Project 1: Clock

Overview

Our group made a clock using Java. When the program runs, you are first prompted into deciding which hour system you would like to use (12 hour or 24 hour). You proceed to set the time you desire and the clock runs from there. The numbers are displayed in a simple console-based text menu, showing the hour, minutes, and seconds.

Work Distribution

Richard was in charge of creating the update methods for the Time class. He created an updateSeconds, updateMinutes, and an updateHours to accurately update the numbers for each. The minutes and seconds had to be rolled over at the 60 mark, and the hour’s method took into consideration both the hour system choice and each ones roll over mark.

Dravid was in charge of the Clock class, as well as making sure the interactions between classes worked. The Clock class acted as an interface between the main class (ClockTest) and the Time. Its primary job was to display the time, much like a regular clock does. It accomplished this task by printing the user-defined time, delaying the program by 1000 ms using Java’s built-in Thread class, and then updating adding on second to the time. Time.java handled the update functionality.

Francinaldo was in charge of the ClockTest class. The class job was to handle the user interface for setting the clock, receiving and validating the inputs. Methods for setting the format and initial hours, minutes, and seconds were created with instruction messages and conditions for the valid inputs.

Jinuk was in charge of part of the Time class. One of the constructors has default values for the time settings, the other uses settings passed as arguments. Getter and setter methods were created for hour, minute, and second.

Challenges

The first challenge was deciding how we were to design the clock and who was going to do what. Dravid took lead from the beginning and set up an account on Slack for communication purposes. He also was the first to suggest how to both separate the work and some ideas as to how to make the design. From there we met up in class and each did their part respectively.

The other challenge was how to delay the program. For this we did some research and found a fairly simple and easy way using a try-catch block. Doing this allowed for us to delay the program for 1 sec during each run through of the while loop. This allowed for the accurate update of the time of our clock.

Done Differently?

This being our first project and first time working in this particular group, we did not want to try and over-due anything and not complete the assignment. Our first and main priority was to finish the project and have a working clock. We discussed the possibility of making an analog clock, but found that it would be too time consuming. Having more time we would like to have made the interface and numbers more than just a simple console-based clock with a text menu.