Project Report: BMI Calculator (Advanced)
Project Title: BMI Calculator with Data Storage and Visualization

Overview:
To design and develop a GUI-based BMI (Body Mass Index) calculator using Python's Tkinter library that takes user inputs for height (in feet and inches) and weight (in kilograms), and displays the calculated BMI along with the weight category. It also stores historical data and allows users to visualize their BMI progress over time.

Technologies Used:
Programming Language: Python
GUI Toolkit: Tkinter (standard Python library)
Libraries:

- csv for data storage
- datetime for timestamping records
- matplotlib for plotting BMI trends

Concept:
BMI (Body Mass Index) is a standard health metric used to assess a person's weight category based on their height and weight. The formula is:
BMI = [weight (kg) / (height (m)^2]

BMI Categories:

Less than 18.5 → Underweight
18.5 to 24.9 → Normal weight
25 to 29.9 → Overweight
30 or more → Obese

Project Features:

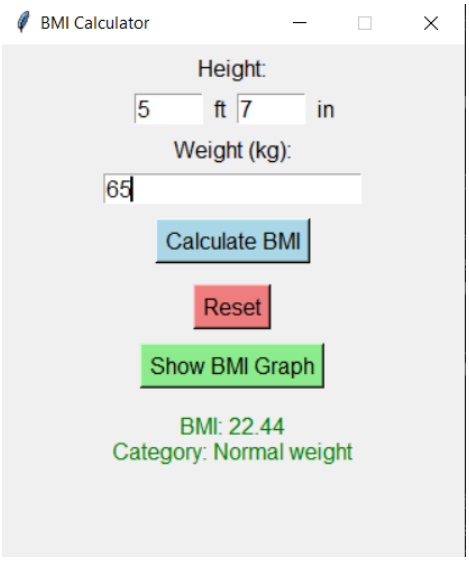
- User-friendly GUI to input:
  - Height (in feet and inches) and
  - Weight (in kilograms)
- Clickable button to calculate BMI
- Categorizes BMI result as Underweight, Normal, Overweight, or Obese
- Error handling for invalid inputs
- Reset button to clear all fields
- Data Storage:

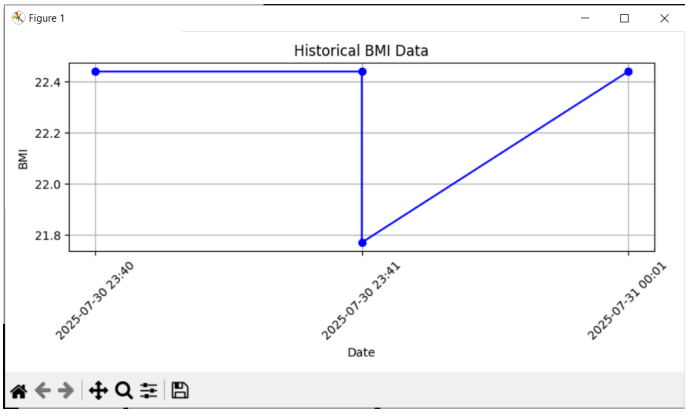
- Saves each BMI record with date, height, weight, BMI value, and category to a CSV file (bmi_history.csv).

- Data Visualization:
  - Plots historical BMI records using matplotlib, showing BMI trends over time.

Output Example:

If user inputs:
Height: 5 ft 7 in
Weight: 65 kg
Result:





Conclusion:

I have used Python and Tkinter to build a beginner-friendly, functional desktop application. Through this I learnt real-time user interaction, input validation, data handling and basic health-related computation.