```
1   /**
2      Lever Action - Mission Possible MK2
3      Ward Melville HS Science Olympiad - Team A - 2017-2018
4      leverTiny.ino
5      Purpose: Turns on a MOSFET when the input is triggered. Turn it off after one second to
       prevent overheating.
6
7      @author David Cutting
8      @version 1.1 1/26/2018
9   */
10
11  // Definitions for microcontroller pin numbers
12  const int IN_PIN = 3;
13  const int OUT_PIN = 2;
14
15  // Variables for states of the pins
16  bool inState = LOW;
17  bool outState = LOW;
18
19  // Variables and constants for the debounce code
20  unsigned int counter = 0;
21  const int DEBOUNCE_COUNT = 50;
22  long time = 0;
23
24  void setup() {
25    // Set the microcontroller pins as either inputs or outputs
26    pinMode(IN_PIN, INPUT);
27    pinMode(OUT_PIN, OUTPUT);
28
29    // Write the output pin low (off)
30    digitalWrite(OUT_PIN, LOW);
31  }
32
33  void loop() {
34    if(millis() != time && outState == LOW) { // If more than one millisecond has elapsed
      since the last loop...
35      inState = digitalRead(IN_PIN); // Read the current state of the input and store it
36
37      if(inState == HIGH) { // If the state of the input is high
38        counter++; // Increment the counter
39      }
40      else { // Otherwise...
41        counter = 0; // Reset the counter
42      }
43      if(counter >= DEBOUNCE_COUNT) { //  If the counter is greater than the debounce
      threshold...
44        counter = 0; // Reset the counter
45        outState = HIGH; // Set the trigger state to high
46          delay(500); // Wait half a second for observation
47        digitalWrite(OUT_PIN, outState); // Set the output pin to the trigger state
48        delay(1000); // Wait 1 second to ensure that the solenoid moves and the next transfer gets
      the signal
49        digitalWrite(OUT_PIN, LOW); // Set the output pin to low to disengage the solenoid and
      prevent overheating
```

```
50       }
51       time = millis(); // Record the current time in milliseconds
52     }
53   }
54
```