

Input PULLUP Testing

```
/*
```

```
Input Pull-up Serial
```

This example demonstrates the use of `pinMode(INPUT_PULLUP)`. It reads a digital input on pin A3,A4 and ON the LED connected to D8,D9 When two pushbutton is pressed then activate the relay and ON the third LED .

The circuit:

- momentary switch attached from pin A3 to ground
- momentary switch attached from pin A4 to ground
- LED on pin 8 relates to A3
- LED on pin 9 relates to A4
- Relay on pin 16

Unlike `pinMode(INPUT)`, there is no pull-down resistor necessary. An internal 20K-ohm resistor is pulled to 5V. This configuration causes the input to read HIGH when the switch is open, and LOW when it is closed.

```
*/
```

```
void setup() {
```

```
//start serial connection
```

```
Serial.begin(115200);
```

```
//configure pin 2 as an input and enable the internal pull-up resistor
```

```
pinMode(A3, INPUT_PULLUP);
```

```
pinMode(A4, INPUT_PULLUP);
```

```
pinMode(8, OUTPUT);
```

```
pinMode(9, OUTPUT);
```

```
pinMode(16, OUTPUT);
```

```
digitalWrite(16,LOW ); // Relay off
```

```
}
```

```
void loop() {
```

```
bool Flag1,Flag2;
```

```
//read the pushbutton value into a variable
```

```
int Val1 = digitalRead(A3);
```

```
int Val2 = digitalRead(A4);
```

```
//print out the value of the pushbutton
```

```
Serial.println(Val1);
```

```
Serial.println(Val2);
```

```
digitalWrite(16,LOW );
```

```
// Keep in mind the pull-up means the pushbutton's logic is inverted. It goes
```

```
// HIGH when it's open, and LOW when it's pressed. Turn on pin 8,9 when the
```

```
// button's pressed, and off when it's not:
```

```
if (Val1 == HIGH) {
```

```
digitalWrite(8, LOW);
```

```
Flag1=LOW;
```

```
} else {
```

```
digitalWrite(8, HIGH);
```

```
Flag1=HIGH;
```

```
}
```

```
if (Val2 == HIGH) {
```

```
digitalWrite(9, LOW);
```

```
Flag2=LOW;
```

```
} else {
```

```
digitalWrite(9, HIGH);
```

```
Flag2=HIGH;
```

```
}
```

```
if ((Flag1 == HIGH) && (Flag2 == HIGH))
```

```
digitalWrite(16, HIGH); // Relay on
```

```
else
```

```
digitalWrite(16,LOW ); // Relay off
```

```
}
```