APPENDIX

```
#include <LiquidCrystal.h>
#include <SoftwareSerial.h>
#include <DHT.h>
const int rs = A5, en = A4, d4 = 10, d5 = 9, d6 = 8, d7 = 7;
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);
int fluxsensor1 = A0;
int fluxsensor2 = A1;
int fluxsensor3 = A2;
int fluxsensor4 = A3;

const int voice1 = 2;
const int voice2 = 3;
const int voice3 = 4;
const int voice4 = 5;



const int fan = 6;
const int light = 13;

#define DHTPIN 8
#define DHTTYPE DHT11

DHT dht(DHTPIN, DHTTYPE);
String val;
```

```
void setup() {
  // put your setup code here, to run once:
  Serial.begin(9600);
  dht.begin();

  pinMode(2, OUTPUT);
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
  pinMode(5, OUTPUT);

  pinMode(6, OUTPUT);
  pinMode(13, OUTPUT);


  digitalWrite(2, LOW);
  digitalWrite(3, LOW);
  digitalWrite(4, LOW);
  digitalWrite(5, LOW);



  digitalWrite(6, HIGH);
  digitalWrite(13, HIGH);

  lcd.begin(16, 2);
  lcd.clear();
```

```
  lcd.setCursor(0, 0);
  lcd.print("Sign Recognition and");
  lcd.setCursor(0, 1);
  lcd.print("Voice Conversion");
  delay(1000);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("Device for Dumb");
  delay(1000);
}

void loop() {
  float temperature = dht.readTemperature();
  float humidity = dht.readHumidity();

  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("Temp: ");
  lcd.print(temperature);
  lcd.setCursor(0, 1);
  lcd.print(" Humid: ");
  lcd.print(humidity);
  lcd.print(" %");

  // put your main code here, to run repeatedly:
  int fluxvalue1 = analogRead(fluxsensor1);
```

```
 int fluxvalue2 = analogRead(fluxsensor2);
 int fluxvalue3 = analogRead(fluxsensor3);
 int fluxvalue4 = analogRead(fluxsensor4);
 if (Serial.available() > 0) {
  val = Serial.readString();
  Serial.println(val);
  delay(1000);
 }
 delay(1000);
 lcd.clear();
 lcd.setCursor(0, 0);
 lcd.print("F1: ");
 lcd.print(fluxvalue1);
 lcd.setCursor(8, 0);
 lcd.print("F2: ");
 lcd.print(fluxvalue2);
 lcd.setCursor(0, 1);
 lcd.print("F3: ");
 lcd.print(fluxvalue3);
 lcd.setCursor(8, 2);
 lcd.print("F4: ");
 lcd.print(fluxvalue4);
 delay(1000);

 if (temperature > 35) {
  lcd.clear();
```

```
  lcd.setCursor(0, 0);
  lcd.print("Temp: ");
  lcd.print(temperature);

  lcd.setCursor(0, 1);
  lcd.print("FAN ON");
  delay(1000);
 }

 if (temperature > 35) {
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print(" Humid: ");
  lcd.print(humidity);
  lcd.print(" %");
  lcd.setCursor(0, 1);
  lcd.print("FAN ON");
  delay(1000);
 }

 if (fluxvalue1 < 200) {

  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("i want to");
  lcd.setCursor(0, 1);
```

```
  lcd.print("go outside");
  delay(1000);

  digitalWrite(2, HIGH);
  delay(2000);
  digitalWrite(2, LOW);
  digitalWrite(13, HIGH);
  digitalWrite(6, HIGH);

  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("FAN OFF");
  lcd.setCursor(0, 1);
  lcd.print("LIGHT OFF");
  delay(1000);
} else if (fluxvalue2 < 200) {

  delay(1000);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("I want food");
  delay(1000);

  digitalWrite(3, HIGH);
  delay(2000);
  digitalWrite(3, LOW);
```

```
} else if (fluxvalue3 < 200) {

  delay(1000);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("I want water");
  delay(1000);

  digitalWrite(4, HIGH);
  delay(2000);
  digitalWrite(4, LOW);
} else if (fluxvalue4 < 220) {

  delay(1000);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("I want medicine");
  delay(1000);

  digitalWrite(5, HIGH);
  delay(2000);
  digitalWrite(5, LOW);

} else if (val == "1") {

  digitalWrite(6, LOW);
```

```
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("FAN ON");
  delay(1000);

 } else if (val == "2") {
  digitalWrite(13, LOW);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("LIGHT ON");
  delay(1000);
 } else if (val == "3") {
  digitalWrite(6, HIGH);

  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("FAN OFF");
  delay(1000);

 } else if (val == "4") {
  digitalWrite(13, HIGH);
  lcd.clear();
  lcd.setCursor(0, 0);
  lcd.print("LIGHT OFF");
  delay(1000);
```