```
// setup pins
const char BUTTON_PIN12 = 12;
const char BUTTON_PIN11 = 11;
const char BUTTON_PIN10 = 10;
const char BUTTON_PIN9 = 9;
const char BUTTON_PIN8 = 8;
const char BUTTON_PIN7 = 7;
const char BUTTON_PIN6 = 6;
const char BUTTON_PIN5 = 5;
bool pressed = false;
int LED_7 = 4;
int LED_8 = 3;

void setup() {
  Serial.begin(9600);

  // Setup pin modes
  pinMode(BUTTON_PIN12, INPUT_PULLUP);
  pinMode(BUTTON_PIN11, INPUT_PULLUP);
  pinMode(BUTTON_PIN10, INPUT_PULLUP);
  pinMode(BUTTON_PIN9, INPUT_PULLUP);
  pinMode(BUTTON_PIN8, INPUT_PULLUP);
  pinMode(BUTTON_PIN7, INPUT_PULLUP);
  pinMode(BUTTON_PIN6, INPUT_PULLUP);
  pinMode(BUTTON_PIN5, INPUT_PULLUP);
  pinMode(A0,OUTPUT);
  pinMode(A1,OUTPUT);
  pinMode(A2,OUTPUT);
  pinMode(A3,OUTPUT);
  pinMode(A4,OUTPUT);
  pinMode(A5,OUTPUT);
  pinMode(LED_7,OUTPUT);
  pinMode(LED_8,OUTPUT);
}

void loop() {
  // Read button
  bool currentState1 = digitalRead(BUTTON_PIN12);
  bool currentState2 = digitalRead(BUTTON_PIN11);
  bool currentState3 = digitalRead(BUTTON_PIN10);
  bool currentState4 = digitalRead(BUTTON_PIN9);
  bool currentState5 = digitalRead(BUTTON_PIN8);
  bool currentState6 = digitalRead(BUTTON_PIN7);
  bool currentState7 = digitalRead(BUTTON_PIN6);
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```
bool currentState8 = digitalRead(BUTTON_PIN5);
digitalWrite(A0,LOW);
digitalWrite(A1,LOW);
digitalWrite(A2,LOW);
digitalWrite(A3,LOW);
digitalWrite(A4,LOW);
digitalWrite(A5,LOW);
digitalWrite(LED_7,LOW);
digitalWrite(LED_8,LOW);

if (currentState1 == pressed) {
  Serial.println("1");
  while(digitalRead(BUTTON_PIN12) == pressed) {
    digitalWrite(A3,HIGH);
    // Do nothing while button is pressed
  }
}
if (currentState2 == pressed) {
  Serial.println("2");
  while(digitalRead(BUTTON_PIN11) == pressed) {
    digitalWrite(A2,HIGH);
    // Do nothing while button is pressed
  }
}
  if (currentState3 == pressed) {
  Serial.println("3");
  while(digitalRead(BUTTON_PIN10) == pressed) {
    digitalWrite(A1,HIGH);
    // Do nothing while button is pressed
  }
}
  if (currentState4 == pressed) {
  Serial.println("4");
  while(digitalRead(BUTTON_PIN9) == pressed) {
    digitalWrite(A0,HIGH);
    // Do nothing while button is pressed
  }
}
  if (currentState5 == pressed) {
  Serial.println("8");
  while(digitalRead(BUTTON_PIN8) == pressed) {
    digitalWrite(LED_8,HIGH);
    // Do nothing while button is pressed
  }
```

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  }
    if (currentState6 == pressed) {
    Serial.println("7");
    while(digitalRead(BUTTON_PIN7) == pressed) {
      digitalWrite(LED_7,HIGH);
      // Do nothing while button is pressed
    }
  }
  if (currentState7 == pressed) {
    Serial.println("6");
    while(digitalRead(BUTTON_PIN6) == pressed) {
      digitalWrite(A5,HIGH);
      // Do nothing while button is pressed
    }
  }
  if (currentState8 == pressed) {
    Serial.println("5");
    while(digitalRead(BUTTON_PIN5) == pressed) {
      digitalWrite(A4,HIGH);
      // Do nothing while button is pressed
    }
  }
}
```