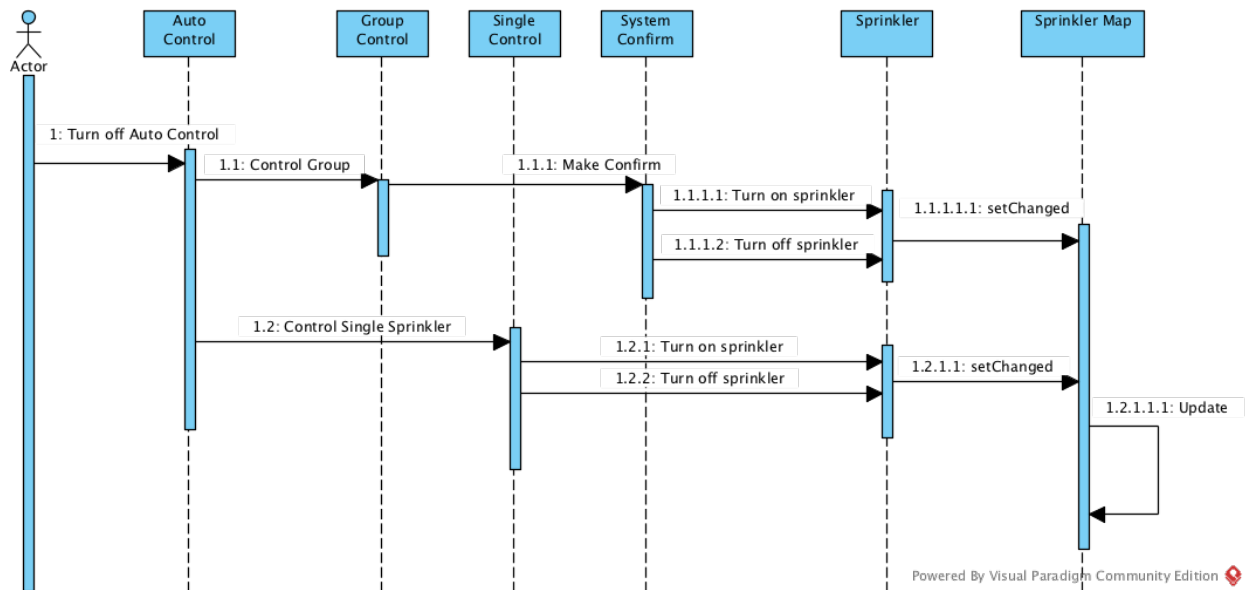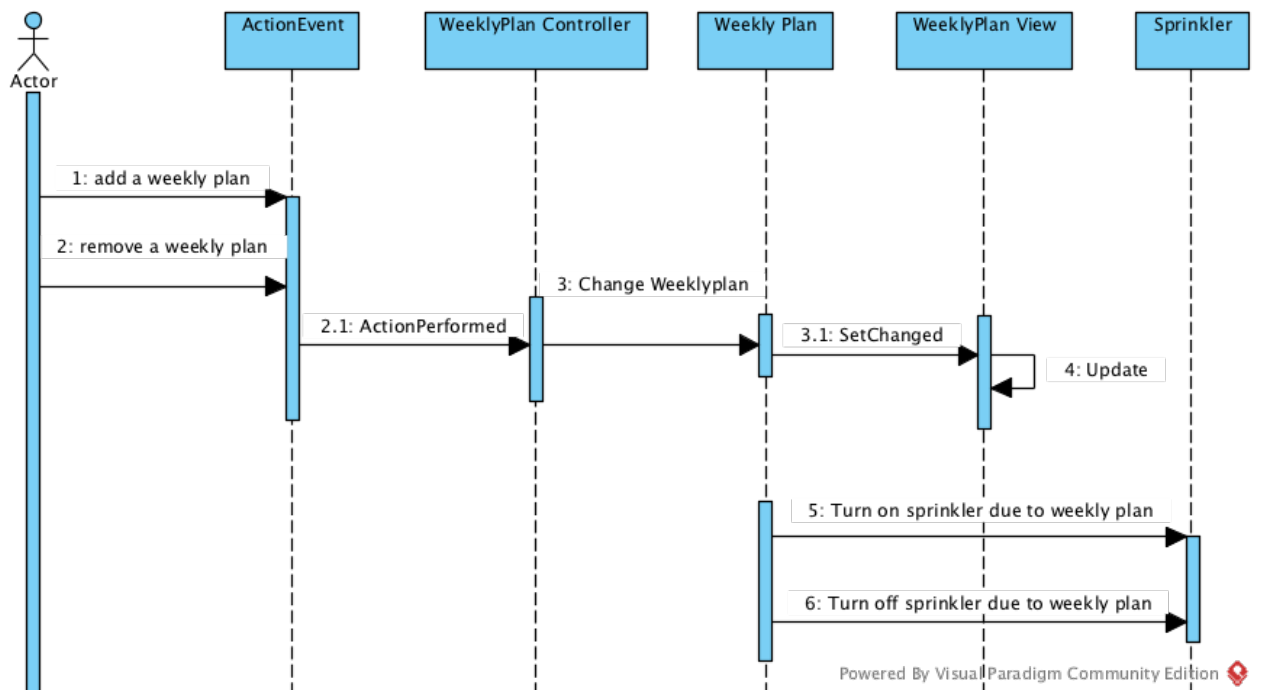# 1. Interaction Diagrams and State Transition Diagrams:
