Debugging Fun Mural1 (Solution)

Scenario: Joy wrote the following code for her Mural Project.

She 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: blinkFast()
- Button1 NOT pushed and button2 pushed: blink()
- Neither pushed: allOff()

Misconceptions: Variable names. They mixed up sensorVal1 and sensorVal2 with which button they correspond with. So the blink and blinkFast cases are mixed up. The variable names for the first if do not need to be switched for the logic to be correct. You can switch them just to keep things consistent.

Solution:

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


  //both buttons pushed
  if(sensorVal2 == HIGH && sensorVal1 == 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();
  }
}
```