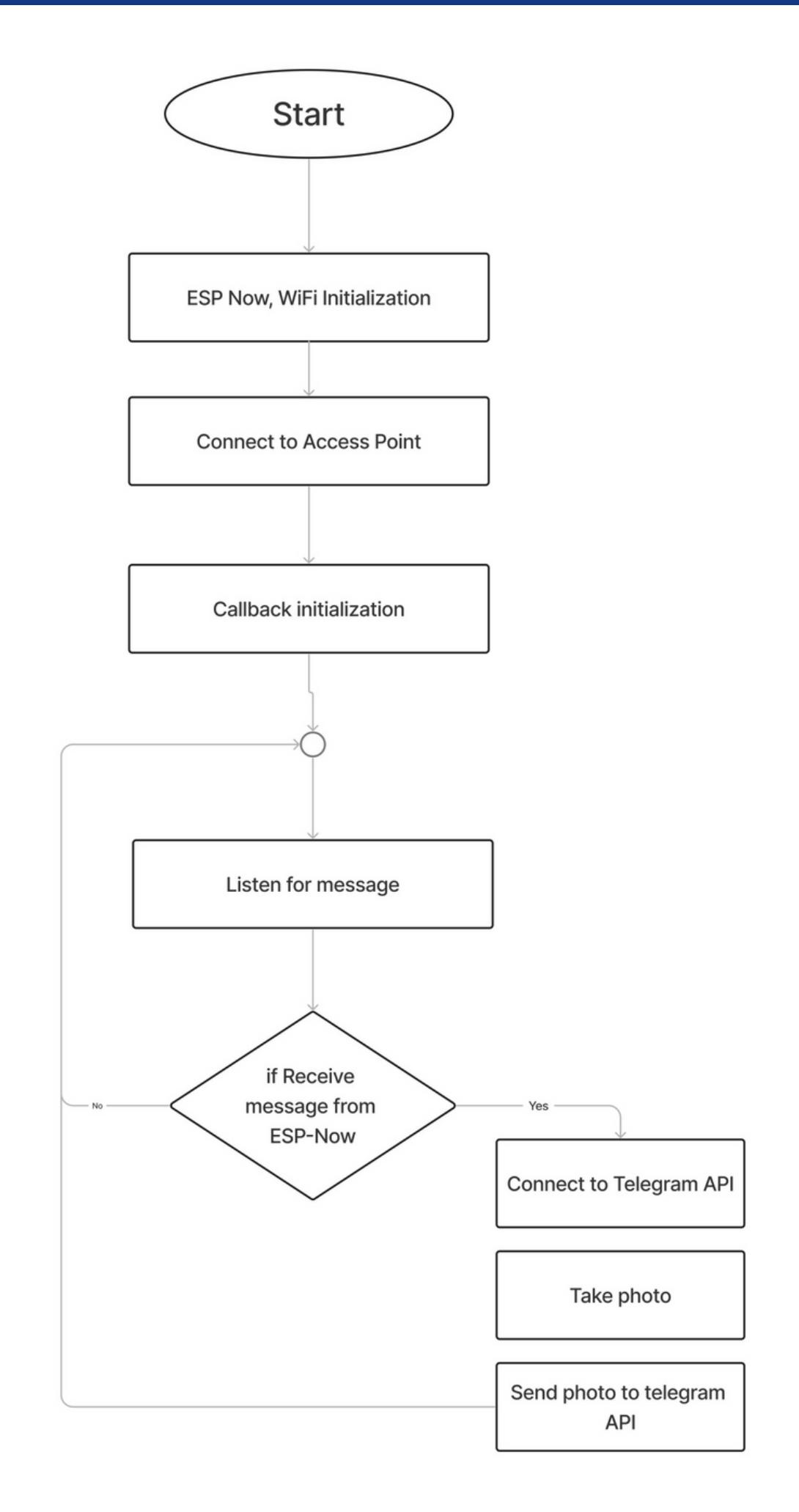
Images of access attempts are sent via the Telegram API to the owner's device for immediate review and action

ESP32

Flowchart



ESP32 Cam Flowchart



Documentation



Documentation

