BMI Calculator

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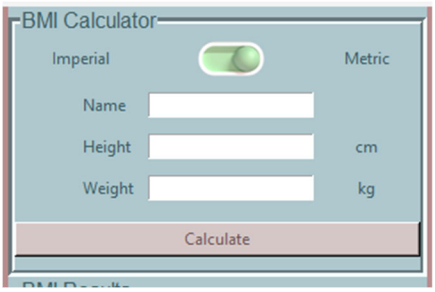
The BMI Calculator App is a simple application/program designed to calculate Body Mass Index (BMI) based on user input. The application utilizes the tkinter library for the graphical user interface, stores user data in a CSV file, and employs matplotlib to display a BMI chart. The chart illustrates the percentage of people falling into different BMI categories (underweight, normal weight, overweight, and obese).

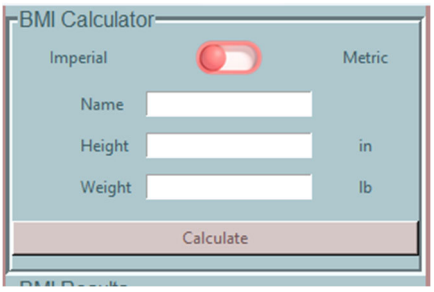
Features

- **User-friendly Interface:** The app provides an intuitive interface for users to input their name, height, and weight.
- **Unit Switch**: Users can easily switch between metric and imperial units for height and weight.
- **BMI Calculation**: The app calculates the BMI value based on the entered data and categorizes the user into one of four BMI categories.
- **Data Storage**: User information, including name, height, weight, BMI value, and category, is saved to a CSV file ("BMI_records.csv").
- **BMI Chart:** The app displays a dynamic BMI chart using matplotlib, allowing users to visualize their BMI category placement over time.

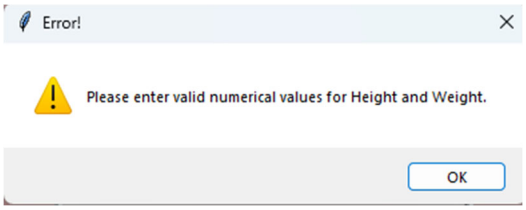
Steps to Use:

1. **Enter User Information:**
    - Use the switch button to toggle between imperial and metric units, for entering height and weight, providing flexibility and convenience.

