Load Cell

Objective:-To measure the weight of the object paced on the load cell. And send that weight to the Mobile app via ESP32 or ATtiny85, also mobile app can give command to the ESP32 which is redirected to arduino Board

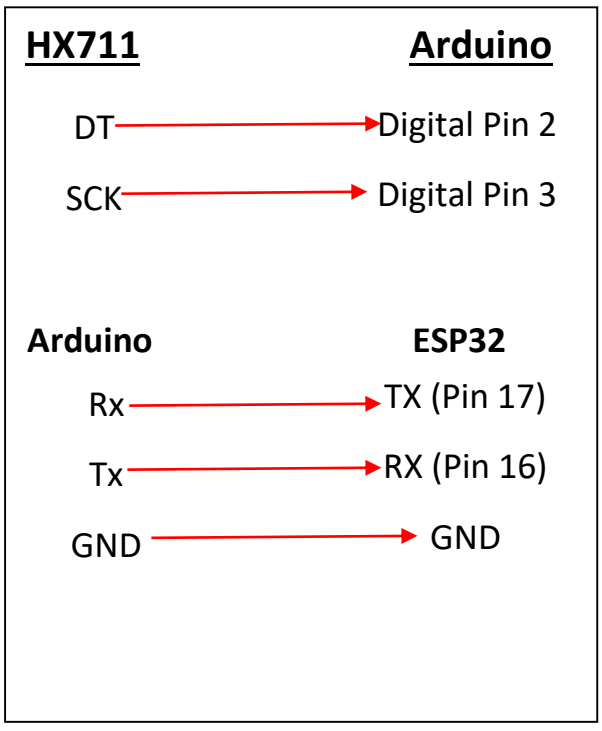
Functionality:

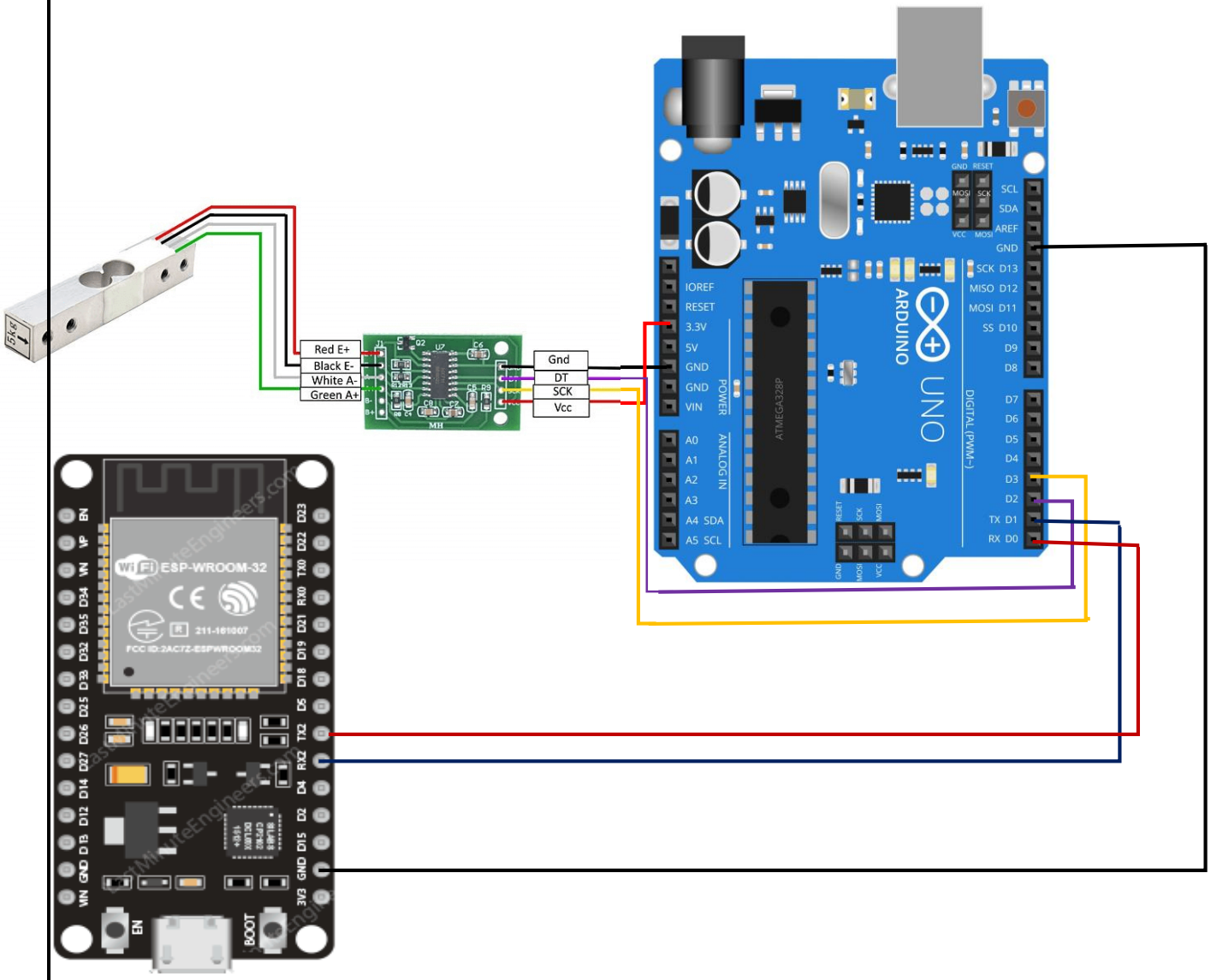
1. Measure weight.
2. Can calibrate any kind of load cell, in short code is compatible to any kind of load cell.
3. Unit conversion (gram to kg & Kg to gram).
4. Tareing feature

