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IoT

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Testing the capacitance values with materials

1. Capacitance test with a knife

The capacitance value is tested with a knife to recognized if touch occurs on the knife or not. The hardware parts include Node MCU, breadboard, resistor, wires, knife, and copper tape connecting the conducting material (knife) and the sensor pin (pin 2). The hardware connection and results are shown in Fig. 1 and Fig. 2.

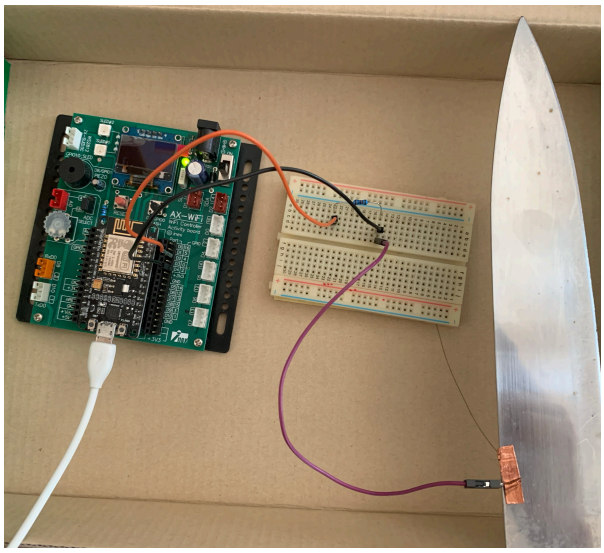

Fig. 1. Capacitive test with knife

Fig. 2. Capacitive test result with knife without touching

2. Capacitance test with a spoon

The capacitance value is tested again with a spoon with or without the touch event. The hardware parts include Node MCU, breadboard, resistor, wires, spoon, and copper tape connecting the conducting material (spoon) and the sensor pin (pin 2). The hardware connection and results are shown in Fig. 3 and Fig. 4.

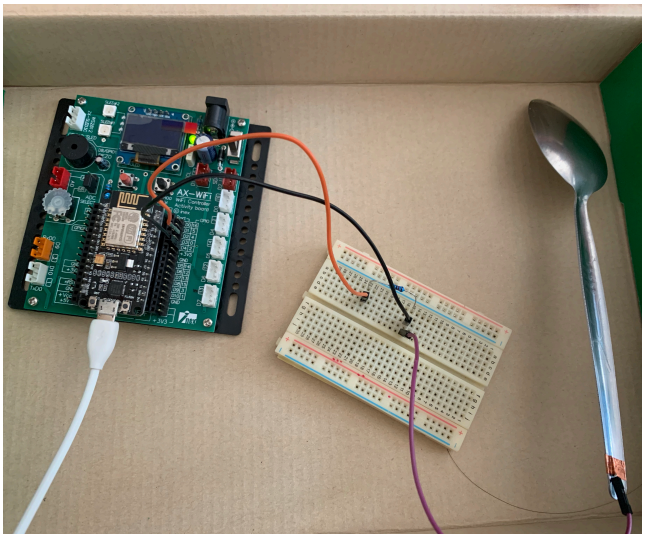

Fig. 3. Capacitive test with spoon

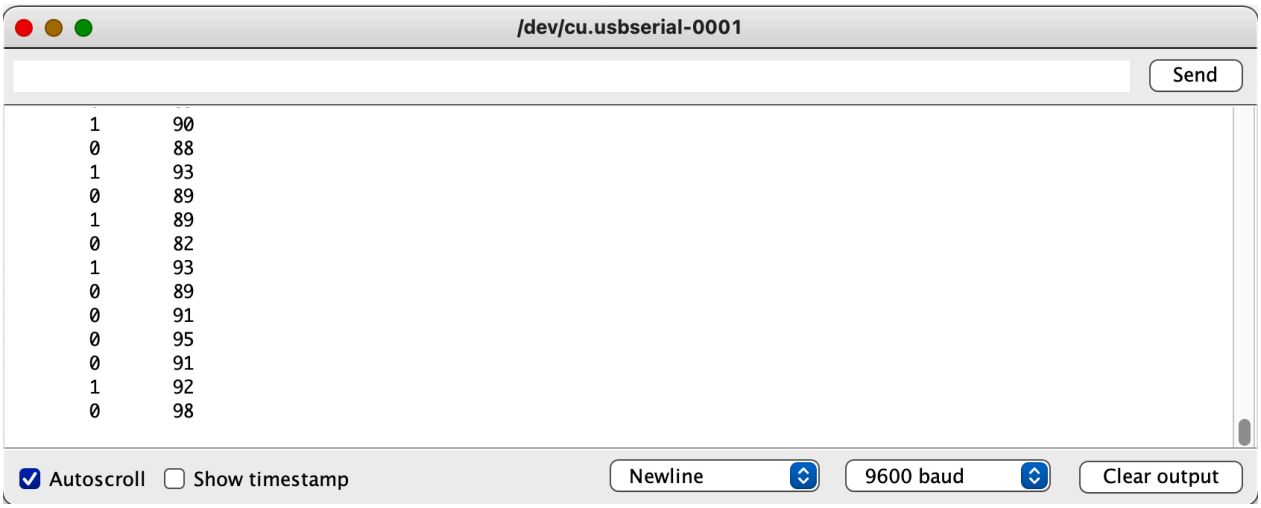

Fig. 4. Capacitive test result with knife when touched

3. Conclusion

This experiment is done to have an insight into the difference in the capacitance value when the conducting material is touched or untouched by a human finger.