Jasmine Latendresse (#40011419)
Airi Chow (#40003396)

Weather System Specification

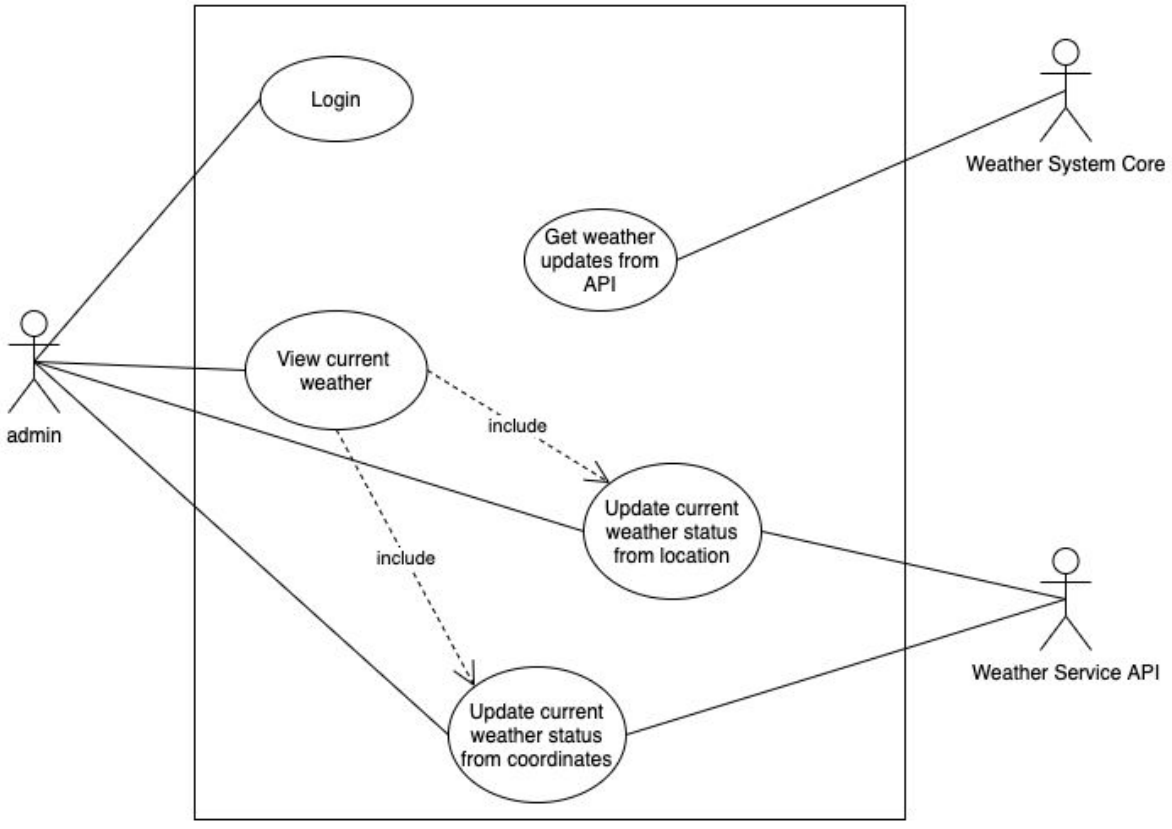
Description of System:

The Weather System displays the current weather of a location given the city's location or the geographical coordinates. In addition to the weather details, the time when this information was updated is displayed.

