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# 7-1 Project Submission

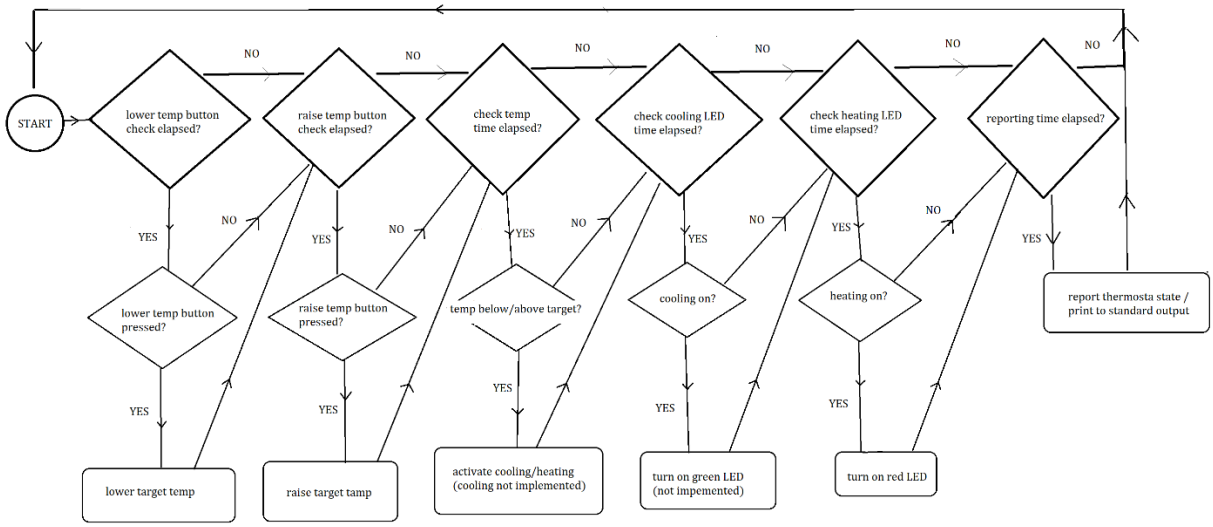
## Task Scheduler and State Machine Documentation

The thermostat task scheduler loops through six tasks and triggers them if a task-specific time period has elapsed. The tasks and their periods (in microseconds) are as follows.

