

**Eon**

**Temperature Control System - Den**

**Analysis Class Report**

## Revision History

Authors	Description of Change	Sections	Rev	Date
Erine Estrella Mohamed Jaafar Devontae Reid Sean Wulwick	➤ Initial Release	All	O	2-28-18
Erine Estrella Mohamed Jaafar	➤ Redesigned Analysis Class Diagram ➤ Edited Project Description ➤ Updated Analysis Class List	Section 2 Section 2.1 Section 2.2	I	3-13-18

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# 1 Team Description

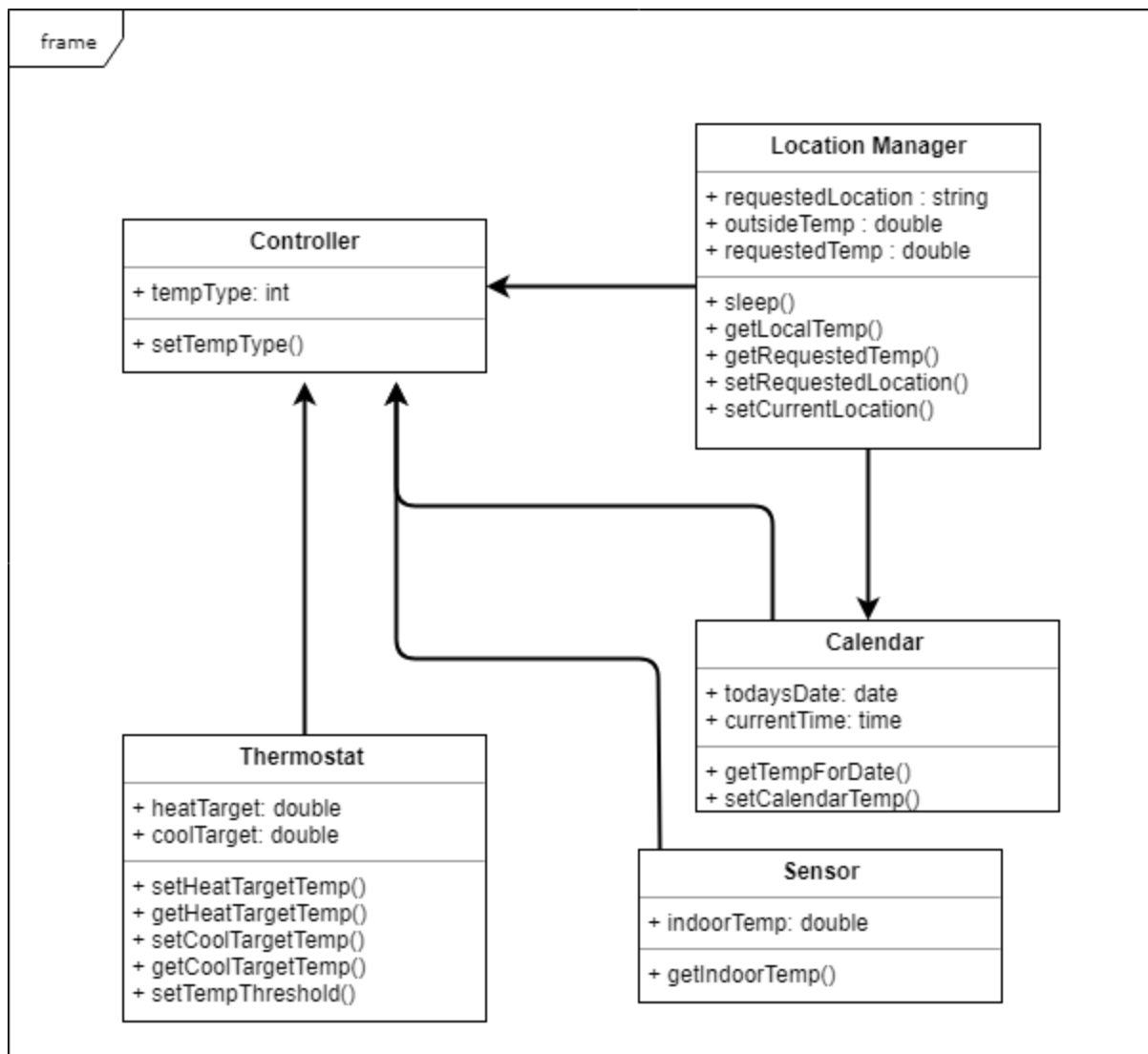
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# 2 Project Description

Statement of Purpose: This project serves as a Temperature Control System, allowing the user to maintain a room's temperature according to their personal input.

Detailed Description: A heating/cooling control system that is capable of taking user input (temperature in either Fahrenheit or Celsius) in and activating an HVAC (Heating, ventilation, and air conditioning) system. This system also allows for scheduling and an external temperature display based on location information that is collected from the weather channel API. The control system is also capable of maintaining a temperature set point within a room at a predefined threshold of temperature. For example, if the user would like a warm climate, a temperature of 80 degrees F can be maintained constantly.

## 2.1 Analysis Class Diagram



## 2.2 Analysis Class List

Sequence Number	Analysis Class
1	Controller
2	Thermostat
3	Location Manager
4	Sensor
5	Calendar

### 2.2.1 Controller

Description: Main of the system, controls most functionality.

Attributes:

- tempType

Methods:

- setTempType()

### 2.2.2 Thermostat

Description: Things and stuff.

Methods:

- setHeatTargetTemp()
- getHeatTargetTemp()
- setCoolTargetTemp()
- getCoolTargetTemp()
- setTempThreshold()

Attributes:

- heatTarget
- coolTarget

### 2.2.3 Location Manager

Description: Gathers information for the display and controller for setting requested temperature from city.

Methods:

- sleep()
- getLocalTemp()
- getRequestedTemp()
- setRequestedLocation()
- setCurrentLocation()

Attributes:

- requestedLocation
- outsideTemp
- requestedTemp

### 2.2.4 Sensor

Description: Gathers and sets the indoor temperature. It is the component that keeps the temperature data updated for the controller.

Methods:

- getIndoorTemp()

Attributes:

- indoorTemp

### 2.2.5 Calendar

Description: Maintains current date and time, sends current requested temperatures to controller as they come in the weekly calendar.

Methods:

- getTempForDate()

Attributes:

- todaysDate
- currentTime