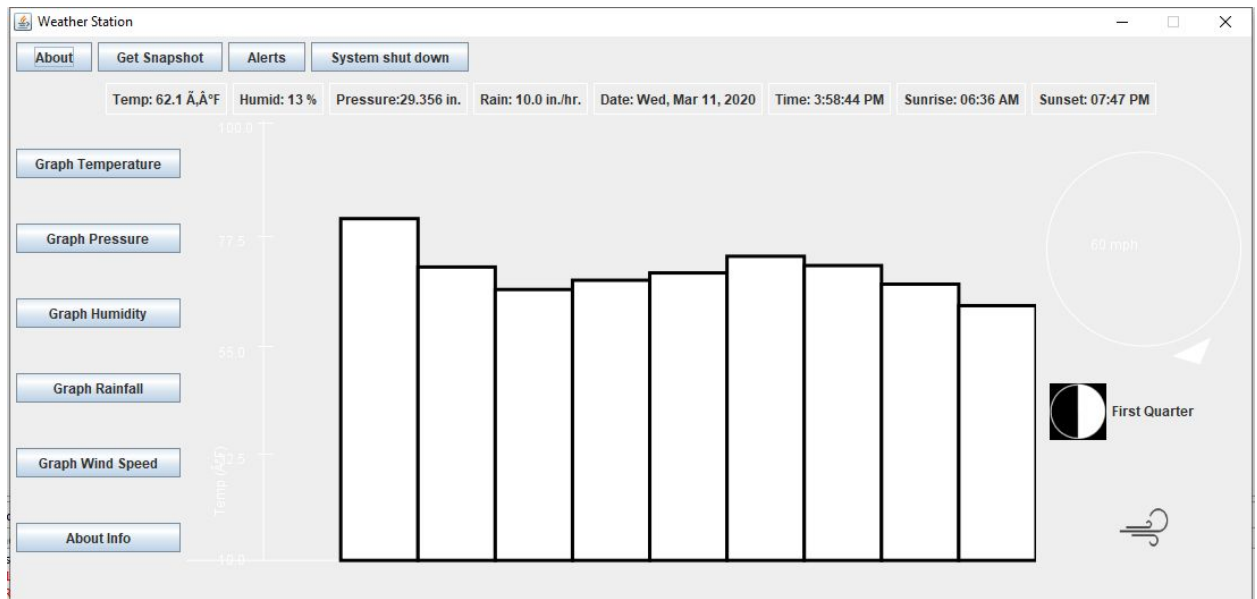
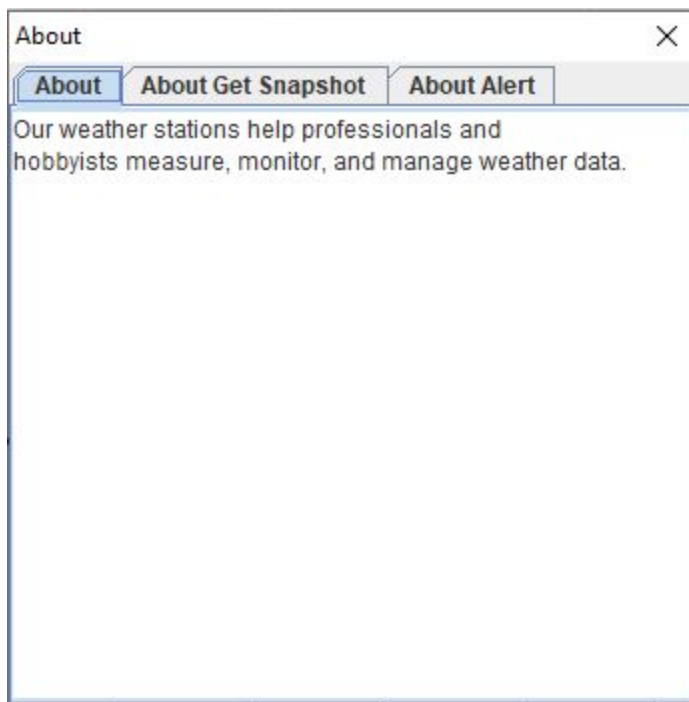


1) The main GUI console.



2) The 'About' GUI.

