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CS7680
HW2
Task C

Overview

The purpose of this assignment was to use MVC design to implement the required tasks of simulating a thermostat. Fakenews() was a function that was provided and essentially was the simulated thermostat. It could also be seen as the API.

Approach

I started the assignment by designing the MVC model I was going to use. I knew that the data was coming from the fakenews() function and accessing those temperatures could serve as the model portion for the MVC. As for the view and controller, I wanted the view to display the simulation to the user and for the controller to be the middle man between the view and the model. In other objected-oriented friendly languages, this MVC design would not be difficult to implement. However, due to C's lack of built-in objected-oriented functionality, I had to do some research on how best to implement my design.

I discovered that I could implement my MVC design in an object-oriented manner by defining structs, initializing the structs, and then creating an instance of that struct by allocating memory ([source](#)). This allowed me to create model, view, and controller objects that could interact with one another to achieve the assignment goals. I had to refine my design a bit by adding a view listener component that served as an interface and an interaction point between the controller and the view. Nonetheless, I was content with the approach I took as it taught me a few things that I previously did not know.

Resources

<https://stackoverflow.com/questions/9355021/mvc-implemented-in-pure-c>
<https://jacobgalam.medium.com/mvc-in-c-66497e5d7011>
<https://www.codementor.io/@michaelsafyan/object-oriented-programming-in-c-du1081gw2>
<https://stackoverflow.com/questions/448944/c-non-blocking-keyboard-input>