

Seven

장준례 2019.202053 권영훈 2015722033
문성우 2019202101
서버지 2019202009

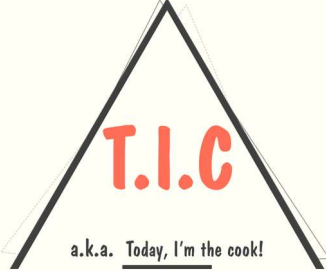


a.k.a. Today, I'm the cook!

PROJECT FINAL PRESENTATION 2019.05.30

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a.k.a. Today, I'm the cook!

Summary

Motive for Development

- ▶ Salty or bland food caused by the eye measurement
- ▶ The hassle of using measuring cups
- ▶ The delivery of the right amount of liquid directly where it is needed

How to use?

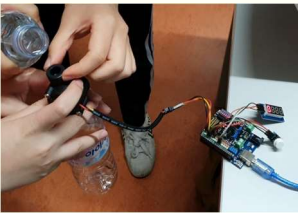

- ▶ Press the button
- ▶ Let the water through
- ▶ The number is displayed on the FND module

Process

19.03.14 ~ 19.05.21

	1	2	3	4	5	6	7	8	9	10	11
Identify the Problem											
Do Research											
Develop Solutions											
Choose One Solution											
Construct a Prototype											
Test the Prototype											
Communicate Results											
Evaluate and Redesign											





Process

```

120
121 prevState = inputSwitch;
122 if ( inputSwitch == HIGH )
123 {
124     if ( switchState == false )
125     {
126         display.setBrightness(3);
127         switchState = true;
128         pulses = 0;
129     }
130     else
131     {
132         switchState = false;
133         display.setBrightness(7, false);
134     }
135 }
136
137 float liters = pulses;
138
139 liters *= 1000;
140
141 liters /= 7.5; //sensor frequency
142
143 liters /= 60.0;
144
145 if ( liters != 0 )
146 {
147     Serial.print(liters); Serial.println(" milliliters");
148 }
149
150
151 uint8_t data[] = {0x0, 0x0, 0x0, 0x0};
152 display.setSegments(data);
153 display.showNumberDec(liters, false, 4, 0);
154
  
```

Process

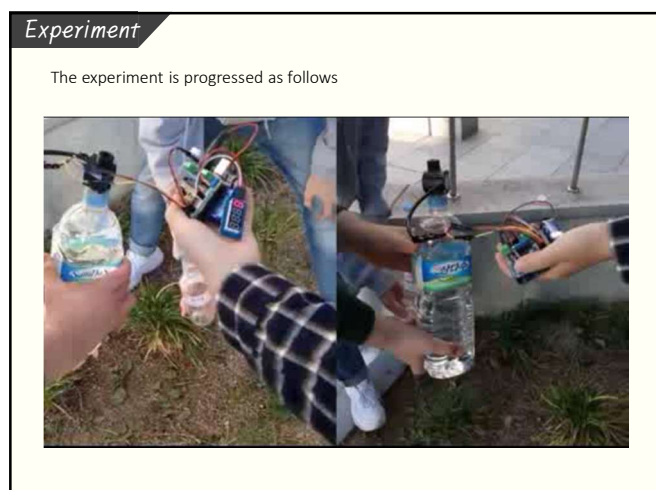
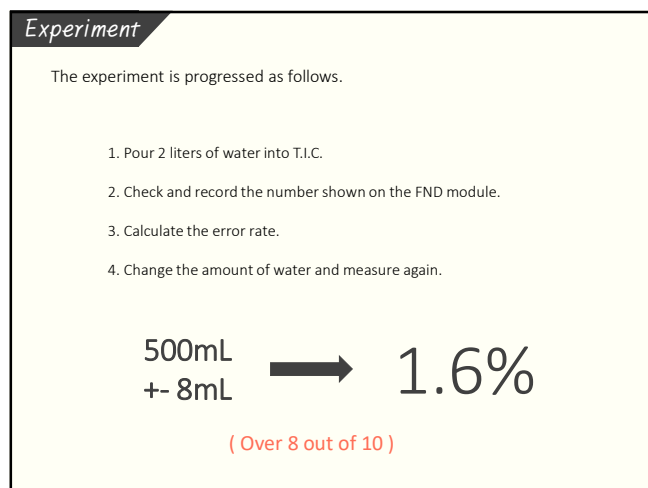
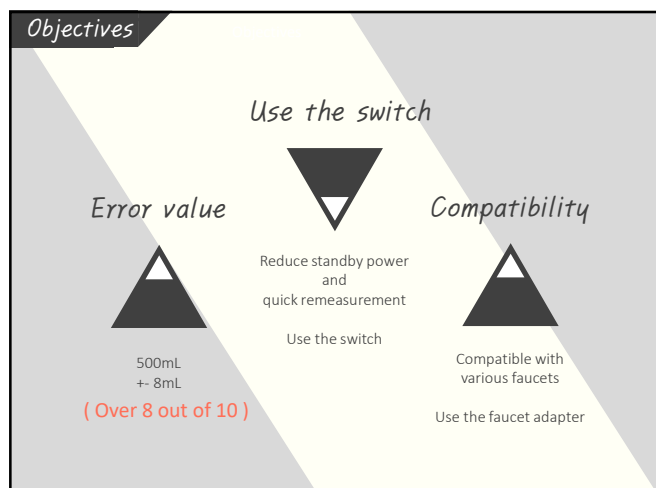
Budget

