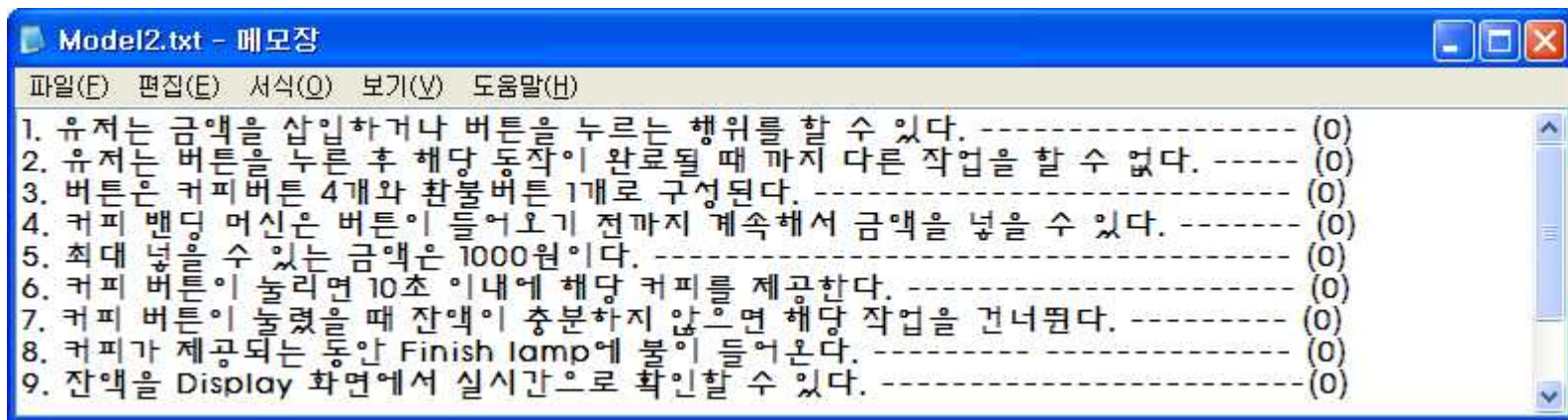


# Model 2 검증 (Coffee Vending Machine)

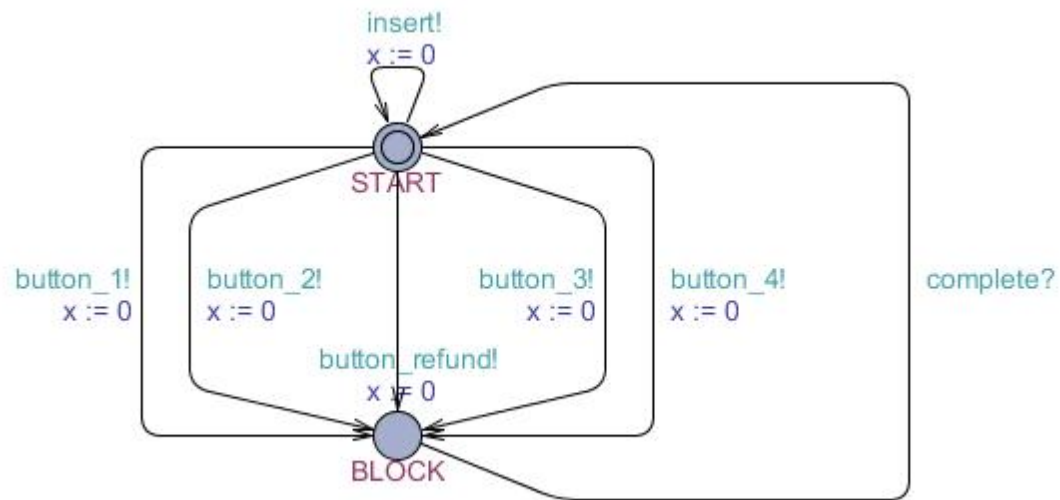
by. 꿀꿀자동차

# 한글 명세

- 한글로 커피 자판기에 필수 요소들을 명시

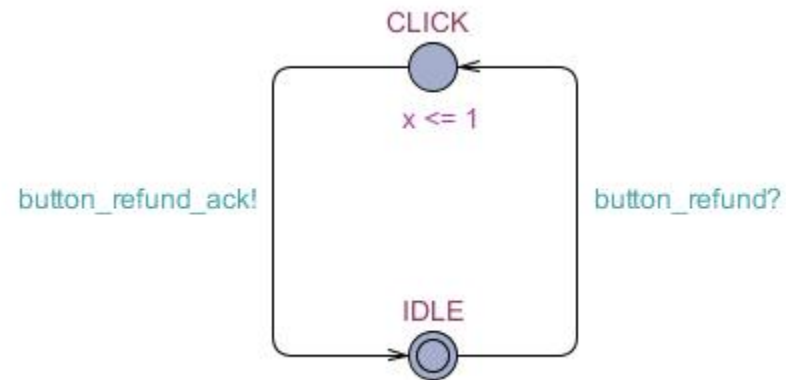


# Timed Automata로 구현



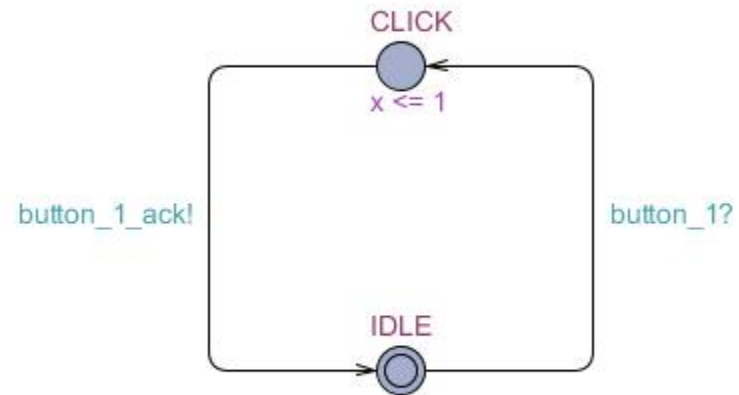
USER

# Timed Automata로 구현



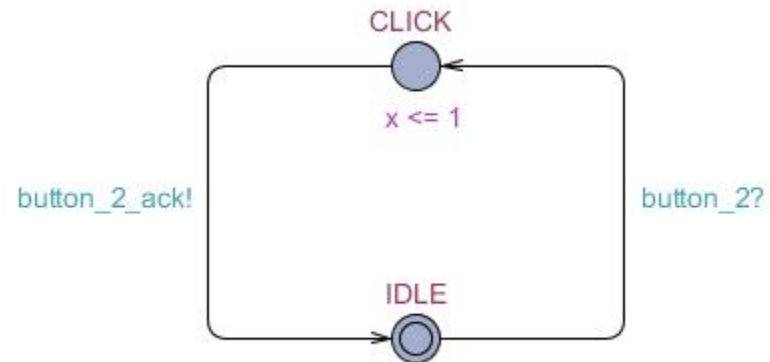
BUTTON\_REFUND

# Timed Automata로 구현



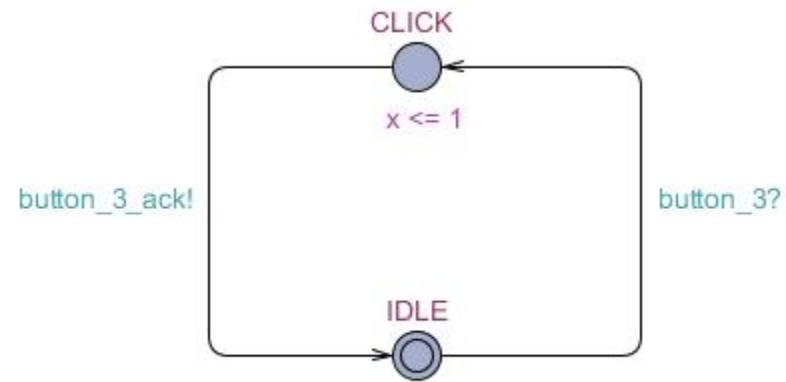
BUTTON\_1