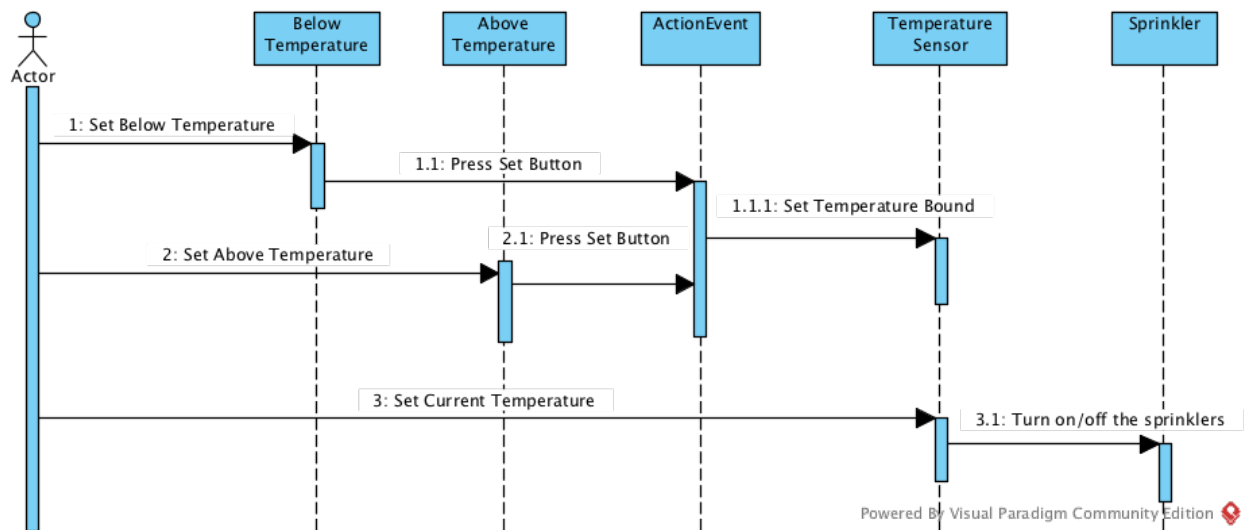
- Sprinkler Sequence
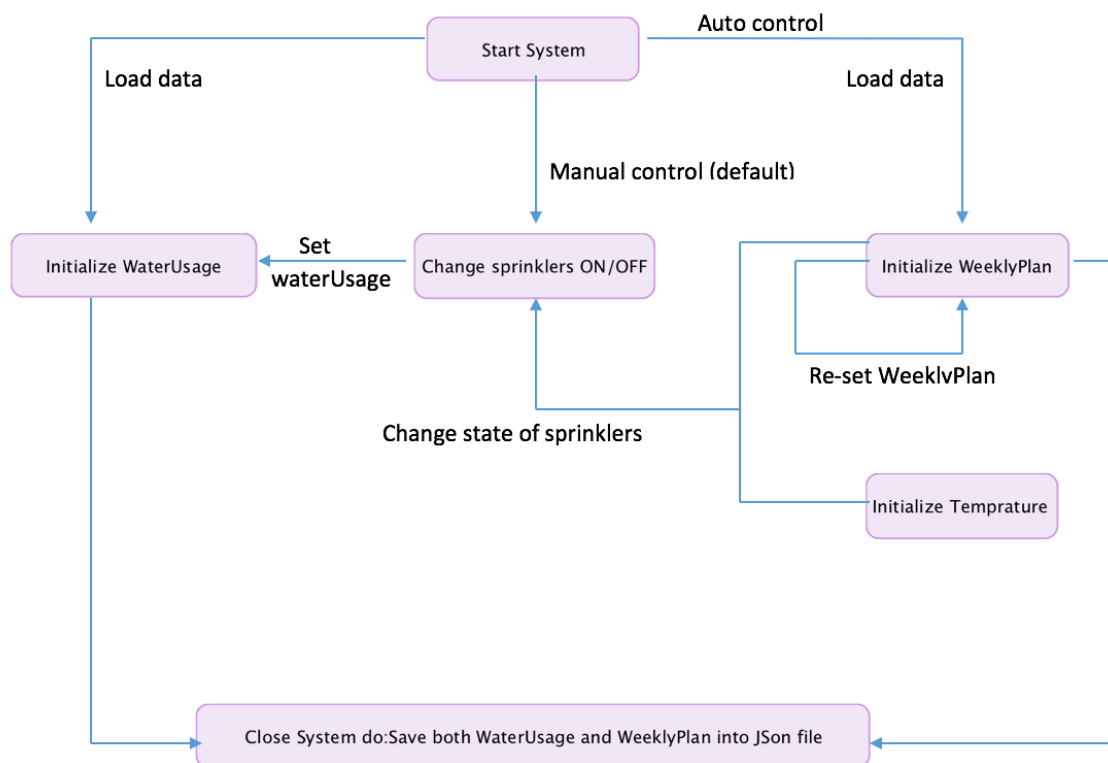

