

sketch.ino

README.md

diagram.json

libraries.txt

Library Manager

```
1 #include <Stepper.h>
2 #include <Keypad.h>
3 #include <LiquidCrystal_I2C.h>
4
5 const int stepsPerRevolution = 200;
6 Stepper steppermotor(stepsPerRevolution, 8, 9, 10, 11);
7
8 const byte ROWS = 4; // Four rows
9 const byte COLS = 4; // Four columns
10 char keys[ROWS][COLS] = {
11   {'1','2','3','A'},
12   {'4','5','6','B'},
13   {'7','8','9','C'},
14   {'*','0','#','D'}
15 };
16
17 byte rowPins[ROWS] = {14, 15, 16, 17}; // Connect to the row pinouts of the keypad
18 byte colPins[COLS] = {23, 25, 27, 29}; // Connect to the column pinouts of the keypad
19
20 Keypad keypad = Keypad(makeKeymap(keys), rowPins, colPins, ROWS, COLS);
21
22 const int bufferSize = 10; // Maximum number of keys to store
23 char buffer[bufferSize]; // Buffer to store pressed keys
24 int bufferIndex = 0; // Index to track position in the buffer
25
26
27 #define I2C_ADDR    0x27
28 #define LCD_COLUMNS 20
29 #define LCD_LINES   4
30
31 LiquidCrystal_I2C lcd(I2C_ADDR, LCD_COLUMNS, LCD_LINES);
32
33
34 char medicines[5][20] = {"Aspirin", "Ibuprofen", "Acetaminophen", "Amoxicillin", "Metformin"};
35
36 void setup() {
37   // put your setup code here, to run once:
38
39   lcd.init();
40   lcd.backlight();
41
42   // Printing Medicines
43   lcd.setCursor(0, 0);
44   lcd.print(medicines[0]);
45   lcd.setCursor(0, 1);
46   lcd.print(medicines[1]);
47   lcd.setCursor(0, 2);
48   lcd.print(medicines[2]);
49   lcd.setCursor(0, 3);
50   lcd.print(medicines[3]);
51
52   // Setting Stepper Motor Speed
53   steppermotor.setSpeed(60);
54
55 }
56
57 void loop() {
58
59   char key = keypad.getKey();
60
61   if (key != NO_KEY) {
62     // Store the pressed key in the buffer
63     buffer[bufferIndex] = key;
64     bufferIndex++;
65     // Check if the buffer is full or if 'Enter' key is pressed
66     if (bufferIndex == 1 || key == '#') {
67       int medicineno = buffer[0] - '0';
68       lcd.clear();
69       lcd.setCursor(0, 0);
70       lcd.print("Enter ");
71       lcd.print(medicines[medicineno]);
72       lcd.print(" quantity: ");
73
74       buffer[bufferIndex] = key;
75       bufferIndex++;
76
77       if (bufferIndex == 3 || key == '#') {
78         int medicineIndex = buffer[0] - '0';
79         int quantity = buffer[2] - '0';
80
81         lcd.clear();
82         lcd.setCursor(0, 0);
83         lcd.print("Dispensing ");
84         lcd.print(quantity);
85         lcd.print(" ");
86         lcd.print(medicines[medicineIndex]);
87         lcd.print("s");
88         steppermotor.step(quantity);
89
90         // Clear the buffer
91         bufferIndex = 0;
92         memset(buffer, 0, bufferSize);
93       }
94     }
95   }
96 }
97
```

Simulation

Description