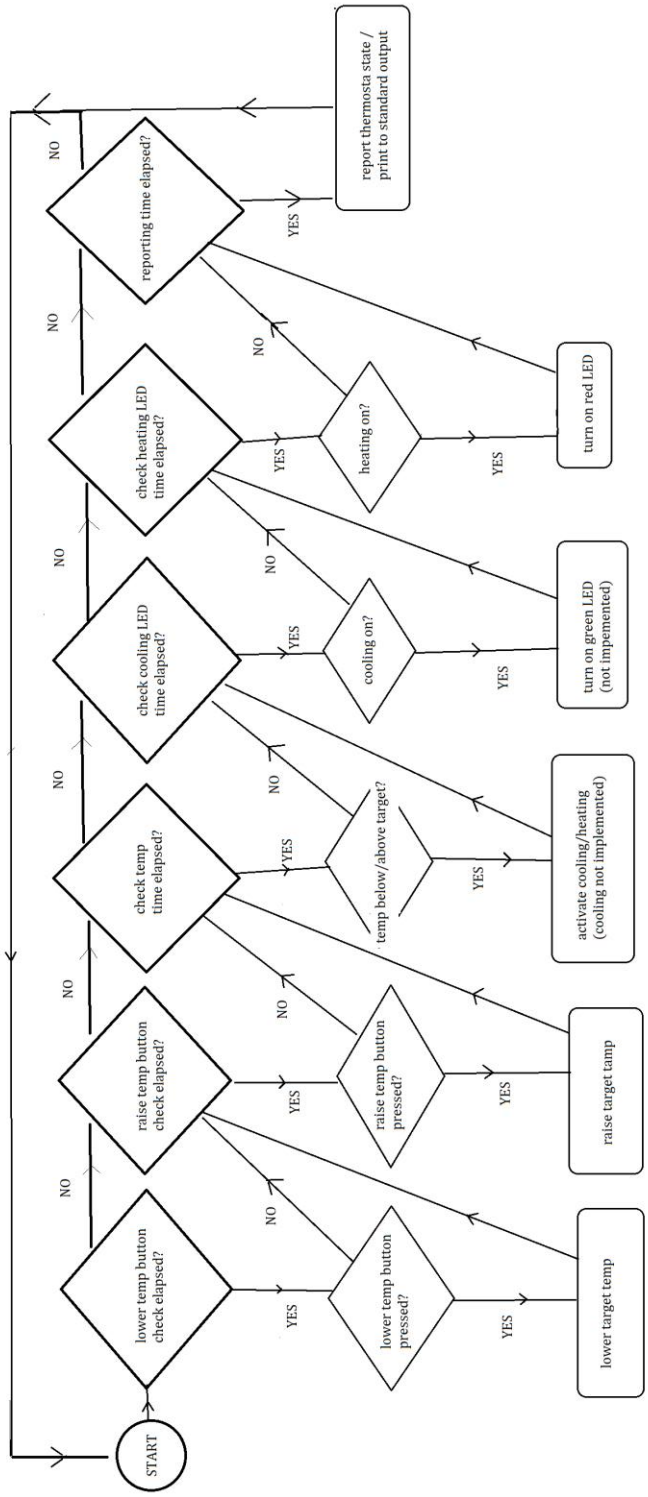
| | |
|---|---|
| Respond to Lower Temp Button Press | 200000 μs |
| Respond to Raise Temp Button Press | 200000 μs |
| Respond to Current Temperature | 500000 μs |
| Respond to Thermostat Cooling | 1000000 μs (not implemented) |
| Respond to Thermostat Heating | 1000000 μs |
| Report Thermostat State to Server | 1000000 μs |

All tasks except “Report Thermostat State to Server” rely on a state machine. A diagram of the task scheduler operations is presented below. State machine diagrams are further below.

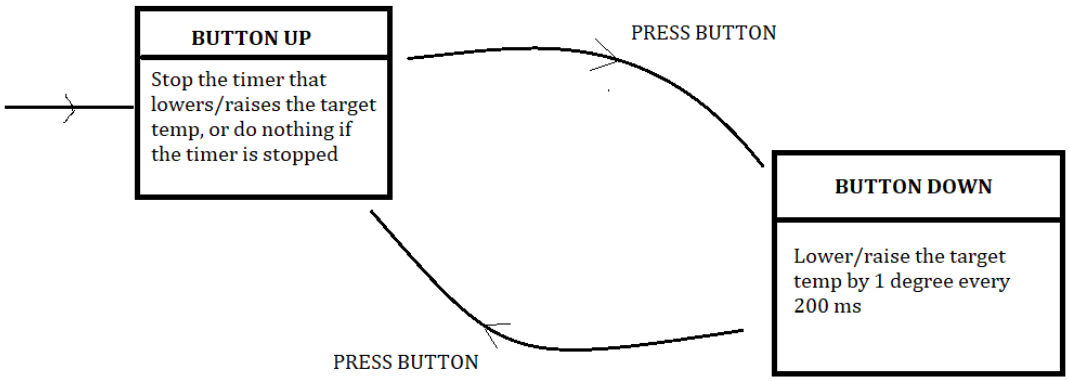
# Task Scheduler Diagram (Portrait)



