CS-350 Project One Task Scheduler
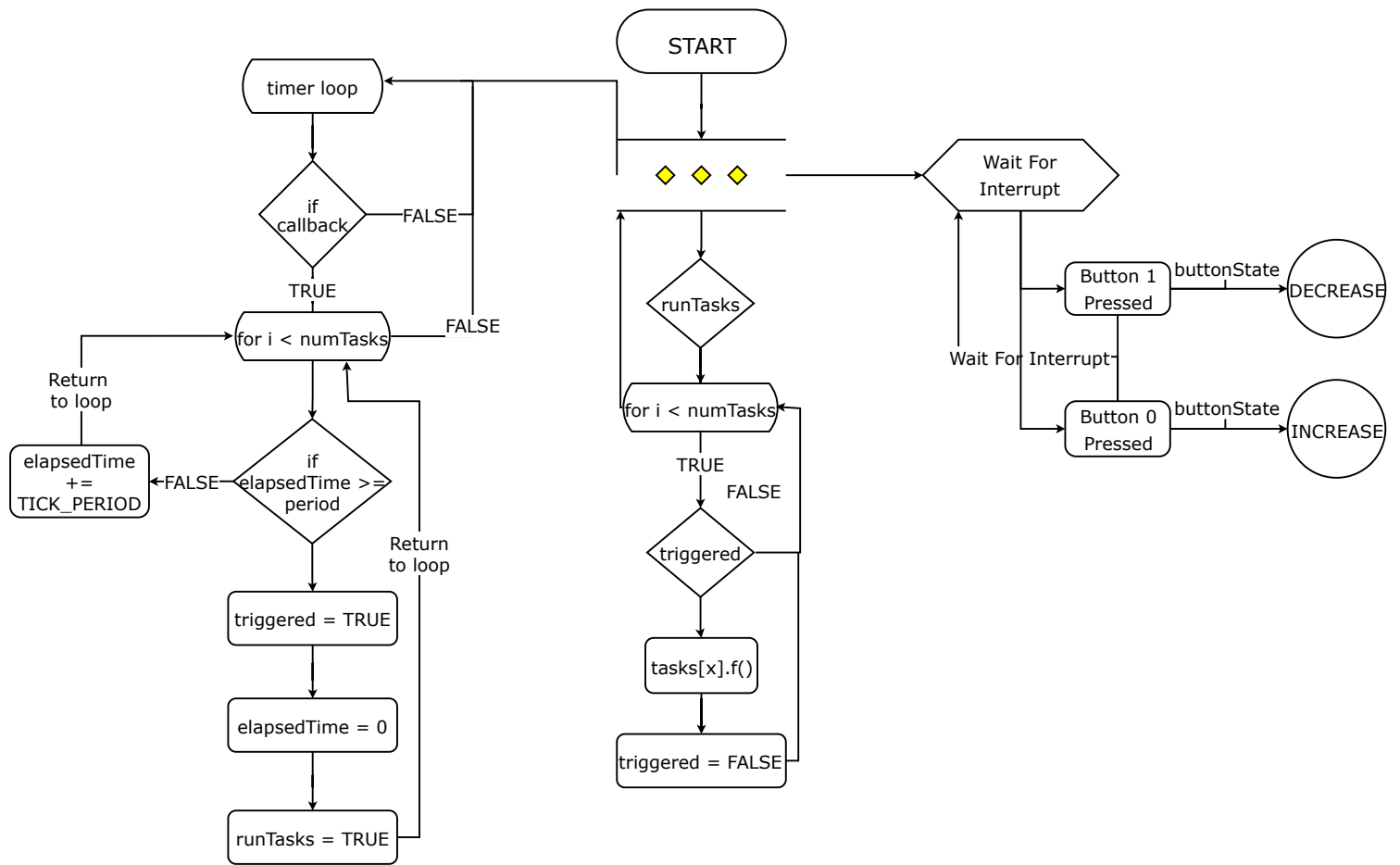
START

timer loop

if callback — FALSE

TRUE

for i < numTasks — FALSE

Return to loop

elapsedTime += TICK_PERIOD ← FALSE — if elapsedTime >= period

Return to loop

triggered = TRUE

elapsedTime = 0

runTasks = TRUE

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runTasks

for i < numTasks

TRUE

triggered — FALSE

FALSE

tasks[x].f()

triggered = FALSE

Wait For Interrupt

Wait For Interrupt

Button 1 Pressed — buttonState — DECREASE

Button 0 Pressed — buttonState — INCREASE

Tasks

taskCheckButton

buttonState

setPoint += 1 ← INCREASE

setPoint -= 1 ← DECREASE

NEUTRAL

buttonState NEUTRAL

END TASK

getUnitState

currTemp = readTemp

maxTemp = setPoint + 3

if currTemp < setPoint → unitState HEATING

FALSE

if currTemp < maxTemp → unitState OFF

FALSE

if currTemp >= maxTemp → unitState COOLING

END FUNCTION

taskCheckTEMP

unitState

OFF → LED_OFF

unitState OFF

COOLING → LED_ON

LED_OFF

HEATING → LED_OFF

END TASK

taskUpdateSvr

resetTime = Timer_getCount

Output-> currentTemp-> setPoint-> unitState-> resetTime

END TASK