Smart House and Weather Monitoring Dashboard Class Diagram S275931

User

+ SmartHomeUser: User

+ useSmartHomeWeathrtDashboard()

+ navigateDashboard()

Smart House / Weather Dashboard

+ smartHomeDashboard: API Data

+ weatherDashboard: WeatherAPIData

+ temperature: TemperatureSensorData

+ humidity: HumiditySensorData

+ getTemperature()

+ getHumidity()

+ getWeatherAPIData()

+ getWeatherLocationData()

+ processTemperatureData()

+ processHumidityData()

+ processWeatherAPIData()

+ displayTemperatureDataOnDashboard()

+ displayHumidityDataOnDashboard()

+ displayWeatherAPIDataAsCurrentAndForecast()

+ displayWeatherLocationDataAsMaps()

+ addNewSensor()

Weather

+ temperature: float

+ humidity: float

+ precipitationProbability: integer

+ precipitationProbabilityType: string

+ weatherConditions: string

+ weatherConditionsIcon: image/icon

+ windSpeed: float

+ windDirection: string

+ pollenCount: integer

+ pollenCountPPM: integer

+ pollenCountDescription: string

+ weatherWarnings: string

+ airPressure: float

+ visibility: string

+ viisibilityDistance: float

+ uvIndex: integer

+ uvIndexDescription: string

+ airPollution: integer

+ airPollutionDescription: string

+ time: time

+ date: date

+ precipitationMap: mapData

+ temperatureMap: mapData

+ windMap: mapData

+ airQualityMap: mapData

+ radarMap: mapData

+ location: locationData

+ retreiveWeatherDataFromWeatherServiceAPI()

+ processWeatherData()

+ displayWeatherDataAsDashboard()

+ retrieveMapDataFromWeatherServiceAPI()

+ processMapData()

+ displayMapDataAsWeatherMaps()

+ useLocationForCorrectWeatherDataForLocalArea()

Humidity

+ humidity: float

+ getHumidityDataFromSensors()

+ processHumidityData()

+ calculateAverageHumidity()

+ displayHumidityData()

+ recordHumidityData24Hours()

+ recordHumidityData30Days()

+ recordHumidityData12Months()

+ retrieveHumidityDataRecords()

+ displayHumidityRecordsAsGraphs()

Temperature

+ temperature: float

+ getTemperatureDataFromSensors()

+ processTemperatureData()

+ calculateAverageTemperature()

+ displayTemperatureData()

+ recordTemperatureData24Hours()

+ recordTemperatureData30Days()

+ recordTemperatureData12Months()

+ retrieveTemperatureDataRecords()

+ displayTemperatureRecordsAsGraphs()