- Weekly Plan Sequence

- Temperature Sequence

- State Transition Diagrams

2. Class Diagram:

Observable

Runnable

Sprinkler
-automation : boolean
-group : String
-isTurnedOn : boolean
-nameID : String
-waterFlux : double
-waterUse : WaterUsage
+autoControlSpk() : void
+manualControlSpk() : void
+turningOff() : void
+turningOn() : void
+isAutoControl() : boolean
+setWaterFlow() : void
+run() : void

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SprinklerBank
-groupSprinklerMap : map
-WATER_FLOW : double = 2.0
+changeWaterFlow() : void
+groupTurningOff() : void
+groupTurningOn() : void
+turnOffAutoControl() : void
+turnOnAutoControl() : void

WeeklyPlan
-groups : String[]
-northGroupPlan : Map
-eastGroupPlan : Map
-westGroupPlan : Map
-southGroupPlan : Map
+saveToJson() : void
+setWeeklyPlan() : void
+removeWeeklyPlan() : void

WaterUsage
-dayOfUse : Map
-nameID : String
+saveToJson() : JSONObject

TemperatureSensor
-aboveTemp : double
-belowTemp : double
-curTemperature : double
-group : String
+setBelowTemp() : void
+setAboveTemp() : void
+setCurTemp() : void
+getCurTemp() : double

SprinklerMapController
+mouseClicked() : void

SprinklerSetController
+actionPerformd() : void

WeeklyPlanController
+actionPerformed() : void

MainFrame
-frame : JFrame
-tab : PanelTab
+go() : void

PanelTab

<<Interface>>
Observer

SprinklerViewer

WeeklyPlanViewer
-showingView : PlanShowingViewer
+update() : void

Runnable

WaterUseView
-spkBank : SprinklerBank
-categoryPlot : CategoryPlot

<<Interface>>
Observer

SprinklerMapView
-spkLabels : Map
+addMouseListener() : void
+update() : void

TemperatureView
-tempInput : JTextField
-groupChoice : JComboBox
-set : JButton
-confirm : JButton
+actionPerformed() : void

SprinklerSetView
-buttonEast : JButton
-autoControl : JButton
-buttonDetail : JButton
-flow : JTextField
+addActionListener() : void

PlanSetViewer

PlanShowingViewer
-head : String[]
-table : JTable
+display() : void

SprinklerLabel
-sprinklerGroup : String
-sprinklerId : String
-sprinklerOff : ImageIcon
-sprinklerOn : ImageIcon
+onSprinklerOn() : void
+onSprinklerOff() : void

DetailsView
-data : Object[][]
-table : JTable

AddPlan
-addButton : JButton
-groupList : JComboBox
-weekList : JComboBox
-startTime : JTextField
-endTime : JTextField
+addActionListener() : void

RemovePlan
-plan : WeeklyPlan
-attribute
+addActionListener() : void

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Models (in line two): Sprinkler, SprinklerBank, WeeklyPlan, WaterUsage, TemperatureSensor.

Controller (in line three): SprinklerMapController, SprinklerSetController, WeeklyPlanController.

Main Frame (in line five): MainFrame, PanelTab.

Main View (in line six): SprinklerViewer, WeeklyPlanViewer, WaterUseView.

3. Package Diagram