

Debugging Fun Mural2 (Solution)

Scenario: Agustin wrote the following code for his Mural Project.

He wants to see:

- allOn() if both buttons are pushed
- blink() if button1 is pushed and button2 is not pushed
- blinkFast() if button1 is not pushed and button2 is pushed
- allOff() if neither is pushed

Actual Buggy Code Behavior:

- both pushed: allOn()
- Button1 pushed, button2 NOT pushed: allOn()
- Button1 NOT pushed and button2 pushed: allOff()
- Neither pushed: allOff()

Misconceptions: Variable names. They used sensorVal1 everywhere, even when it should be sensorVal2. So, the code only looks at button1 and ignores button2.

Solution:

```
loop() {
  int sensorVal1 = digitalRead(button1);
  int sensorVal2 = digitalRead(button2);

  //both buttons pushed
  if(sensorVal1 == HIGH && sensorVal2 == HIGH) {
    allOn();
  }
  //button1 pushed and button2 not pushed
  else if(sensorVal1 == HIGH && sensorVal2 == LOW) {
    blink();
  }
  //button1 not pushed and button2 pushed
  else if(sensorVal1 == LOW && sensorVal2 == HIGH) {
    blinkFast();
  }
  //neither button pushed
  else {
    allOff();
  }
}
```