# Timed Automata로 구현



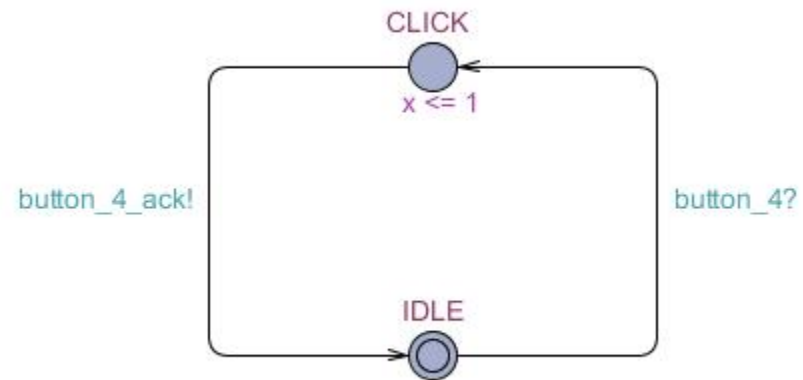
BUTTON\_2

# Timed Automata로 구현



BUTTON\_3

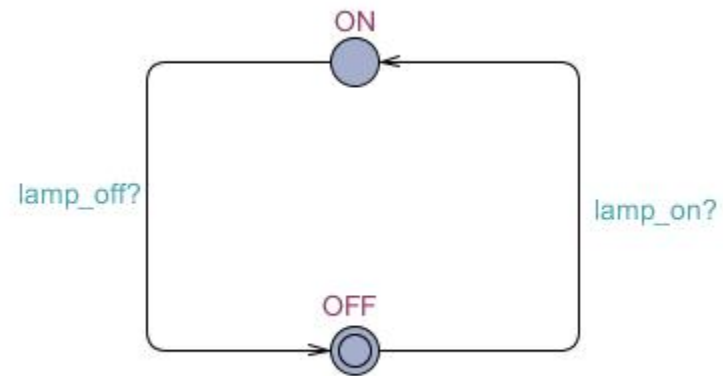
# Timed Automata로 구현



BUTTON\_4

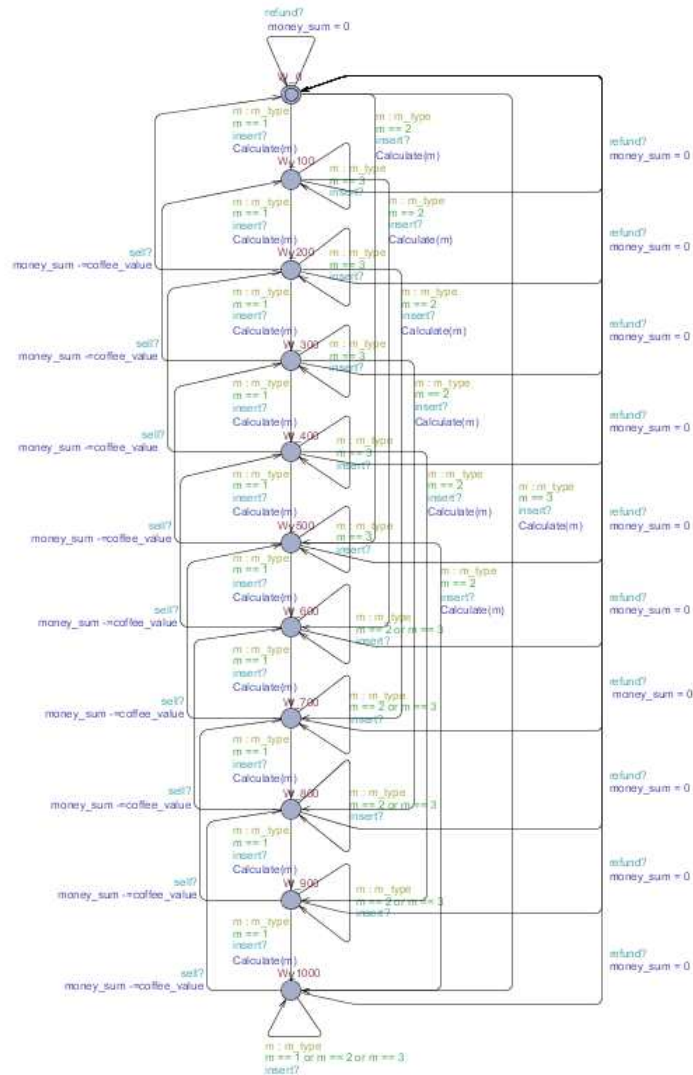


# Timed Automata로 구현



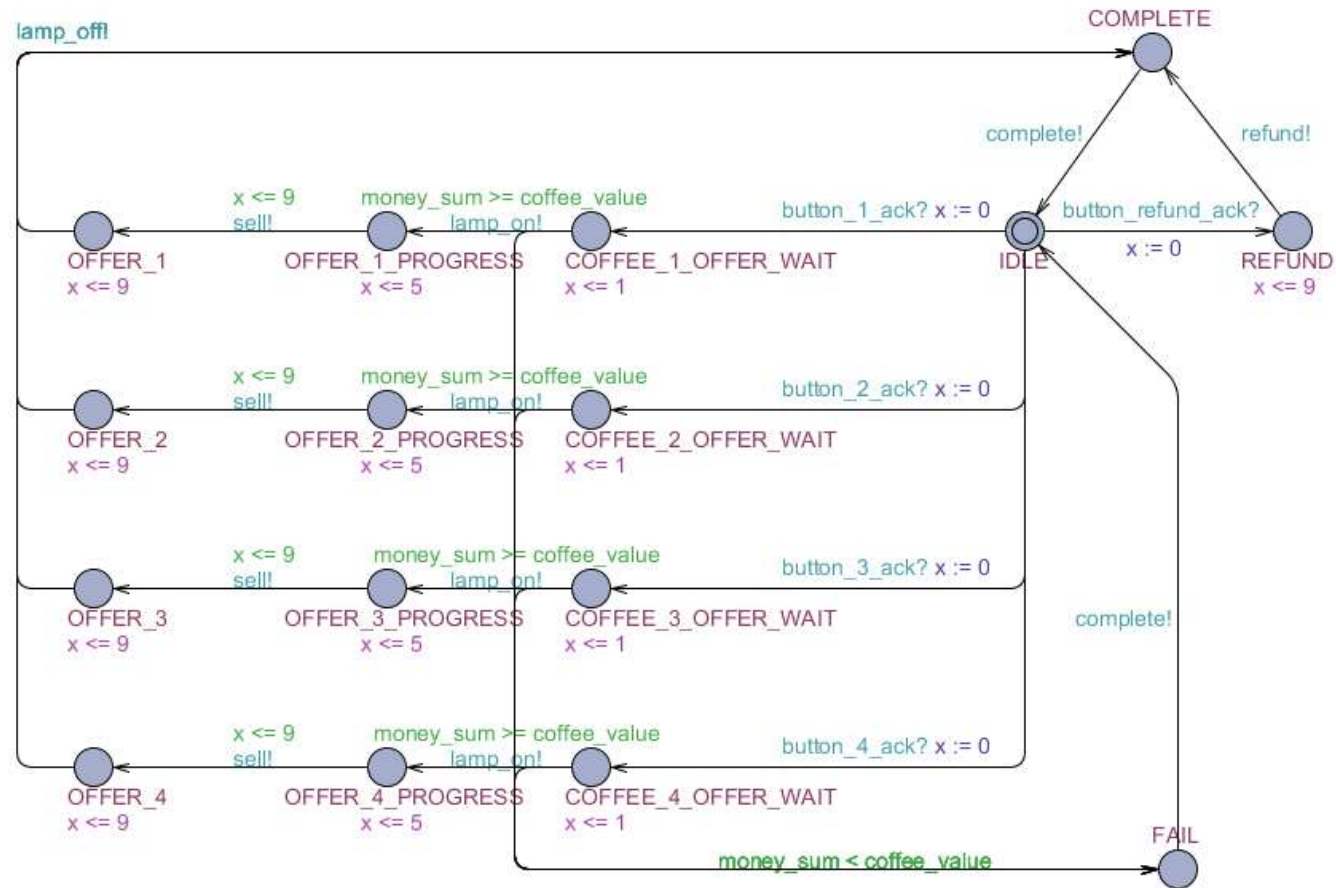
FINISH\_LED

# Timed Automata로 구현



DISPLAY

# Timed Automata로 구현



CVM

# Verify

## Overview

```
A[] CVM.FAIL imply money_sum < coffee_value