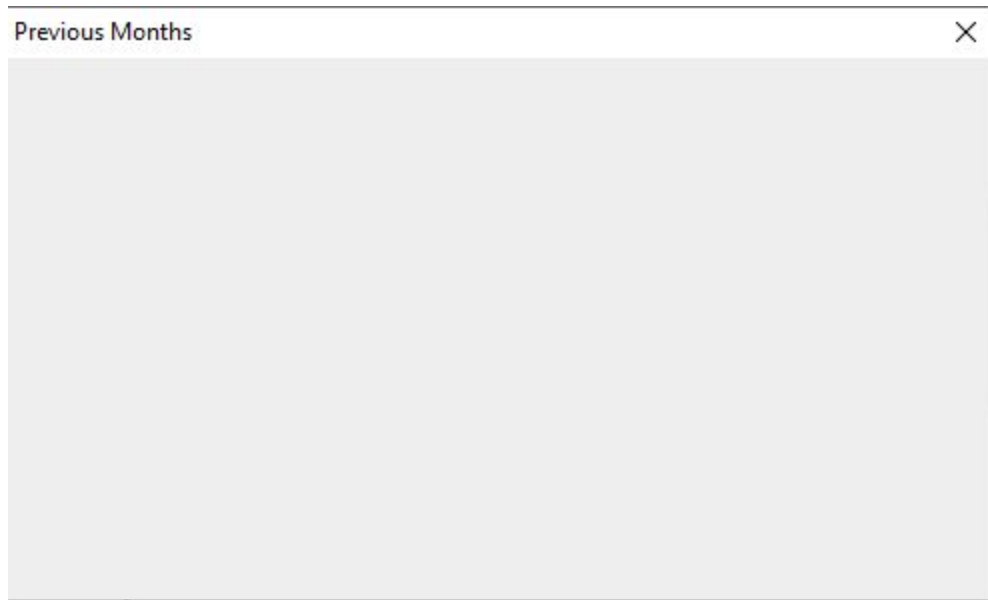


This GUI can lead to 2 others but they do not warrant snapshots as they are simply the other two tabs in th #2 picture.

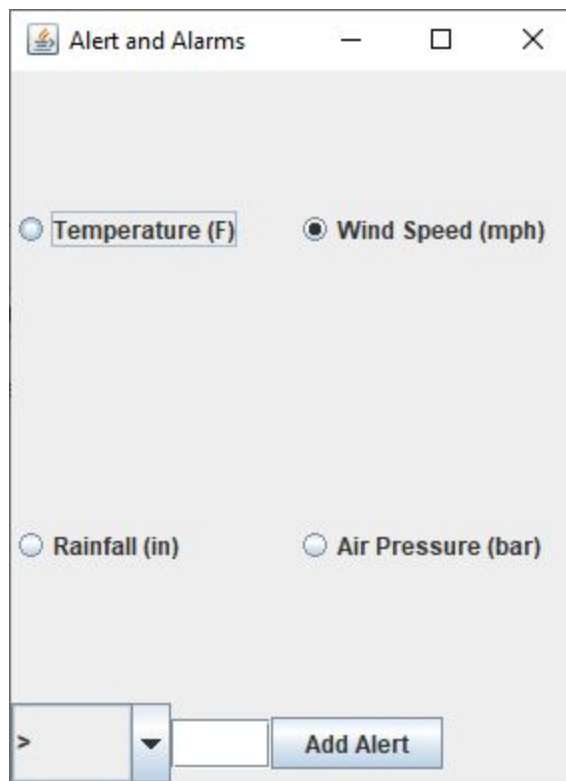
3)The 'Get Snapshot' GUI.



4)The new GUI after making a selection in 'Get Snapshot'. This follows for 'hours' and 'days' screens aswell.



5)Alert GUI.

