

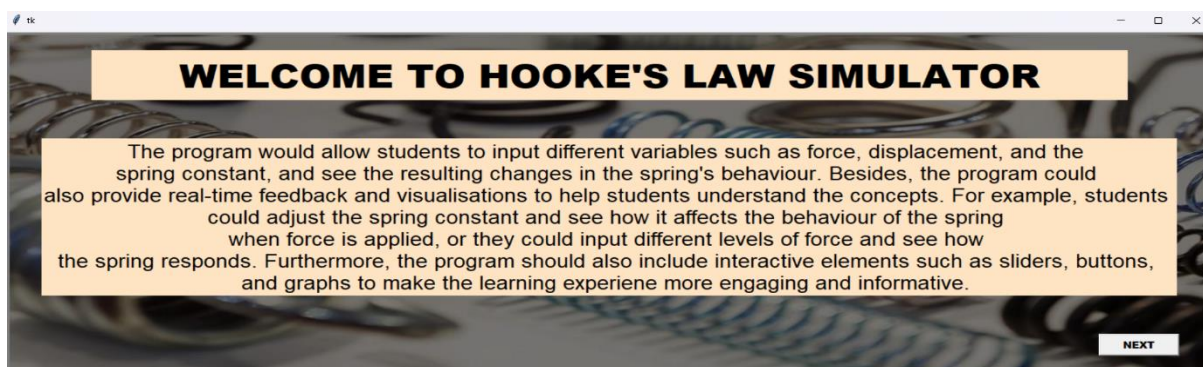
User Guide

Welcome to the user manual for the "Hooke's Law Simulator" app! This app is designed to show you real-time feedback of a spring that obeys Hooke's Law.

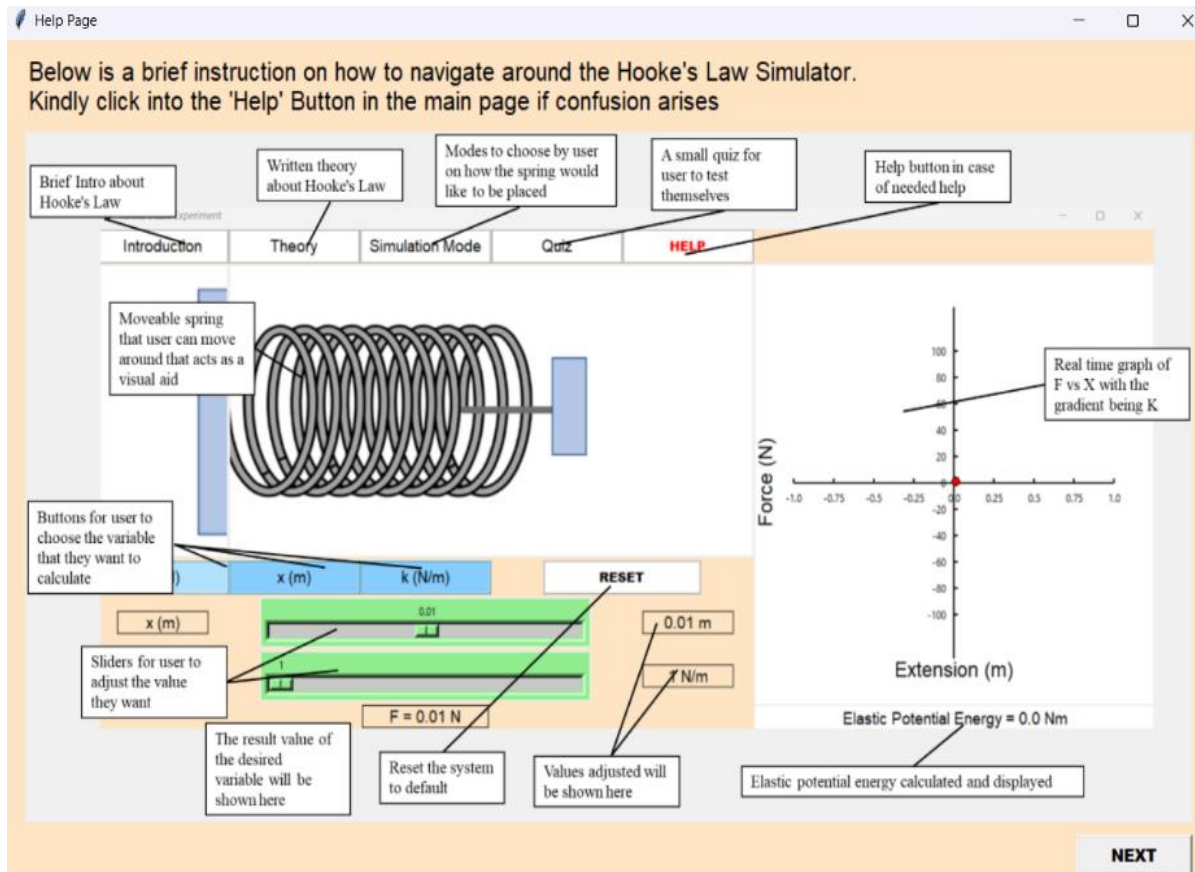
Getting started:

