1.TABLET DISPENSER(ARDUINO):

#include <Keypad.h>

#include <LiquidCrystal\_I2C.h>

LiquidCrystal\_I2C lcd(0x3F, 16, 2);

int h = 0;

int m = 0;

int s = 0;

int a = 0;

int freq = 0;

int ht[3];

int mt[3];

int st[3];

int at[3];

int ft[3];int k = 0;

int id[3];

int count[3];

int flag = 0;

int TIME = 0;

//int v1=0;

//int v2=0;

//int v3=0;

const byte ROWS = 4; //four rows

const byte COLS = 4; //three columns

char keys[ROWS][COLS] = {

{'1', '2', '3', 'A'},

{'4', '5', '6', 'B'},

{'7', '8', '9', 'C'},

{'\*', '0', '#', 'D'}

};

byte rowPins[ROWS] = {2, 3, 4, 5}; //connect to the row pinouts of the keypad

byte colPins[COLS] = {6, 7, 8, 9}; //connect to the column pinouts of the keypad

Keypad keypad = Keypad( makeKeymap(keys), rowPins, colPins, ROWS, COLS );

void setup() {

Serial.begin(9600); lcd.init();

lcd.backlight();

pinMode(10, OUTPUT); pinMode(11, OUTPUT); pinMode(12, OUTPUT);

}

void loop() {

if (freq == 0) {

lcd.setCursor(0, 0);

lcd.print(" -WELCOME- ");

delay(2000);

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("ENTER FREQUENCY:");

lcd.setCursor(0, 1);

freq = GetNumber();

for (int i = 0; i < freq; i++)

{

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("TIME:");

lcd.setCursor(0, 1);

ht[i] = GetNumber();

lcd.print(":");

mt[i] = GetNumber();

lcd.print(":");

st[i] = GetNumber();

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("AM-1 PM-2");

lcd.setCursor(0, 1);

at[i] = GetNumber();

if (at[i] == 1)

{

ft[i] = 0;

}

if (at[i] == 2)

{

ft[i] = 12;

}

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("COUNT:");

count[i] = GetNumber();

for (int j = 0; j < count[i]; j++)

{

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("ID:");

id[k] = GetNumber();

k = k + 1;

}

}

}

lcd.setCursor(0, 0);

if (h == 0) {

lcd.print("CURRENT TIME:");

lcd.setCursor(0, 1);

h = GetNumber();

lcd.print(":");

m = GetNumber();

lcd.print(":");

s = GetNumber();

lcd.clear();

lcd.setCursor(0, 0);

lcd.print("AM-1 PM-2 ");

lcd.setCursor(0, 1);

a = GetNumber();

if (a == 1) {

flag = 0;

}

if (a == 2) {

flag = 12;

}

}

lcd.setCursor(0, 0);

s = s + 1;

lcd.print("TIME:" );

lcd.print(h);

lcd.print(":");

lcd.print(m);

lcd.print(":");

lcd.print(s);

if (flag < 12) lcd.print(" AM");

if (flag == 12) lcd.print(" PM");

if (flag > 12) lcd.print(" PM");

if (flag == 24) flag = 0;

delay(1000);

lcd.clear();

if (s == 60)

{

s = 0;

m = m + 1;

}

if (m == 60)

{

m = 0;

h = h + 1;

flag = flag + 1;

}

if (h == 13)

{

h = 1;

}

//lcd.setCursor(0, 1);

if (ht[0] == h || ht[1] == h || ht[2] == h )

{

if (mt[0] == m || mt[1] == m || mt[2] == m )

{

if (st[0] == s || st[1] == s || st[2] == s )

{

if (ht[0] == h && mt[0] == m && st[0] == s)

{

if (count[0] == 1&& id[0] == 1){

lcd.print("time to med1");

s = s + 4;

digitalWrite(11, HIGH);delay(1000);digitalWrite(11, LOW);

digitalWrite(10, HIGH);delay(3000);

digitalWrite(10, LOW);

}

if (id[0] == 2&&count[0]==1)

{

lcd.print("time to med2");

s = s + 5;

digitalWrite(12, HIGH);delay(2000);digitalWrite(12, LOW);

digitalWrite(10, HIGH);delay(3000);

digitalWrite(10, LOW);

}

if (count[0] == 2)

{

lcd.print("time to med12");

s = s + 6;

digitalWrite(11, HIGH);delay(1000); digitalWrite(11, LOW);

digitalWrite(12, HIGH);delay(2000);

digitalWrite(12, LOW);

digitalWrite(10, HIGH); delay(3000);

digitalWrite(10, LOW);

}}

if (ht[1] == h && mt[1] == m && st[1] == s)

{

if (count[1] == 1&& (id[1]==1)){

lcd.print("time to med1");

s = s + 4;

digitalWrite(11, HIGH);delay(1000);digitalWrite(11, LOW);

digitalWrite(10, HIGH);delay(3000);

digitalWrite(10, LOW);}

if ((id[1] == 2)&&count[1]==1)

{

lcd.print("time to med2");

s = s + 5;

digitalWrite(12, HIGH);delay(2000);digitalWrite(12, LOW);

digitalWrite(10, HIGH);delay(3000);

digitalWrite(10, LOW);

}

if (count[1] == 2)

{

lcd.print("time to med12");

s = s + 6;

digitalWrite(11, HIGH);delay(1000); digitalWrite(11, LOW);

digitalWrite(12, HIGH);delay(2000);

digitalWrite(12, LOW);

digitalWrite(10, HIGH); delay(3000);

digitalWrite(10, LOW);

}}

if (ht[2] == h && mt[2] == m && st[2] == s)

{

if (count[2] == 1&& (id[2]==1)){

lcd.print("time to med1");

s = s + 4;

digitalWrite(11, HIGH);delay(1000);digitalWrite(11, LOW);

digitalWrite(10, HIGH);delay(3000);

digitalWrite(10, LOW);}

if ((id[2] == 2)&&count[2]==1)

{

lcd.print("time to med2");

s = s + 5;

digitalWrite(12, HIGH);delay(2000);digitalWrite(12, LOW);

digitalWrite(10, HIGH);delay(3000);

digitalWrite(10, LOW);

}

if (count[2] == 2)

{

lcd.print("time to med12");

s = s + 6;

digitalWrite(11, HIGH);delay(1000); digitalWrite(11, LOW);

digitalWrite(12, HIGH);delay(2000);

digitalWrite(12, LOW);

digitalWrite(10, HIGH); delay(3000);

digitalWrite(10, LOW);

}}

}}}}

int GetNumber()

{

int num = 0;

char key = keypad.getKey();

while (key != '#')

{

switch (key)

{

case NO\_KEY:

break;

case '0': case '1': case '2': case '3': case '4':

case '5': case '6': case '7': case '8': case '9':

lcd.print(key);

num = num \* 10 + (key - '0');

break;

case '\*':

num = 0;

lcd.clear();

break;

}

key = keypad.getKey();

}

Serial.println(num);

return num;

}

2. BOLT IOT CODE (JAVA SCRIPT):

Plotchart(“time\_stamp”,”light”);