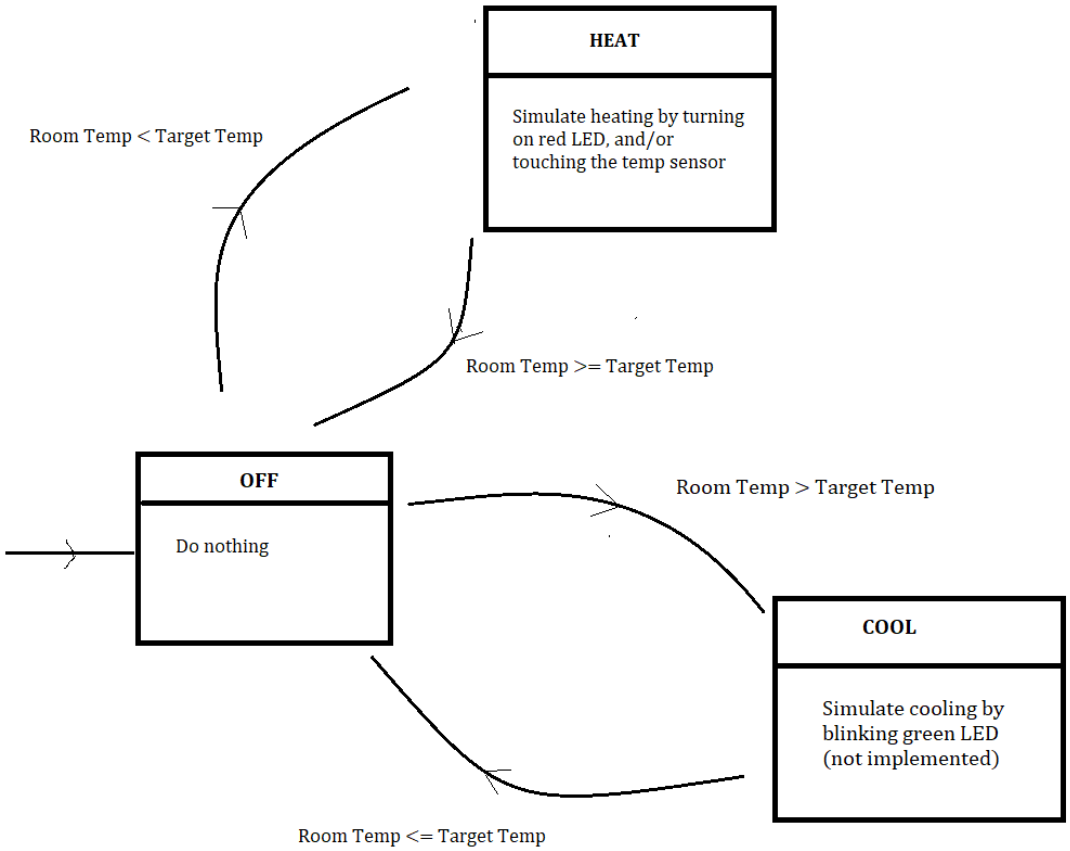
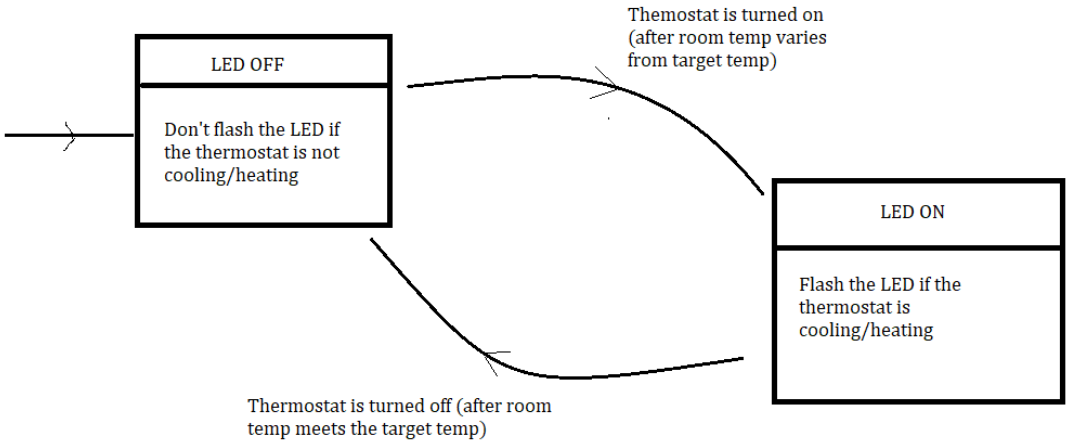
# Task Scheduler Diagram (Landscape)



# Button Press State Machine Diagram



# Thermostat State Machine Diagram



# LED State Machine Diagram