Working:

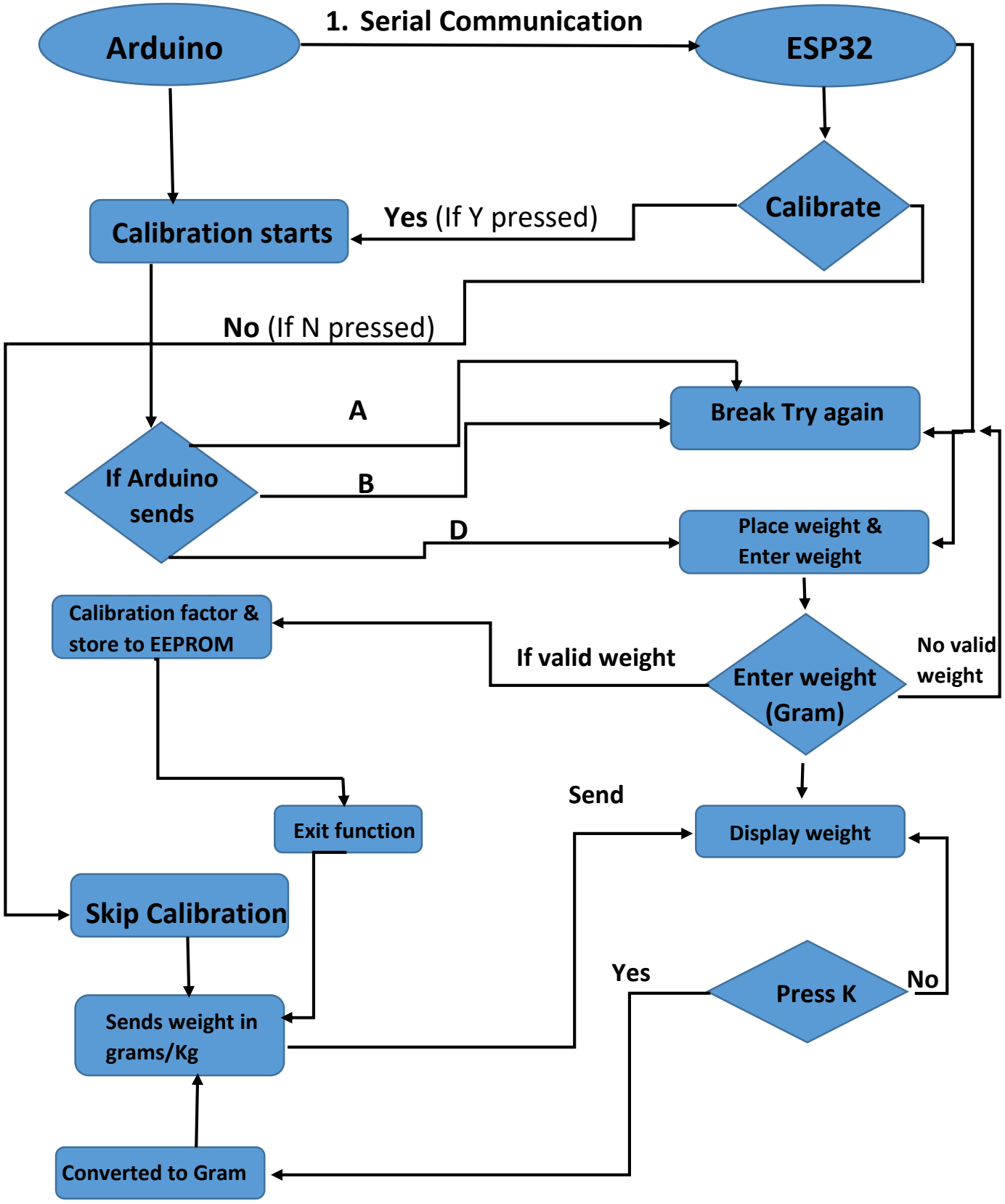
1. Arduino board reads the weight from load cell which is also interfaced with HX711 module.
2. The weight which is read by arduino will be sent to ESP32 board which will further read by any mobile app.
3. Esp32 will give command to arduino for specific action like (unit conversion, Tareing, calibration)
4. Esp32 will be controlled by mobile app.

Circuit diagram:




Red E+
Black E-
White A-
Green A+
Gnd
DT
SCK
Vcc
ARDUINO
UNO
ATMEGA328P
ESP-WROOM-32

Flow chart


Arduino
1. Serial Communication
ESP32
Calibrate
Calibration starts
Yes (If Y pressed)
No (If N pressed)
A
Break Try again
If Arduino sends
B
D
Place weight & Enter weight
Calibration factor & store to EEPROM
If valid weight
Enter weight (Gram)
No valid weight
Send
Exit function
Display weight
Skip Calibration
Yes
Press K
No
Sends weight in grams/Kg
Converted to Gram