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const int buttonPins[8] = {2, 3, 4, 5, 6, 7, 8, 9}; // Button inputs

const int frequencies[8] = {300, 400, 500, 600, 700, 800, 900, 1000}; // Frequencies for each button

const int speakerPin = 10; // Speaker output

void setup() {

  for (int i = 0; i < 8; i++) {

    pinMode(buttonPins[i], INPUT\_PULLUP); // Set button pins as input with internal pull-up

  }

  pinMode(speakerPin, OUTPUT);

}

void loop() {

  int totalFreq = 0;

  bool keyPressed = false;

  for (int i = 0; i < 8; i++) {

    if (digitalRead(buttonPins[i]) == LOW) { // Button is pressed

      totalFreq += frequencies[i];

      keyPressed = true;

    }

  }

  if (keyPressed) {

    tone(speakerPin, totalFreq); // Play combined frequency tone

    delay(20); // Maintain tone for 20ms if key is momentarily pressed

  } else {

    noTone(speakerPin); // Stop sound if no key is pressed

  }

}