**SOURCECODE**

#include <SoftwareSerial.h>

#include <VarSpeedServo.h>

VarSpeedServo servo8;

VarSpeedServo servo1;

VarSpeedServo servo7;

#include <NewPing.h>

#define SOFTSERIAL\_RX\_PIN 2

#define SOFTSERIAL\_TX\_PIN 3

#define TRIGGER\_PIN 4

#define ECHO\_PIN 5

#define MAX\_DISTANCE 200

const int LED\_PIN = 6;

SoftwareSerial softSerial(SOFTSERIAL\_RX\_PIN, SOFTSERIAL\_TX\_PIN);

NewPing sonar(TRIGGER\_PIN, ECHO\_PIN, MAX\_DISTANCE);

const char \*voiceBuffer[] = {

"Turn on the light",

"Turn off the light",

"Play music",

"Pause",

"Next",

"Previous",

"Up",

"Down",

"Turn on the TV",

"Turn off the TV",

"Increase temperature",

"Decrease temperature",

"What's the time",

"Open the door",

"Close the door",

"Left",

"Right",

"Stop",

"Start",

"Mode 1",

"Mode 2",

"Go",

};

void setup()

{

Serial.begin(9600);

softSerial.begin(9600);

softSerial.listen();

servo8.attach(8);

servo1.attach(13);

servo7.attach(10);

servo1.slowmove(60,90);

servo7.slowmove(90,90);

servo8.slowmove(52,90);

delay(1000);

pinMode(LED\_PIN, OUTPUT);

}

void loop()

{

if (softSerial.available())

{

char cmd = softSerial.read();

if (cmd >= 1 && cmd <= sizeof(voiceBuffer) / sizeof(voiceBuffer[0]))

{

Serial.println(voiceBuffer[cmd - 1]);

if (strcmp(voiceBuffer[cmd - 1], "Down") == 0)

{

servo1.slowmove(0,50);

servo7.slowmove(0,50);

servo8.slowmove(0,50);

}

else if (strcmp(voiceBuffer[cmd - 1], "Go") == 0)

{

servo1.slowmove(110,50);

servo7.slowmove(110,50);

servo8.slowmove(110,50);

}

else if (strcmp(voiceBuffer[cmd - 1], "Up") == 0)

{

servo1.slowmove(130,50);

servo7.slowmove(140,50);

servo8.slowmove(130,50);

}

else if (strcmp(voiceBuffer[cmd - 1],"Start" ) == 0)

{

digitalWrite(LED\_PIN, HIGH); // Turn on the LED

}

else if (strcmp(voiceBuffer[cmd - 1], "Stop" ) == 0)

{

digitalWrite(LED\_PIN, LOW); // Turn off the LED

}

// Add more conditions for other commands here

}

}

// Ultrasonic sensor code

unsigned int distance = sonar.ping\_cm();

if (distance > 0 && distance < 10) // Adjust the distance threshold as needed

{

servo1.slowmove(120,40);

servo7.slowmove(120,40);

servo8.slowmove(120,40);

delay(1000);

servo1.slowmove(20,40);

servo7.slowmove(20,40);

servo8.slowmove(20,40);

// Rotate the servo to a specific angle

// Wait for 1 second (adjust as needed)

    }

}