

Challenge - Physics Calculator

The object of this challenge is to practice adding event bindings to a Tkinter program.

Mild 🌶️

Create a program that satisfies the following requirements:

- There is a labeled input field for the **distance** an object has travelled
- There is a labeled input field for the **time** it took the object to travel that far
- There is a function that uses the **distance** and **time** to calculate the **velocity** of the object
- A button to call the function
- A label to display the **velocity**

Medium 🌶️ 🌶️

Create a program that satisfies the following requirements:

- There is a labeled input field for the **distance_1** an object has travelled
- There is a labeled input field for the **time_1** it took the object to travel that far
- There is a labeled input field for the **distance_2** an object has travelled
- There is a labeled input field for the **time_2** it took the object to travel that far
- There is a function that uses **distance** and **time** to calculate **velocity**
 - $\text{velocity} = \text{distance} / \text{time}$
- There is a function that uses **velocity_1**, **velocity_2**, **time_1**, and **time_2** to calculate **acceleration**
 - $\text{acceleration} = (\text{velocity}_2 - \text{velocity}_1) / (\text{time}_2 - \text{time}_1)$
- A button to calculate **acceleration**
- A label to display the calculated **acceleration**

Spicy 🌶️ 🌶️ 🌶️

Create a program that satisfies the following requirements:

- There is a labeled input field for the **distance_1** an object has travelled
- There is a labeled input field for the **time_1** it took the object to travel that far
- There is a labeled input field for the **distance_2** an object has travelled
- There is a labeled input field for the **time_2** it took the object to travel that far
- There is a labeled input field for the **mass** of the object
- There is a function that uses **distance** and **time** to calculate **velocity**
 - $\text{velocity} = \text{distance} / \text{time}$
- There is a function that uses **velocity_1**, **velocity_2**, **time_1**, and **time_2** to calculate **acceleration**
 - $\text{acceleration} = (\text{velocity}_2 - \text{velocity}_1) / (\text{time}_2 - \text{time}_1)$
- There is a function that uses **velocity_1**, **velocity_2**, **time_1**, and **time_2** to calculate **acceleration**
 - $\text{acceleration} = (\text{velocity}_2 - \text{velocity}_1) / (\text{time}_2 - \text{time}_1)$
- There is a function that uses **mass** and **acceleration** to calculate **force**.
- A button to calculate **force**
- A label to display the calculated **force**