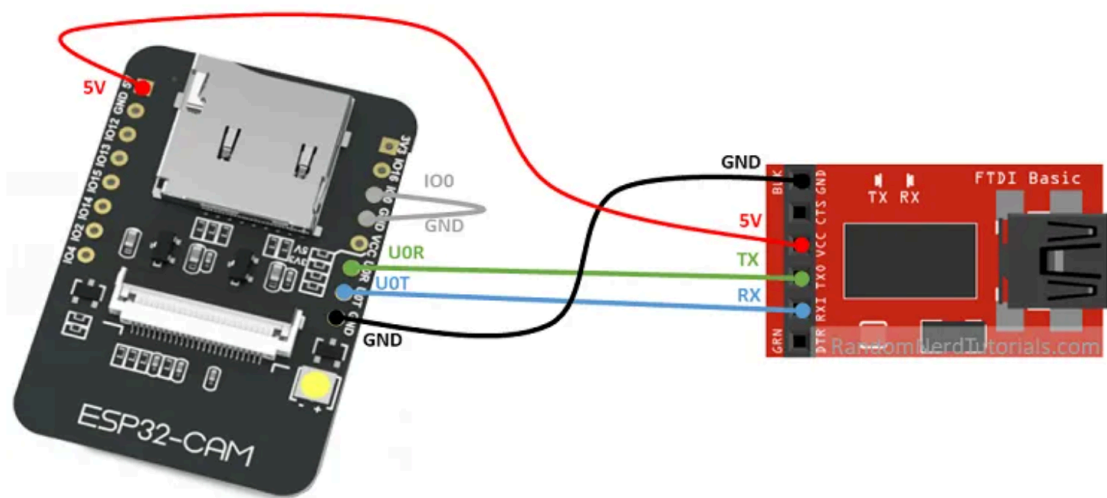


[FINALIZED] CAPSTONE PROJECT

1. Upload code to ESP32 CAM
 - Code is **ESP_Try_pIC**
 - Upload using FTDI Programmer



2. Upload code to Arduino Uno
 - Code is **Final_WasteCan_Arduino** (not FINAL_Arduino_Waste)
3. Assemble Final Circuit

Arduino	Component / Pin
5V	SD / VCC, Hall Sensor / VCC
GND	SD / GND, Hall Sensor / GND, LEDs / GND
A0	Green LED, +
A1	Red LED, +
A2	Hall Sensor / A0
A3	Big Relay / S
A4	Small Relay / S
A5	ESP / GPIO4
13	SD / SCK
12	SD / MISO
11	SD / MOSI
10	SD / CS
9, 8, 7	Keypad / R1, R2, R3
6, 5, 4	Keypad / C1, C2, C3

3, 2	ESP / Rx, Tx (connect after upload)

Power Pins as Normal

Big Relay / Common	Big Solenoid / +
Big Relay / NO	Big Battery / +
Big Solenoid / -	Big Battery / -
Small Relay / Common	Small Solenoid / +
Small Relay / NO	Small Battery / +
Small Solenoid / -	Small Battery / -

4. Ready to go:

- Enter homeroom (grade 5 or 6): LED Red lights up and homeroom stored on SD Card
- Enter waste type (1, 2, or 3 for General, Compostable, or Recycle): LED Green lights up and waste type stored on SD Card
- Top lock unlocks
- Lifts up lid and throws trash
- Magnet detected on hall sensor (from lid closing)
- Camera takes a picture and stores on SD card
- ESP32 sends picture number back and stores on SD card
- Layer lock unlocked
- Back to step 1