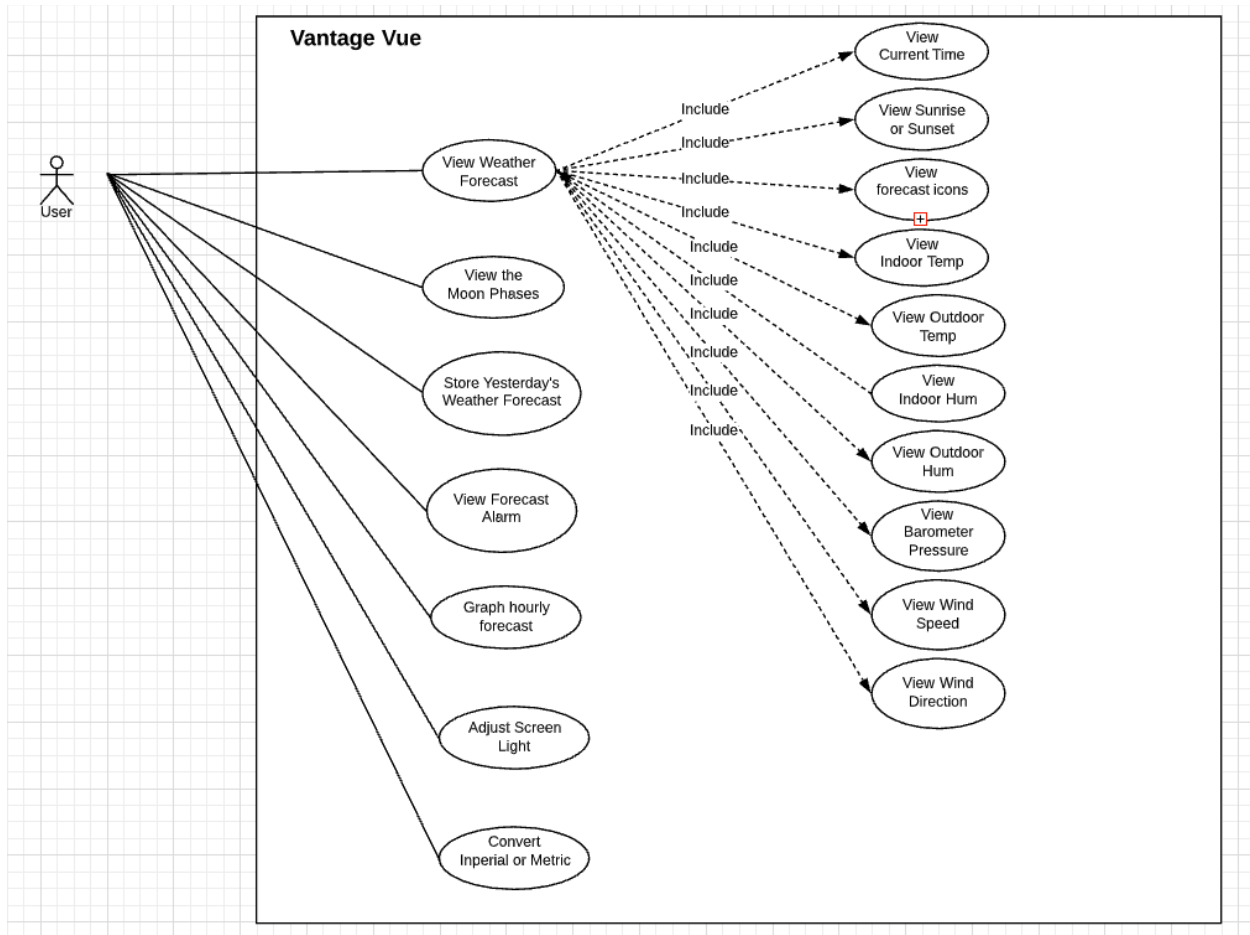


The image shows a window titled "Alert and Alarms" with a standard Windows-style title bar (minimize, maximize, close buttons). The window contains four radio button options for setting alerts: "Temperature (F)", "Wind Speed (mph)", "Rainfall (in)", and "Air Pressure (bar)". The "Wind Speed (mph)" option is currently selected. At the bottom of the window, there is a numeric input field with a greater-than sign (>) to its left and a dropdown arrow to its right. To the right of the input field is a button labeled "Add Alert".

6) This is a message pane for incorrect values in #5 the alerts tab.



The image shows a "Message" dialog box with a close button (X) in the top right corner. On the left side of the dialog is an information icon (a lowercase 'i' inside a circle). To the right of the icon is the text: "Please enter a valid value. (an integer value).". At the bottom center of the dialog is an "OK" button.