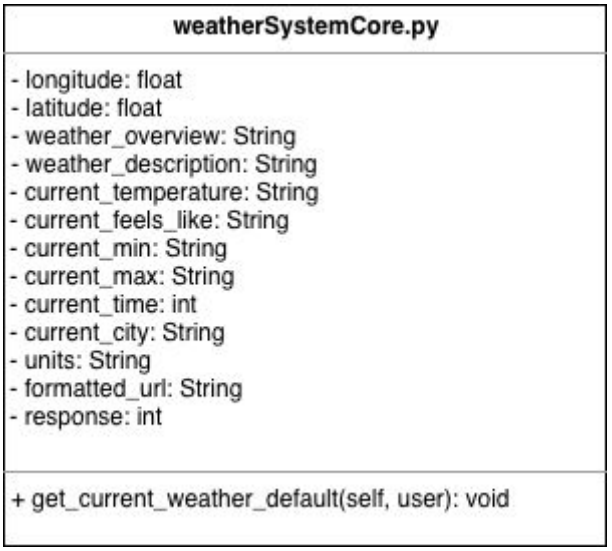
Functions of the System:

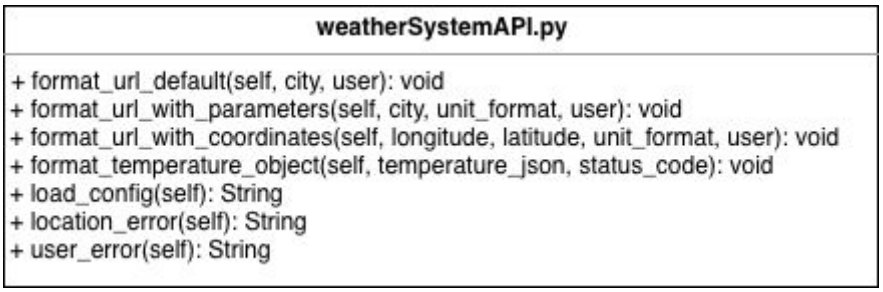
- Displaying as default Montreal's current weather in Celsius
- Displaying Last Updated time in Montreal's Time
- Searching location based on city
- Searching location based on longitude and latitude
- Toggling between Fahrenheit and Celsius

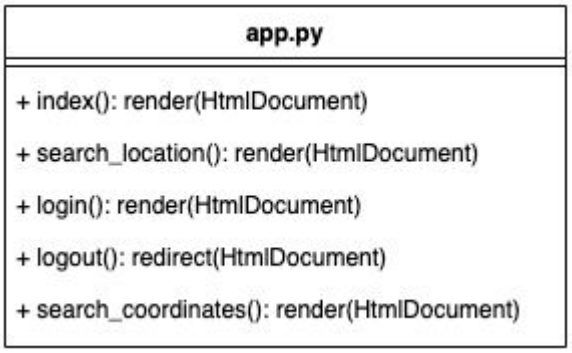
Use Case Diagram:



Class / Package Diagrams:







API Specification:

load_config(self):
Loads up the service api with config file consisting of the url with api token. User can modify the api token by modifying "weatherAPIConfig.json" file.

format_url_default(self, city, user):
Takes city(string) and formats the url to set the requested url. The user parameter will be checked if it's None before calling the "Weather's System Core".

format_url_with_parameters(self, city, unit_format, user):
Takes city(string) and unit_format(string) to set the requested url. The user parameter will be checked if it's None before calling the "Weather's System Core".

format_url_with_coordinates(self, longitude, latitude, unit_format, user):
Takes longitude(float), latitude(float) and unit_format(string) to set the requested url. The user parameter will be checked if it's None before calling the "Weather's System Core".

format_temperature_object(self, temperature_json, status_code):
Takes a response object in JSON format and parses the selected temperature attributes. This data is then written as a temperature object in "temperature.json". In the case that the status_code is not 200, "tempertureError.json" is created.

Potential Status Code:

200 - Request was successfully processed.

400 - "An error occurred, the location could not be found!":
Coordinates entered do not match any city location.

403 - "User is None! An error occurred, this is an invalid user. ": the user parameter is a None object.

403 - "An error occurred, this is an invalid user.": the user parameter does not match the authorised users in "config.json" file

404 - "An error occurred, the location could not be found!":
Invalid location. Either misspell location name or city is not supported.