Design Document

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Module: Fundamentals of Object Oriented Programming

Date: Nov, 05, 2021

**Statement of Goals:**

This will be the first working application I develop so I aim to learn how to set up a .java file that successfully compiles. I want to learn new things like how to implement a JOptionPane and make a reliable error document. Personally, I would like to improve my documentation of drafts, improve my own draft saving system using onenote. I also aim to hone my existing if,else if, else statements skills by applying my knowledge practically.

**Functional Specification:**

Since this is my first application, it will be very simple and won’t have complex features. The program is run and a screen will pop up containing a message that prompts the users to type in the temperature in degrees Celsius. Within the first screen there will be a close button and cancel button in case the user wants to exit the program, then an okay button to proceed to the next screen. The next screen then will show a screen that says the temperature in both Celsius and Fahrenheit. Consequently the 2nd screen will have an exit button to close the screen and an okay button to proceed to the 3rd screen. The 3rd screen is the final screen, it has a close button, and okay button which upon pressing will close the program.

**Technical Specification:**

Being the first application to be made by me, the code will contain very simple data structures, algorithms, and it won’t include a database. Also, the language used is java 16. As for data structures, tempCelsius is the variable name, it is an integer and it’s the only variable in the application. Important to note: tempCelsius is changed to String as instructed by the instructor to follow the sample document for implementing a JOptionPane. As for algorithm, if, else if, and else statements are used to denote an output based on the range at which the data belongs to; anything above 100°C is too hot, anything above 40°C is hot, anything below 15°C is icy(cold) and everything else is perfect since it is below 40°C and above 15°C. The algorithm works this way:

* It starts from the highest temperature I think is appropriate. 100°C is chosen because water boils at 100°C, and I also find choosing 100°C to be humorous because no organism would survive in such high temperatures.
* Then the next statement is an else if statement: anything above 40°C is hot since 15°C-40°C is preferable (at least for me).
* Then anything below 15°C is cold because above 15°C is preferable.
* Then finally anything that doesn't belong in any of those statements (15>x>40) is perfect.

**Reflection:**

* I learned from this particular assignment the importance of confirming whether a due date is a draft or final submission. I have made a working draft 1 day after the assignment was given yet I didn't provide the instructor a draft. I also learned to finish everything to the bare minimum then only after that I can make it more complex and polished just to be sure that I get a distinction from all of them since complexity is not exactly awarded much more points. My knowledge of allocating storage containers(variables) for specific data was reinforced as I was integrating a JOptionPane. I learned that data within a method cannot be accessed in another method, something I heard before from youtube tutorials but only now I manage to consolidate it in my mind after applying the knowledge practically. Consequently, I learned how to create a global variable, something I did not anticipate during the planning phase.