A[] CVM.OFFER_1 imply USER.x <= 10
A[] CVM.OFFER_2 imply USER.x <= 10
A[] CVM.OFFER_3 imply USER.x <= 10
A[] CVM.OFFER_4 imply USER.x <= 10
A[] CVM.REFUND imply USER.x <= 10
A[] DISPLAY.W_100 imply money_sum == 1
A[] DISPLAY.W_200 imply money_sum == 2
A[] DISPLAY.W_300 imply money_sum == 3
A[] DISPLAY.W_400 imply money_sum == 4
A[] DISPLAY.W_500 imply money_sum == 5
A[] DISPLAY.W_600 imply money_sum == 6
A[] DISPLAY.W_700 imply money_sum == 7
A[] DISPLAY.W_800 imply money_sum == 8
A[] DISPLAY.W_900 imply money_sum == 9
A[] DISPLAY.W_1000 imply money_sum == 10
A[] CVM.OFFER_1 imply FINISH_LED.ON
A[] CVM.OFFER_2 imply FINISH_LED.ON
A[] CVM.OFFER_3 imply FINISH_LED.ON
A[] CVM.OFFER_4 imply FINISH_LED.ON
A[] not USER.START && CVM.OFFER_1
A[] not USER.START && CVM.OFFER_2
A[] not USER.START && CVM.OFFER_3
A[] not USER.START && CVM.OFFER_4
A[] not money_sum > 10
A[] not deadlock
```