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#include <BluetoothSerial.h>

BluetoothSerial SerialBT;

#define IN1 25
#define IN2 26
#define IN3 27
#define IN4 14

#define MOTOR_IN1 32
#define MOTOR_IN2 33

void setup() {
  pinMode(IN1, OUTPUT);
  pinMode(IN2, OUTPUT);
  pinMode(IN3, OUTPUT);
  pinMode(IN4, OUTPUT);

  pinMode(MOTOR_IN1, OUTPUT);
  pinMode(MOTOR_IN2, OUTPUT);

  digitalWrite(IN1, LOW);
  digitalWrite(IN2, LOW);
  digitalWrite(IN3, LOW);
  digitalWrite(IN4, LOW);

  SerialBT.begin("ESP32_Robot"); // Set the Bluetooth device name
  Serial.begin(115200);
  Serial.println("The robot is ready to pair!");
}

void loop() {
  if (SerialBT.available()) {
    char command = SerialBT.read();
    Serial.println(command);

    if (command == 'f') { // Move Forward
      digitalWrite(IN1, HIGH);
      digitalWrite(IN2, LOW);
      digitalWrite(IN3, HIGH);
      digitalWrite(IN4, LOW);
    }
    else if (command == 'b') { // Move Backward
      digitalWrite(IN1, LOW);
      digitalWrite(IN2, HIGH);
      digitalWrite(IN3, LOW);
      digitalWrite(IN4, HIGH);
    }
    else if (command == 'l') { // Move Left
      digitalWrite(IN1, LOW);
      digitalWrite(IN2, HIGH);
      digitalWrite(IN3, HIGH);
      digitalWrite(IN4, LOW);
    }
    else if (command == 'r') { // Move Right
      digitalWrite(IN1, HIGH);
      digitalWrite(IN2, LOW);
      digitalWrite(IN3, LOW);
      digitalWrite(IN4, HIGH);
    }
    else if (command == 's') { // Stop
      digitalWrite(IN1, LOW);
      digitalWrite(IN2, LOW);
      digitalWrite(IN3, LOW);
      digitalWrite(IN4, LOW);
    }
  }
}

```

```
else if (command == 'c') { // Rotate Additional Motor Clockwise for 2 sec
  digitalWrite(MOTOR_IN1, HIGH);
  digitalWrite(MOTOR_IN2, LOW);
  delay(2000); // Rotate for 2 seconds
  digitalWrite(MOTOR_IN1, LOW);
  digitalWrite(MOTOR_IN2, LOW);
}
else if (command == 'a') { // Rotate Additional Motor Counterclockwise
  digitalWrite(MOTOR_IN1, LOW);
  digitalWrite(MOTOR_IN2, HIGH);
  delay(2000); // Rotate for 2 seconds
  digitalWrite(MOTOR_IN1, LOW);
  digitalWrite(MOTOR_IN2, LOW);
}
else {
  // Stop all motors if the command is not recognized
  digitalWrite(IN1, LOW);
  digitalWrite(IN2, LOW);
  digitalWrite(IN3, LOW);
  digitalWrite(IN4, LOW);
}
}
}
```