Name: Preyash

Registration Number: 20BPS1022   Date: January 20, 2022
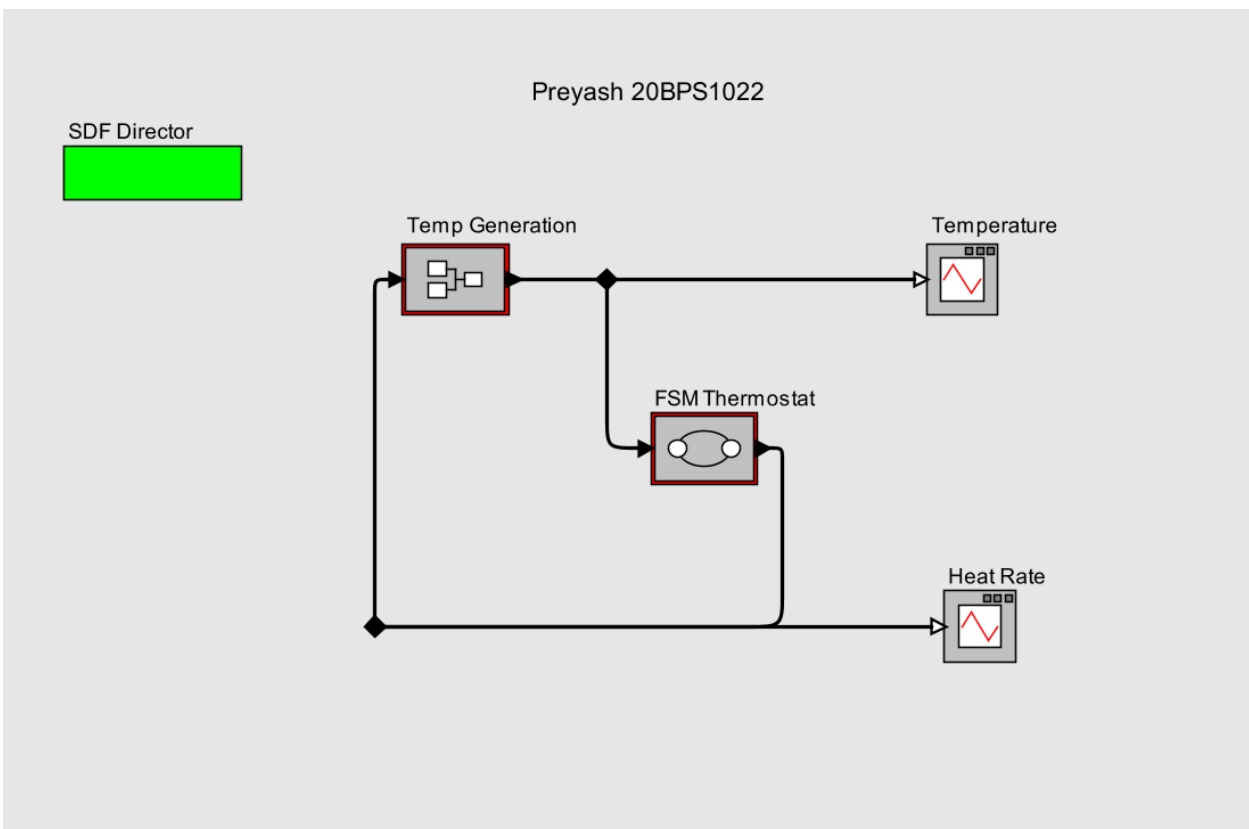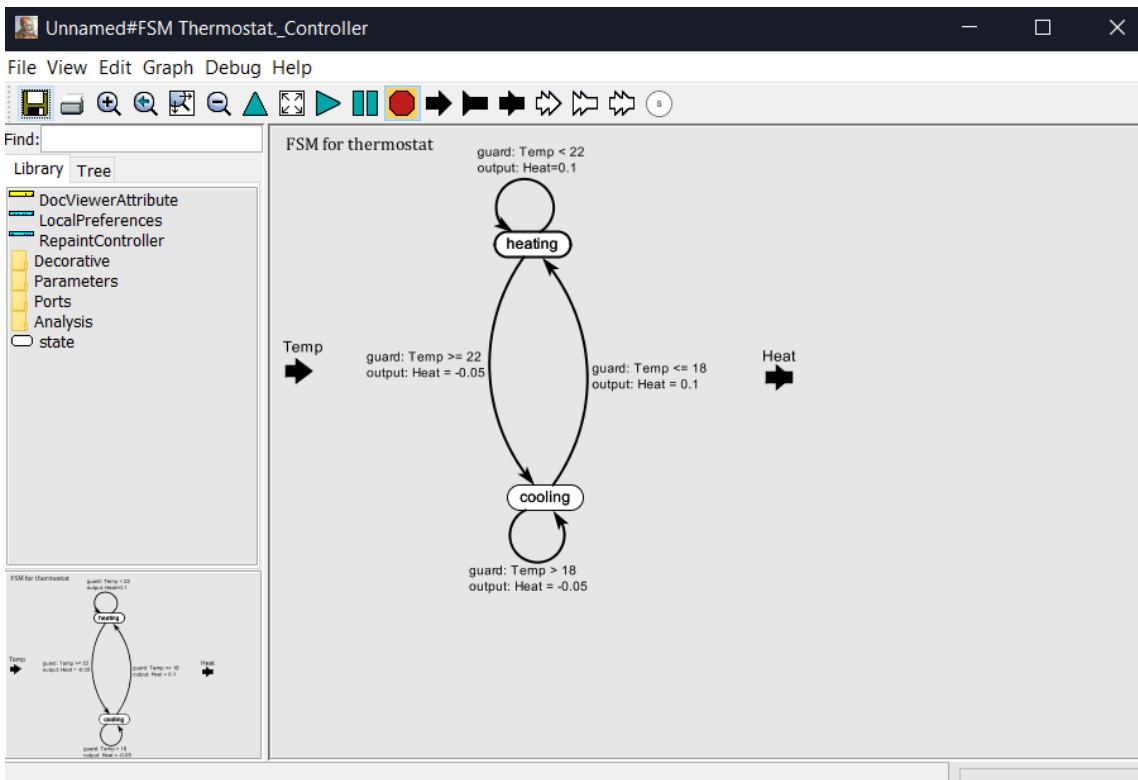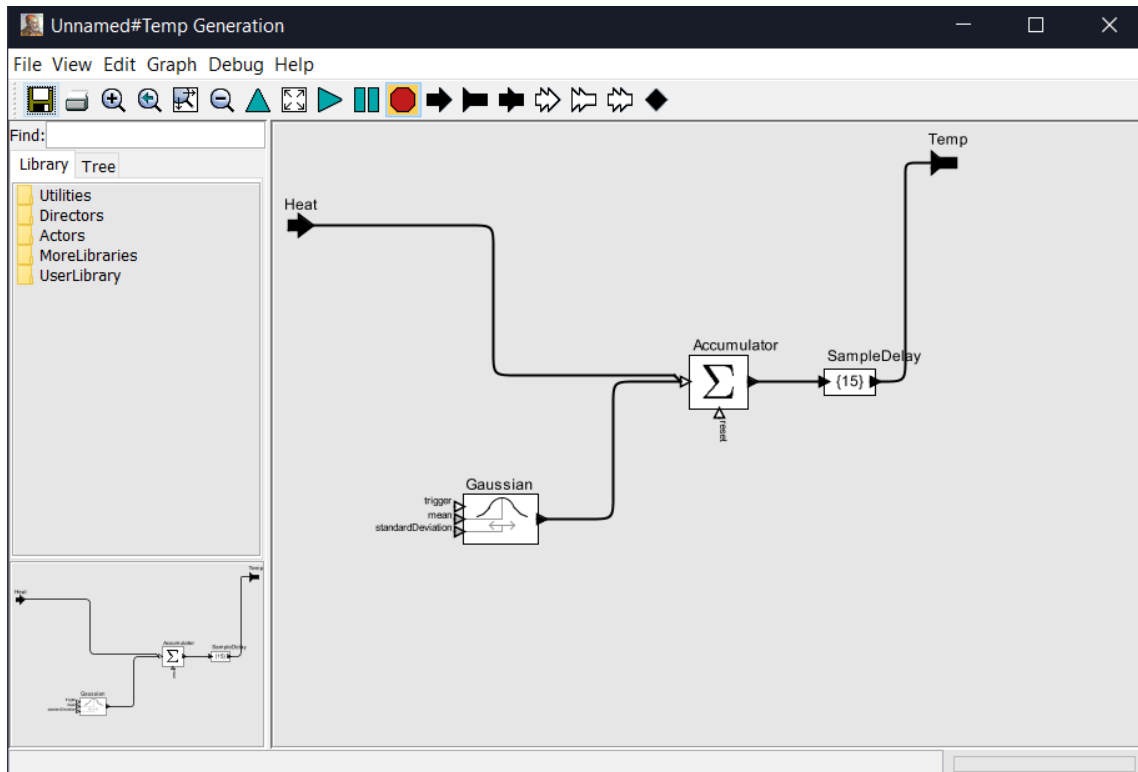
LAB-02

CSE2021

DISTRIBUTED REAL-TIME SYSTEMS

Tools Used: Ptolemy

Task: Design a model of a thermostat with hysteresis using FSM

Circuit:

Unnamed#Temp Generation

File View Edit Graph Debug Help

Find:
Library Tree

Utilities
Directors
Actors
MoreLibraries
UserLibrary

Temp

Heat

Accumulator
Σ
reset

SampleDelay
{15}

Gaussian
trigger
mean
standardDeviation

Unnamed#FSM Thermostat._Controller

File View Edit Graph Debug Help

Find:
Library Tree

DocViewerAttribute
LocalPreferences
RepaintController
Decorative
Parameters
Ports
Analysis
state

FSM for thermostat

guard: Temp < 22
output: Heat=0.1

heating

Temp

guard: Temp >= 22
output: Heat = -0.05

guard: Temp <= 18
output: Heat = 0.1

Heat

cooling

guard: Temp > 18
output: Heat = -0.05