To use the app, first make sure you have downloaded our app zip files "EFY Team 15 Increment 4" onto your device. Then, install pip PIL into your code editor terminal. Click on <https://blog.finxter.com/python-install-pil/> on how to install pip PIL on Window, Mac, Linux, Ubuntu, Anaconda and so on (Dr. Christian Mayer, n.d.).

Once done, run the "index" file in your code editor and a welcome page will be displayed.

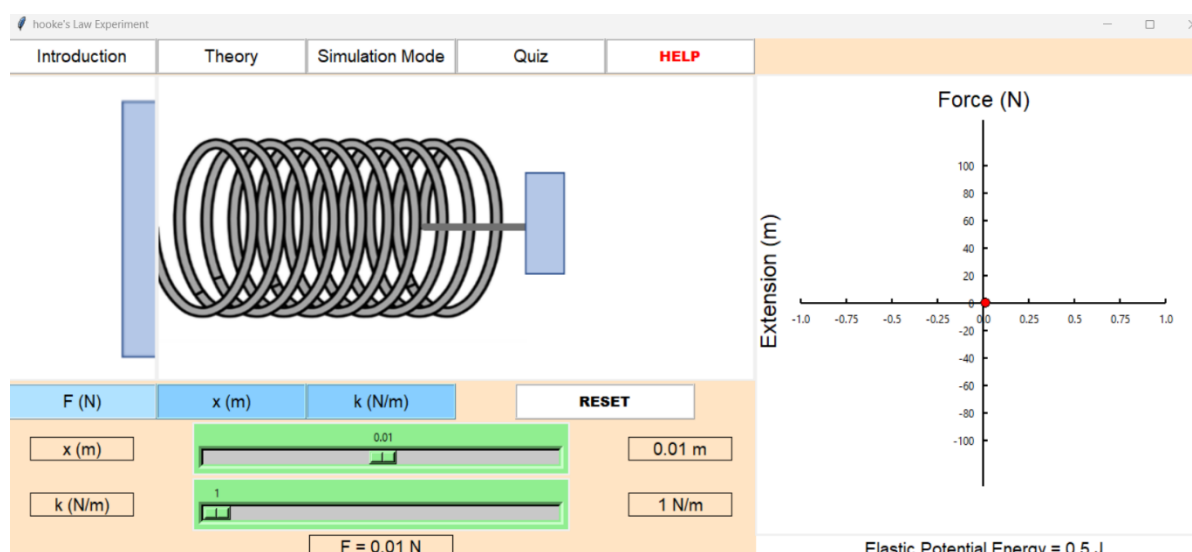


Click "Next" on the welcome page to bring you to a brief instruction on how to use the app.

