



ECEA 5347- Project 2

Implementation/Assumption Notes

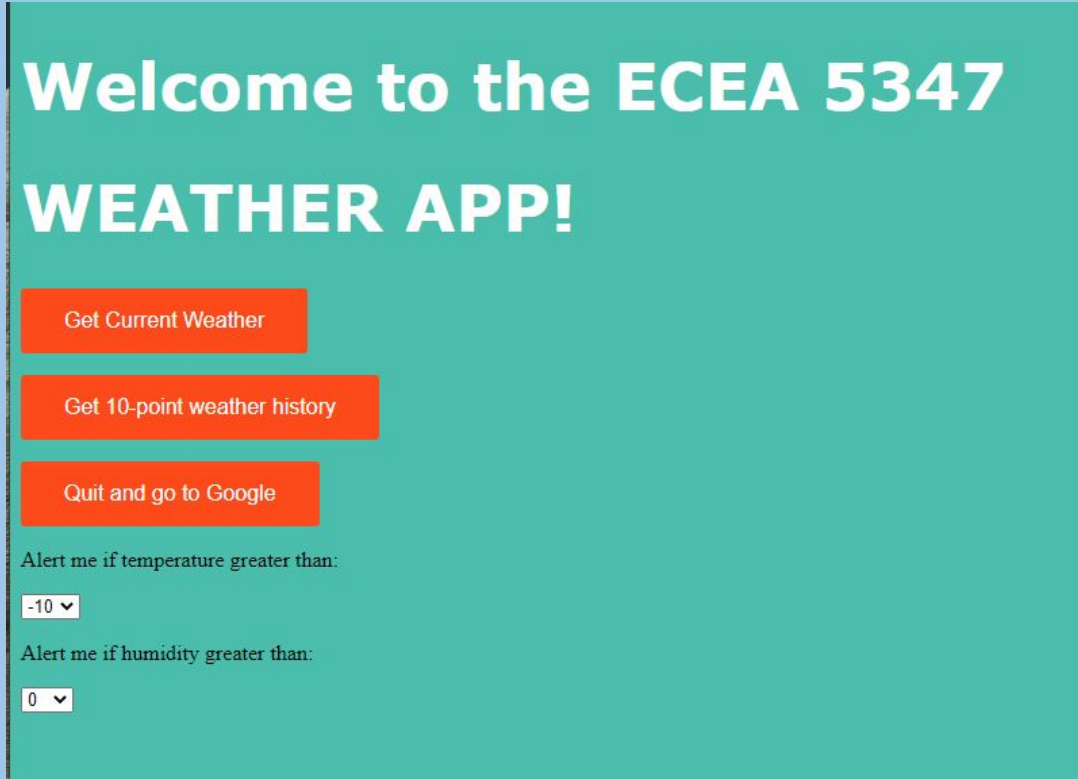
Objective- Create an HTML/CSS user interface that will:

1. Display temperature & humidity read in from a pseudo sensor, respond to events (e.g. button presses) and send data to code (e.g. text fields)
2. Start your HTML UI (load it into a browser) and connect to the Tornado Webserver.
3. Indicate errors if the webserver is not available or the connection can not be established.
4. Provide a Qt button that will read 10 values from the pseudo sensor with a one second delay between each reading (these values will be stored with their timestamps) – you can decide how this is displayed on the UI – showing data items read, showing completion, etc.
5. Provide a Qt button that will cause the main Python program to calculate and display on the UI from the last 10 (or less) temperature/humidity pairs read in – include minimum, maximum, and values for each reading type
6. Include two fields to set temperature and humidity alarm values; if the main Python program sees any temperature or humidity read from the pseudo sensor exceeds the alarm value, indicate an alarm on the UI – these alarm fields should have default values at startup
7. Displays a Qt button on the UI that will close the UI and end the Python main program
8. A button to close the window and end the program.
9. Data from the pseudo sensor is humidity between 0 and 100%, and temperature between -20 and 100 degrees Fahrenheit.

