Coding Journal -Scientific Calculator using TKinter

| Date: | Friday May 24, 2024 |
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| Today’s Goal | 1. Wire Frame for TKinter Scientific calculator 2. Setting The main frame 3. Displaying Buttons 4. Adding Logic 5. Evaluating Simple Math Expressions |
| Successes | * ~~Wire Frame for TKinter Scientific calculator~~ * ~~Setting The main frame~~ * ~~Displaying Buttons~~ * ~~Adding Logic~~ * ~~Evaluating Simple Math Expressions~~ |
| List problems and describe attempted solutions\*  (sources go here) | 1. Puting Entry for numbers in a function of its own    1. Done using one single function that creates buttons according to rows and columns 2. Evaluating the expression    1. Converting ‘x’ and ‘÷’ to ‘\*’ and “/” and calling the eval method to calculate it 3. Adding logic to buttons    1. Since all buttons were created using a single function two different functions were created ‘evaluate\_exp’ and “handle\_buttons’ the handle button functions handles the input in such a way it does not raise an error when calculating the whole expression, the ‘evaluate\_exp” calculates the final result |
| Lessons learned | The same program can be done in many different ways  The program infrastructure varies from programmer to programmer.  Isolating each function and its functionality and then creating a function to handle them is better than putting everything in \_\_init\_\_ function.  THE EVAL() METHOD.  THE ISDIGIT() METHOD |
| Creative Ideas | Add a Dice Roller, Add different unit(eg.. radian/degree), Add Trig Calculations |
| Questions still unanswered | 1. Adding functionality to sin cos and tan buttons |

| Date: | Friday May 31, 2024 |
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| Today’s Goal | 1. Adding Functionality to buttons 2. Updating User Experience/ GUI Looks 3. Interest Calculator |
| Successes | * ~~Interest Calculator~~ * ~~Bug fixes~~ |
| List problems and describe attempted solutions\*  (sources go here) | 1)The pi symbol was not being evaluated.  = math.pi()  2)Factorials were returning errors.  = using the math module  3)Switching to a different window  A function that uses the Toplevel |
| Lessons learned | Math module can handle a lot of mathematical sides of the program |
| Creative Ideas | Bar Chart for interest growth over years |
| Questions still unanswered |  |

| Date: | Tuesday June 4, 2024 |
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| Today’s Goal | 1. Testing For Bugs 2. Implementing Graphs 3. Changing the GUI for more user friendly look |
| Successes | * ~~Implementing Graphs~~ * ~~Changing the GUI for more user friendly look~~ |
| List problems and describe attempted solutions\*  (sources go here) | 1. Bugs fixed eg(Button placement, Colors,Button Logic) 2. Graphs were implemented using matplotlib |
| Lessons learned | 1)matplotplib bar graph plottting |
| Creative Ideas |  |
| Questions still unanswered |  |

| Date: | Friday June 7, 2024 |
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| Today’s Goal | * Write Reflection * Optimize Code * Clear and Understandable comments * Code Readability * Making Code Reusable |
| Successes | * ~~Write Reflection~~ * ~~Optimize Code~~ * ~~Clear and Understandable comments~~ * ~~Code Readability~~ * ~~Making Code Reusable~~ |
| List problems and describe attempted solutions\*  (sources go here) |  |
| Lessons learned | Documenting code in a project is very important |
| Creative Ideas | regular contribution entry field to the interest calculations and see growth |
| Questions still unanswered | How to add a regular contribution entry field to the interest calculations and see growth |