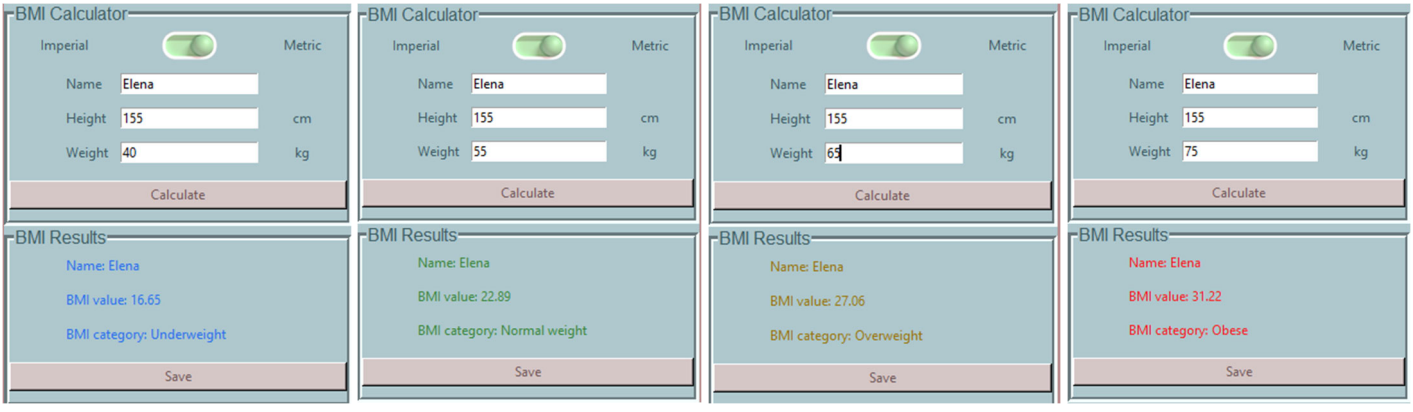




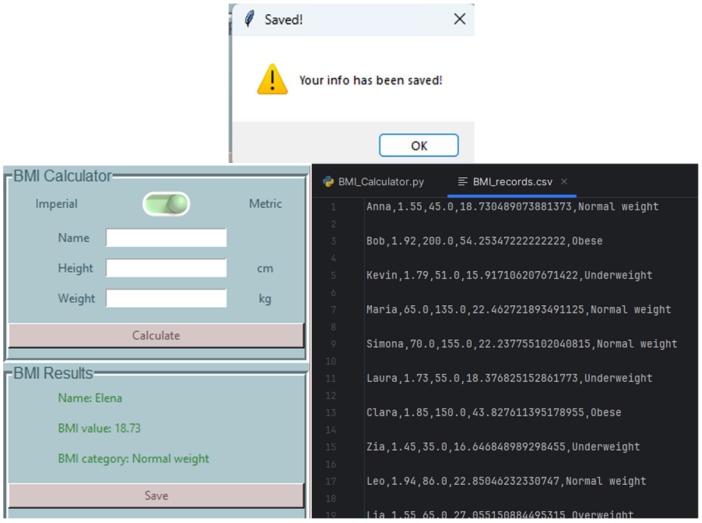
- Provide your name, height, and weight in the BMI Calculator frame.
- The application ensures data accuracy by validating user inputs. If height or weight fields are left blank or contain non-numerical values, an error message is displayed, guiding users to enter valid information.



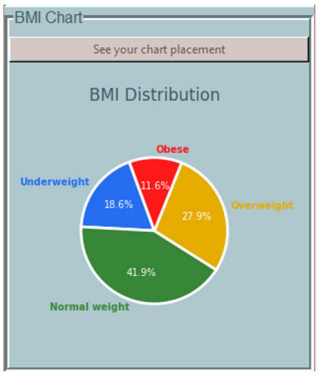
2. **Calculate BMI:**
   - Click the "Calculate" button to obtain your BMI value and category. The app calculates BMI based on the entered height and weight. The BMI value is then used to categorize users into four groups: Underweight, Normal weight, Overweight, and Obese.
3. **View Results:**
   - The calculation results are displayed in the BMI Results frame are dynamically color-coded to provide a quick visual indication of the user's BMI category.
     - Underweight: Blue
     - Normal weight: Green
     - Overweight: Yellow
     - Obese: Red



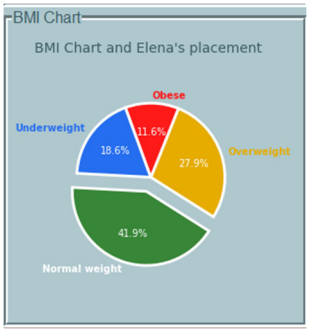
4. **Save Data:**
    - Click “Save” to store the data in a CSV file ("BMI_records.csv") for future reference. Upon successful save, a confirmation message is displayed, and the input fields are cleared for the next user.



5. **Explore BMI Distribution Chart:**
    - Check the BMI Chart frame to visualize the distribution of BMI categories based on historical data, which was saved to "BMI_records.csv" file.



6. **Interactive Chart - See Your Placement:**
    - Optionally, click "See your chart placement" to dynamically update the chart, highlighting the current BMI category on the chart.



Conclusion:

The BMI Calculator app provides a comprehensive solution for calculating and visualizing BMI data, offering users a simple yet effective tool for monitoring their health and wellness. The interactive features and color-coded results enhance user experience, making it easy to understand and interpret the data presented by the application.