Additional Notes

1. IDE is set up with: VSCode, Win10, HTML5, Python, Tornado Webserver.

UI at startup

The image shows the startup screen of a web application. It has a teal background. At the top, the text 'Welcome to the ECEA 5347' is in white, followed by 'WEATHER APP!' in a larger white font. Below this, there are three orange buttons stacked vertically: 'Get Current Weather', 'Get 10-point weather history', and 'Quit and go to Google'. At the bottom, there are two alert settings. The first is 'Alert me if temperature greater than:' followed by a dropdown menu showing '-10'. The second is 'Alert me if humidity greater than:' followed by a dropdown menu showing '0'.

Welcome to the ECEA 5347

WEATHER APP!

Get Current Weather

Get 10-point weather history

Quit and go to Google

Alert me if temperature greater than:

-10 ▼

Alert me if humidity greater than:

0 ▼

Error condition



This site can't be reached

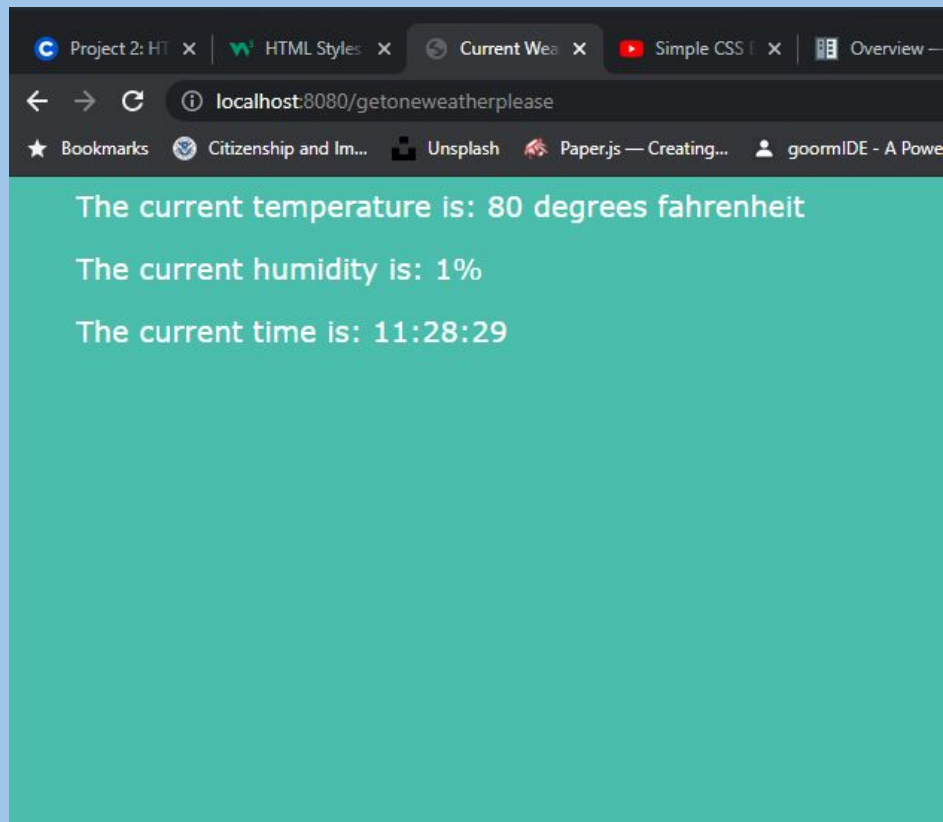
localhost refused to connect.

