

Project: Mini-Project Option A

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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 PPM 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 ensure that each action worked as intended.

Problem 3: Weather API & JSON Parsing

I created and built the `WeatherForecast` 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.