Vantage Vue/Control Software	
Function	View Current Time
Description	Show the current time at the current location based on a simulation weather temperature
Inputs	none
Source	A simulation weather temperature
Outputs	Show the current data
Destination	Show the current data on the GUI
Action	Show 00:00:00 if it doesn't connect to the internet. Show the current time if it connects to the internet.
Requires	Make sure the current time updates every second
Precondition	None

Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Sunrise or Sunset
Description	Show the time of sunrise or sunset at the current location based a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show the time of sunrise or sunset
Destination	View the time of sunrise or sunset data on the GUI
Action	Show 00:00:00 if it doesn't connect to the internet. Show the time of sunrise or sunset if it connects to the internet.
Requires	The sunset time must less than the sunrise time
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Icons
Description	<ul style="list-style-type: none"> • Show the sunny icon if the weather forecast said that it is sunny today • Show the rainy icon if the weather forecast said that it is rainy today • Show the cloudy icon if the weather forecast said that it is cloudy today
Inputs	None
Source	A simulation weather temperature
Outputs	Show the icons with the weather forecast respectively
Destination	Show the icons on the GUI with the weather forecast respectively

Action	Show string if it doesn't connect to the internet. Show the weather forecast icon if it connects to the internet.
Requires	None
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Indoor Temperature
Description	Show current indoor temperature based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show indoor temperature
Destination	Show indoor temperature on the GUI
Action	Show 0°F or 0°C if it doesn't connect to the internet. Show current indoor temperature if it connects to the internet.
Requires	<ul style="list-style-type: none"> • Update the temperature every minute • The temperature doesn't exceed a record high or low
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Outdoor Temperature
Description	Show current Outdoor temperature based on a simulation weather temperature
Inputs	None

Source	A simulation weather temperature
Outputs	Show indoor temperature
Destination	Show outdoor temperature on the GUI
Action	Show 0°F or 0°C if it doesn't connect to the internet. Show current outdoor temperature if it connects to the internet.
Requires	<ul style="list-style-type: none"> • Update the temperature 10 seconds • The temperature doesn't exceed a record high or low
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Indoor Humidity
Description	Show current indoor humidity based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show indoor humidity
Destination	Show indoor humidity on the GUI
Action	Show 0% if it doesn't connect to the internet. Show current indoor humidity if it connects to the internet.
Requires	<ul style="list-style-type: none"> • Update the humidity every minute • The humidity doesn't exceed 100% or less than 0%
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software

Function	View Outdoor Humidity
Description	Show current outdoor humidity based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show outdoor humidity
Destination	Show outdoor humidity on the GUI
Action	Show 0% if it doesn't connect to the internet. Show current outdoor temperature if it connects to the internet.
Requires	<ul style="list-style-type: none"> • Update the temperature 50 seconds • The humidity doesn't exceed 100% or less than 0%
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Barometer Pressure
Description	Show current barometer pressure based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show barometer pressure
Destination	Show barometer pressure on the GUI
Action	Show 0 BAR if it doesn't connect to the internet. Show barometer pressure if it connects to the internet.
Requires	Five-position trend arrow shows whether barometric pressure is rising, falling or stable.
Precondition	None
Postcondition	None

Side effects	None
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Vantage Vue/Control Software	
Function	View Wind Speed
Description	Show current wind speed based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show wind speed
Destination	Show wind speed on the GUI
Action	Show 0 mph or 0 knot if it doesn't connect to the internet. Show wind speed if it connects to the internet.
Requires	Cannot a negative number
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Wind Direction
Description	Show current wind direction based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show wind direction
Destination	Show wind direction on the GUI
Action	Show wind direction if it connects to the internet.
Requires	None
Precondition	None

Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Rainfall
Description	Show current rainfall based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show rainfall
Destination	Show rainfall on the GUI
Action	Show 0 inch if it doesn't connect to the internet. Show rainfall if it connects to the internet.
Requires	<ul style="list-style-type: none"> • Update the rainfall 50 seconds • Cannot a negative number
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Rain Rate
Description	Show current rain rate based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Show rain rate
Destination	Show rain rate on the GUI
Action	Show rain rate if it connects to the internet.