Try:

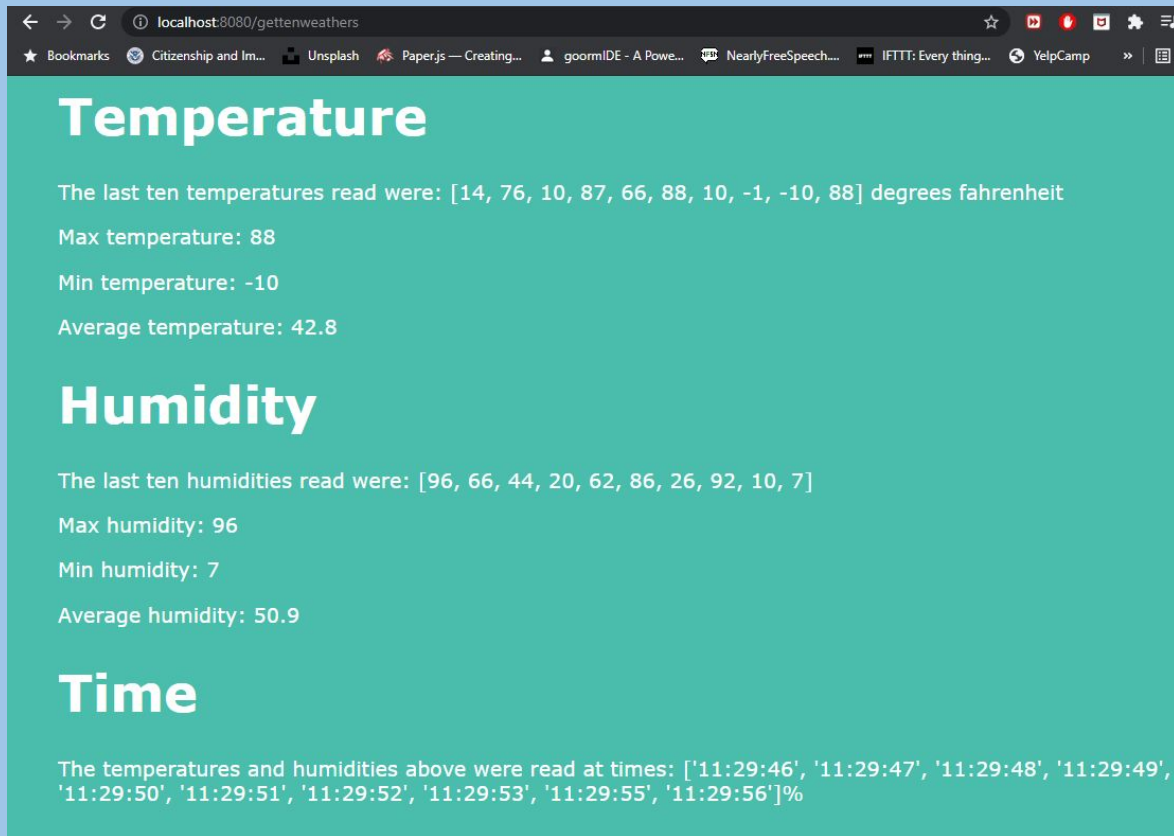
- Checking the connection
- [Checking the proxy and the firewall](#)

ERR_CONNECTION_REFUSED

Single reading



10-point reading



← → ↻ ⓘ localhost:8080/gettenweathers ☆ 📑 🔍 📌 📄 📁

★ Bookmarks 🌐 Citizenship and Im... 👤 Unsplash 📄 Paperjs — Creating... 👤 goomlDE - A Powe... 🗣️ NeartyFreeSpeech... 📺 IFTTT: Every thing... 📍 YelpCamp » 📄

Temperature

The last ten temperatures read were: [14, 76, 10, 87, 66, 88, 10, -1, -10, 88] degrees fahrenheit

Max temperature: 88

Min temperature: -10

Average temperature: 42.8

Humidity

The last ten humidities read were: [96, 66, 44, 20, 62, 86, 26, 92, 10, 7]

Max humidity: 96

Min humidity: 7

Average humidity: 50.9

Time

The temperatures and humidities above were read at times: ['11:29:46', '11:29:47', '11:29:48', '11:29:49', '11:29:50', '11:29:51', '11:29:52', '11:29:53', '11:29:55', '11:29:56']%

Temperature alert