내용/DESCRIPTIONS	수량/ QTY	단가/UNIT COST	합계/COST
1 (PP-A468) YF-S201 유량센서 모듈 호환급지 기 DC 5~18V	1	₩ 3,600	₩ 3,600
2 (DFR0265) 아두이노 IO 확장보드 V7.1	1	₩ 15,000	₩ 15,000
3 (PP-A015) Arduino UNO(R3) 아두이노 무 선 호환보드	1	₩ 8,000	₩ 8,000
4 12핀이 방수 부속배선 스위치 (4126)	1	₩ 3,636	₩ 3,636
5 (PP-A364) 정밀계량기 40핀 10cm 길/수 F-M	1	₩ 1,636	₩ 1,636
6 (PP-A365) 정밀계량기 40핀 10cm 길/장 F-F	1	₩ 1,636	₩ 1,636
7 (PP-A237) PCB 브레드보드(통용) - 소 (400 Pin)	1	₩ 1,900	₩ 1,900
8 (PP-A489) 노브 버튼 모듈 스위치 모듈 Facd Switch	1	₩ 600	₩ 600
9 (PP-A290) 9V용 배터리 소켓+DC플러그	1	₩ 300	₩ 300
10 (PP-A206) TMI637 LED 시계 7채그라운드 연결-전선	1	₩ 1,100	₩ 1,100
소계 / SUB TOTAL			₩ 37,408
부가세 / V.A.T			₩ 3,741.80
합계 / TOTAL			₩ 41,150




Costs

No	Budget Head	Funds Sanctioned	Expenditure	% of Total cost
1	Component	65,500	41,150	69.6%
2	Production tools	5,000	7,000	11.8%
3	Experiment tools	10,000	11,000	18.6%
	Total	80,500	59,150	100%



Results

The Results of the experiment 9/10

Water	2L	2L	2L	2L	2L
Record	1996mL	1966mL	1981mL	1986mL	2000mL
Gap	-4mL	-34mL	-19mL	-14mL	0mL
Error rate	-0.2%	-1.7%	-0.95%	-0.99%	0%
Water	500mL	500mL	500mL	500mL	500mL
Record	497mL	498mL	504mL	492mL	497mL
Gap	-3mL	-2mL	+4mL	-8mL	-3mL
Error rate	-0.6%	-0.4%	+0.8%	-1.6%	-0.6%

Switch Operation ✓

Compatibility ✓

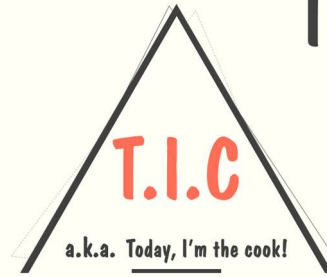
Conclusion

Expectation effectiveness

Substitute the measuring cup	No beakers, no measures, no intermediary vessels.
saving water in daily life	Encourage people to develop better habit for saving water compared with their daily consumption.
Strategic water intake	Know your water intake accurately and try to reach the recommended daily intake of water(1.5L ~ 2L).

Seven

Thank you



PROJECT FINAL PRESENTATION

2019.05.30