Requires	Get updated rain totals and rain rate every 20 seconds for the last 25 hours, 25 days, and 25 months.
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View the Moon Phases
Description	Show current moon phases
Inputs	The current datetime
Source	Moon phase can be calculated based off data obtained from https://svs.gsfc.nasa.gov/4768
Outputs	Moon phase is returned as one of eight segments and is represented by icons
Destination	Show moon phase on the GUI
Action	Show moon phase.
Requires	Check that the moon phase returned is an integer between 0-8.
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	Store yesterday's weather forecast
Description	Store yesterday's weather forecast so that it can be used in the future use
Inputs	None
Source	A simulation weather temperature
Outputs	all weather forecast data

Destination	Storage all weather forecast in memory
Action	Allows comparisons of changes in temperature and barometric pressure from day to day.
Requires	Check that change in temperature doesn't exceed 100 degrees for imperial scale.
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	View Forecast Alarm
Description	View Forecast Alarm based on a simulation weather temperature
Inputs	<ul style="list-style-type: none"> • Get/Set alarm for high/low: temperature, humidity, wind speed (high only), rain (high only) • City or zip code
Source	A simulation weather temperature
Outputs	Show Forecast Alarm
Destination	Show Forecast Alarm on the GUI
Action	Show forecast alarm if it connects to the internet.
Requires	Set 22 simultaneous, different alarms to warn of dangers such as high winds, freezing temperatures, rain rate, heat index, flood warning, and more.
Precondition	None
Postcondition	None
Side effects	None

Vantage Vue/Control Software	
Function	Graph hourly/daily/monthly forecast

Description	Graph hourly/daily/monthly forecast based on a simulation weather temperature
Inputs	None
Source	A simulation weather temperature
Outputs	Data containing all hourly/daily/monthly forecast data with city or zip code input
Destination	Show graph on the GUI
Action	Show graph on the GUI
Requires	Verify that null data does not crash the application.
Precondition	None
Postcondition	None
Side effects	None