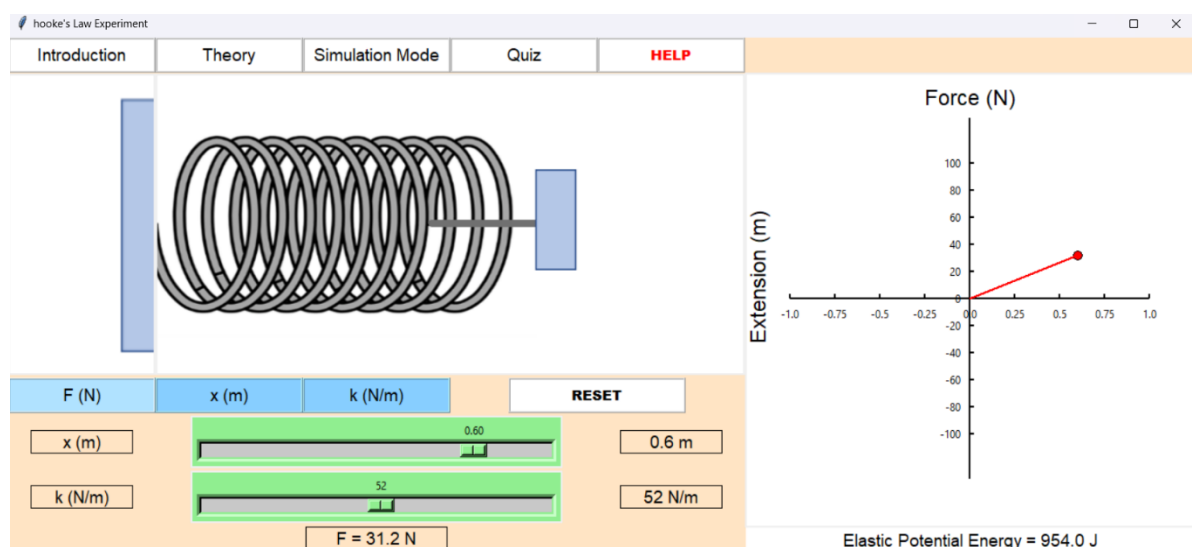


Using the app:

After that, click “Next” to bring you to the simulator. This will take you to the live feedback screen where you can see the current position of the spring and a real time feedback graph.

