

Project: Mini-Project Option A

Author: Justin Mabry

Overview:

Since I worked alone on this project, I was responsible for all the coding, documentation, and testing. This includes the image processing, manipulation, as well as everything for the weatherForecast. Although I worked alone, I did use course materials, such as notes, knowledge gained from assigned readings, and occasionally looking back at code from the labs in order to help remember something I forgot.

Problem 1: PPM File Handling

I designed and implemented `readPpmImage(String in)` in order to make PPPM files load into `BufferedImages`. Next, I implemented the `writePpmImage(String out)` for correctly formatting output for modified images. I created the documentation, such as javadocs, and the occasional comment in the code (unless I left some in from the instructor for help navigating my place in the code).

Problem 2: Image Transformations

I implemented all of the image operations, including `zeroRed`, `grayscale`, `invert`, `mirror`, `repeat`, and `rotate`, each one was turned to true inside `ToolsMenu` prior to testing. Following that, each implementation was thoroughly tested to insure that each action worked as intended.

Problem 3: Weather API & JSON Parsing

I created and built the `WeatherForcast` class inside the project to fetch real-time data via GET requests. After, I used Gson to parse JSON response into structured weather data. Maven wasn't compiling correctly so this part took some time in order to get the modules working properly on my system. I ensured the formatting of the output was correct, grouping properly by day in 3-hour intervals, my original output was incorrect so this took some tweaking.

Debugging:

I addressed some issues I had with properly loading in the .ppm image given to us in the starter project. It was pathing incorrectly and some tweaking was done.

Indirect Collaboration:

Although this project was completed solo by me. I did refer to course materials, and had occasional help from A.I. which is fully documented in my other files. Along with questions to it about the assignment, I also didn't have a pom.xml file or maven running properly on my

system, I used CoPilot to help me with that in order to do the JSON parsing for the later part of the WeatherForecast class implementation.