Project Three

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What exists as the purpose of a loan? Finance aids in running the world, from raising capital for acquisitions, to financing individual purchases for the consumer. For this project, the instructions tasked students with developing a calculator to determine loan payments. I can detail the process here.

To start with, I referenced the same foundation from the previous assignment in Module 12. I studied that, and then applied the same philosophy. I developed the stage, pane, scene, and the eventual details within the scene. Once I completed the “core” part of the project, in terms of displaying the calculator and its labels and text-fields, I then moved on to the calculations portion. For this, I normally referenced the content within the lectures and class materials, and developed the ButtonHandler class to handle the events and calculate the answers; dependent on the responses of the users. The eventual process I utilized required conversions from the text-inputs, to strings, into eventual double values; to finally strings that then inputted into the last two text-fields. In terms of any methods that I utilized, I only normally referenced the start method to develop the GUI, and the handle method to process all calculations of the button. I implemented the optional main method for running the code in VSCode. I only possessed two classes, for the start method application, and the handle method implementation.

In terms of any alternatives to the project, countless possibilities exist. I re-created the calculator from the instructions, without any serious deviations. Someone else can hypothetically place the “Calculate” button near the left side of the calculator. Another person can rearrange the order of the labels and text fields. In terms of the actual code itself, that boils down to differences in organization and the approach.

In regards to any options that I first considered before discarding, or any mistakes on my end, I first attempted to calculate the monthly and total payments with integer values. This eventually led to issues when pressing the “Calculate” button. The rest of the program worked, though the reliance on integers and non-decimal answers prevented me from correctly displaying any answers in the text-fields. The situation resolved when I converted every number to a double. In terms of other mistakes and approaches, I first created an object for handling the button, before then placing that object in the class for handling all actions and events. For whatever reason, this failed to work until I directly created a class called ButtonHandler, and then just directly inputted that into the argument for the action of the button.

I obtained valuable lessons from this assignment. The first focused on emphasizing organization of UI elements. All of us utilize user-interfaces in our daily lives, from iOS and Android, to Xbox and Instagram. Working on this assignment allowed me to appreciate the work emphasized in quality user-interface placement and aesthetics, and I look forward to eventually learning more of the processes of crafting beautiful designs that flow and stream well. I also obtained a lesson on the values of calculations within GUI-interfaces. The formula exists as simple, though implementing it required multiple “temporary” values in the code, for the sake of calculating exponents; due to Java not directly allowing exponential calculations. This assignment allowed for an approach in calculating values to the power of “x,” through the usage of temporary values that combine into the final answer.

I enjoyed the opportunity to work on this and look forward to the future ones ahead.