Vantage Vue

View Weather
Forecast

View the
Moon Phases

Store Yesterday's
Weather Forecast

View Forecast
Alarm

Graph hourly
forecast

Adjust Screen
Light

Convert
Imperial or Metric

Include

Include

Include

Include

Include

Include

Include

Include

Include

Include

Include

Include

Include

View
Current Time

View Sunrise
or Sunset

View
forecast icons

View
Indoor Temp

View Outdoor
Temp

View
Indoor Hum

View Outdoor
Hum

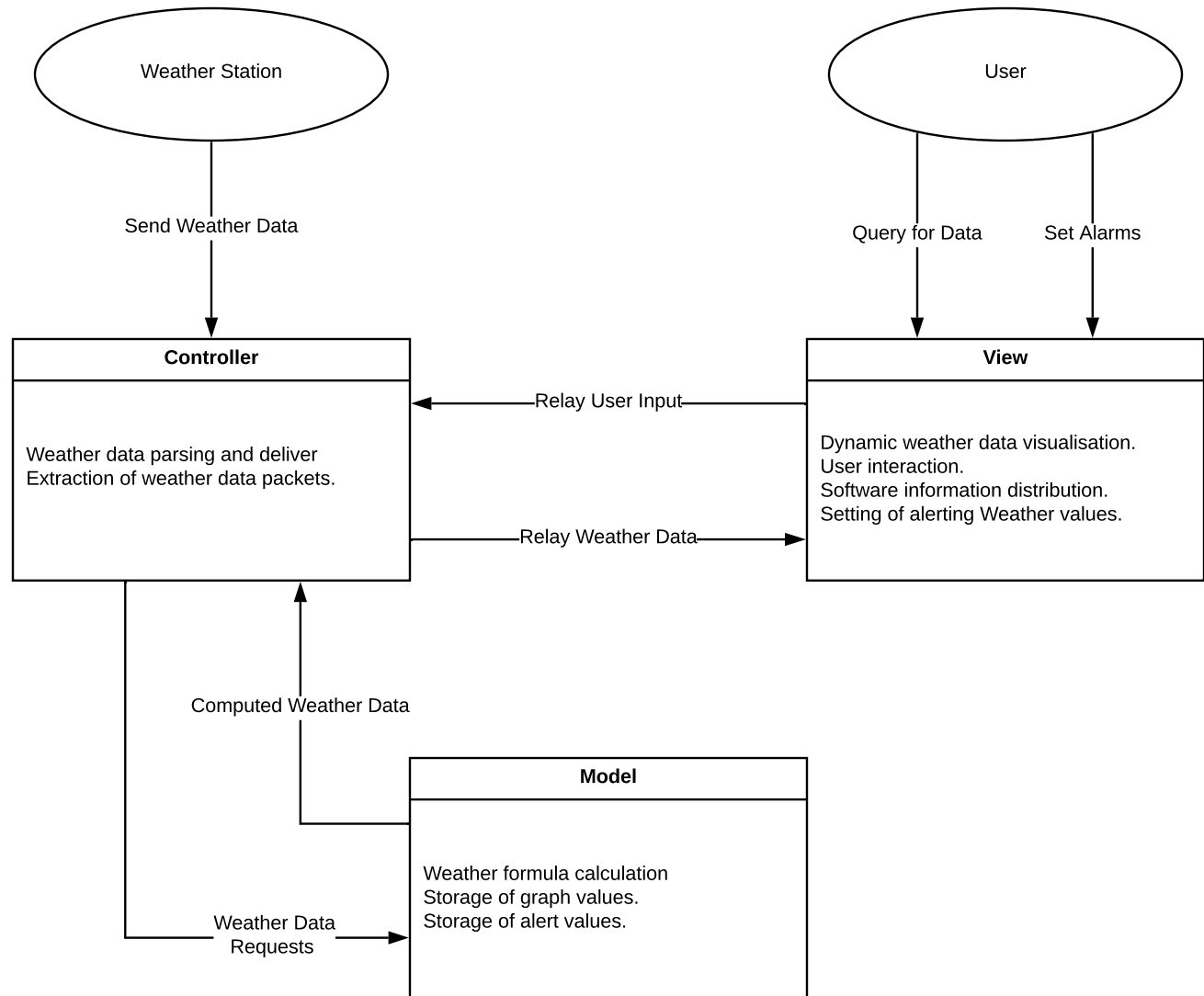
View
Barometer
Pressure

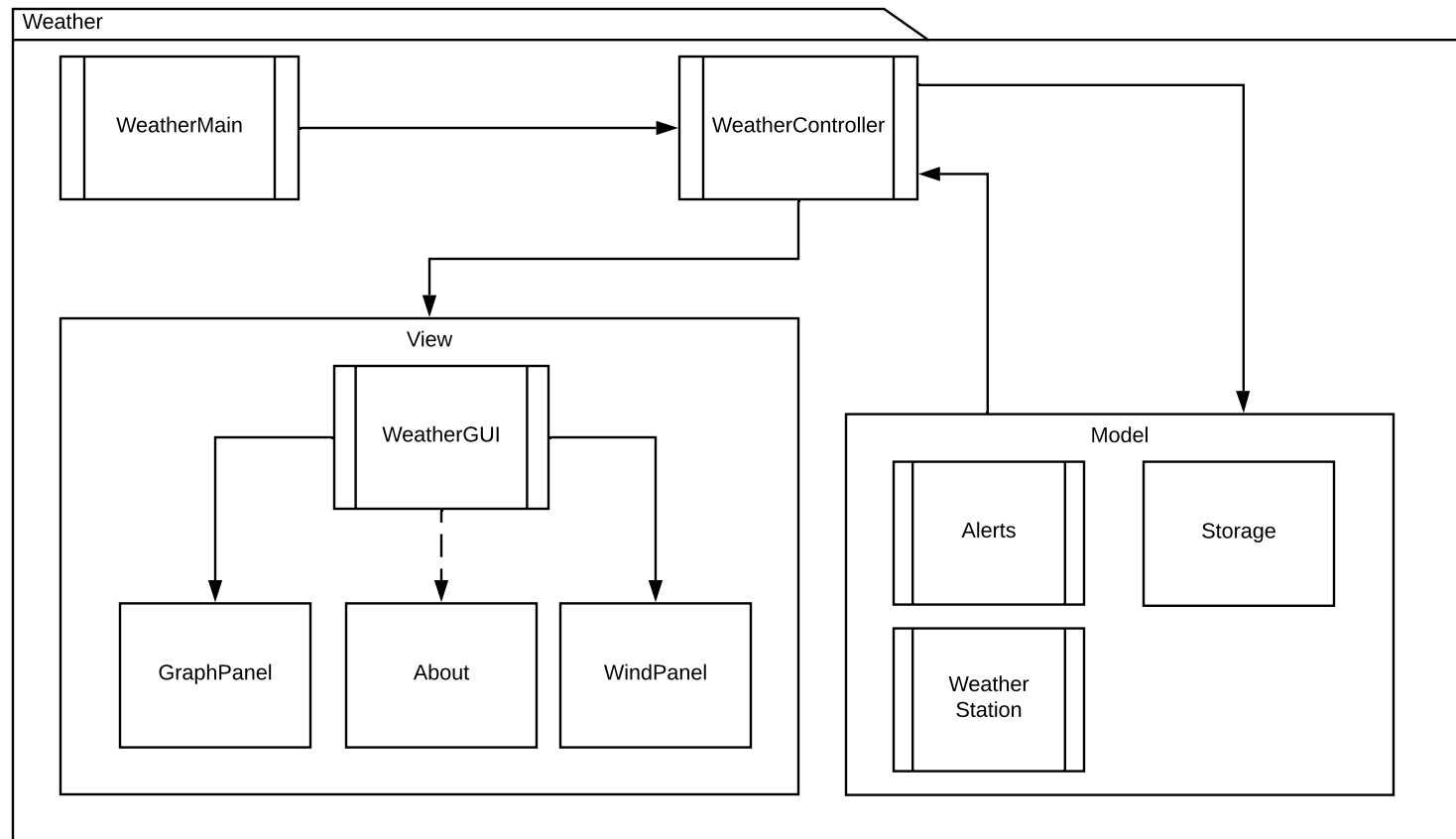
