CS350 - Week 7 - Final Project - State Machine Diagram

Finite state machine (implemented in Python)
Three external buttons generate events
updateLights() function
Serial port write

Grant McCord, October 17,2025

setPoint = 72

OFF

RED light off
BLUE light off

(cycle()

HEAT

(on_enter_heat)

updateLights()

(on_exit_heat)

RED light off

(cycle()

COOL

(on_enter_cool)

updateLights()

(on_exit_cool)

BLUE light off

cycle()

Green Button

cycle()

Red Button

setPoint +1

Blue button

setPoint -1

Serial Port Write

IDLE — (30 seconds) → Transmit

updateLights()

getFahrenheight()

RED light off
BLUE light off

MODE

[COOL]

[OFF]

[HEAT]

Temp > setPoint

yes

no

BLUE light pulse

BLUE light on

RED light off
BLUE light off

Temp < setPoint

yes

no

RED light pulse

RED light on