View Wind
Speed

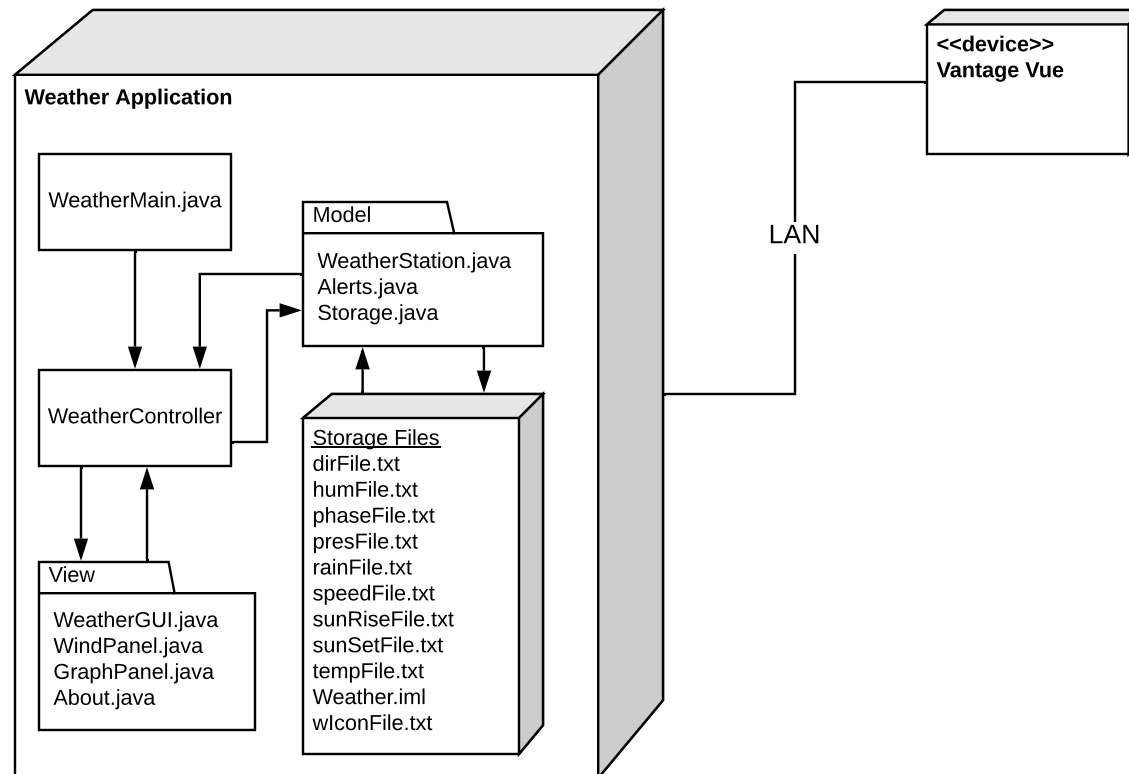
View Wind
Direction

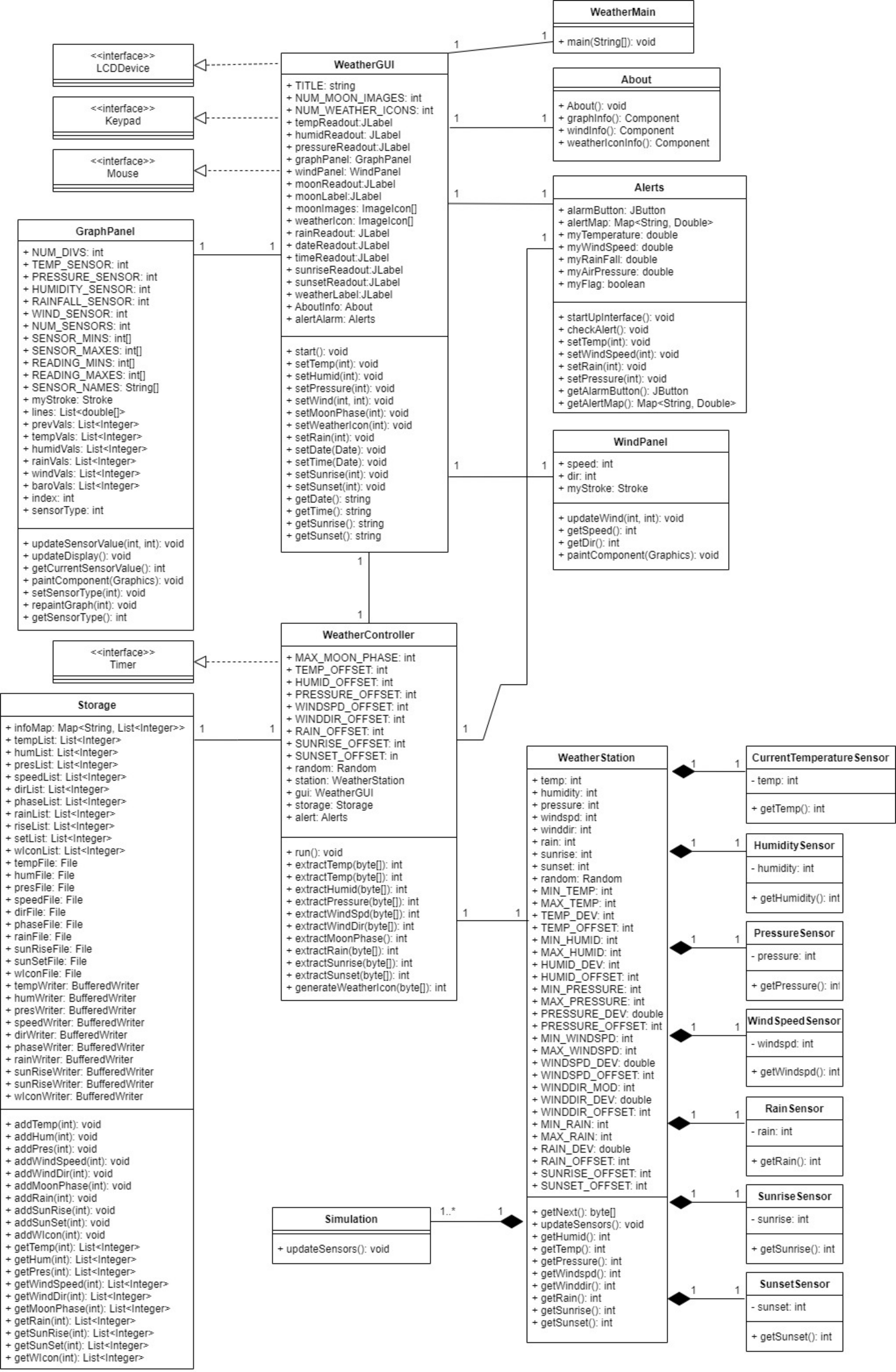
View Rainfall

View Rain
Rate









Project 3 Group 5 Question 10

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