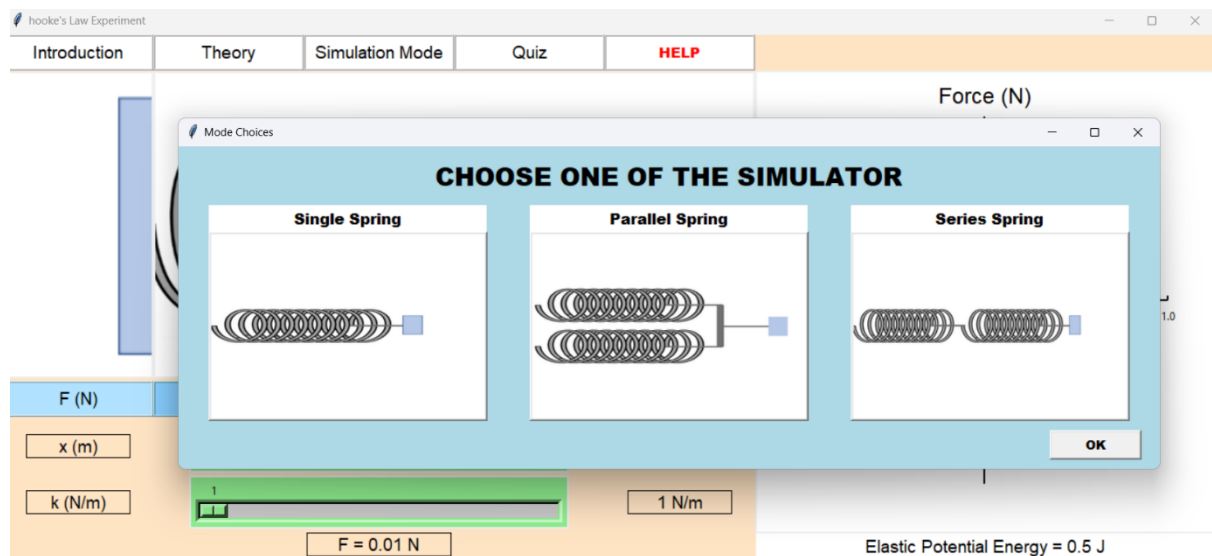


The app will automatically calibrate the spring and set it to its initial position. Once the spring is set up, you can begin to change the variables (extension, x , spring constant, k and force, F depending on which output you would like to know) and see the real-time feedback on the app. As you change the value, the app will display the spring's current position and a graph. You can adjust values by using the slider on the screen.

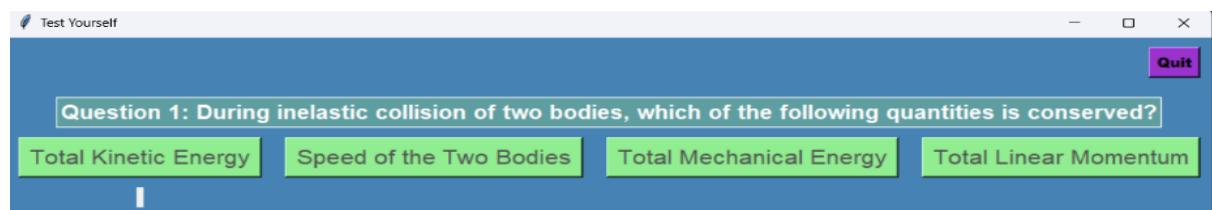


You can also tap the "reset" button to bring the spring back to its initial position and start again.

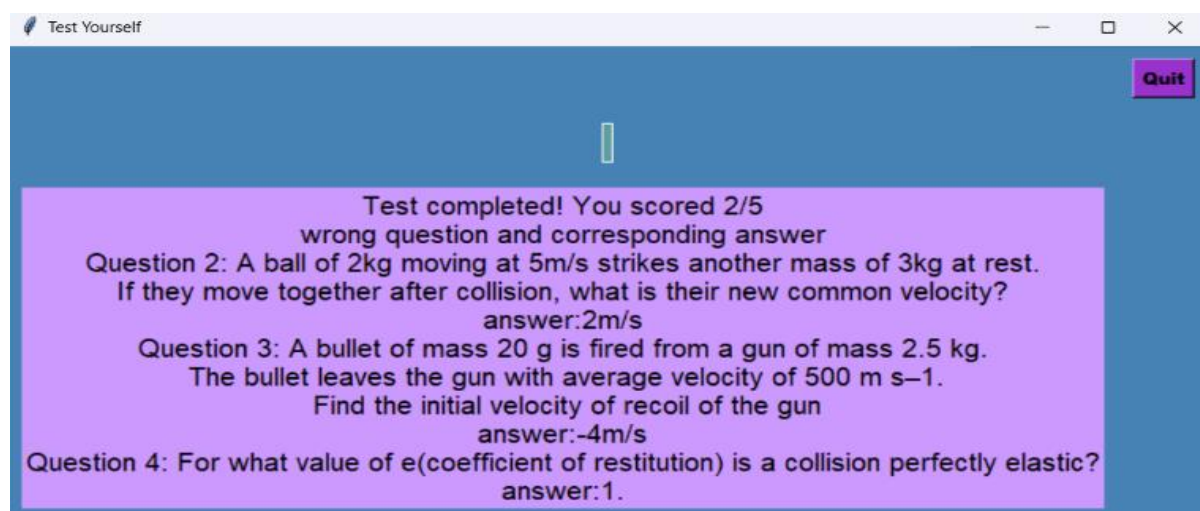
The type of simulator can be changed too on the “Simulation Mode” button.



You can also access the quiz feature by clicking "Quiz" button.



A review board that shows your score and the question you answered wrongly with the corresponding answer will be displayed. Click “Quit” to return to the main page.



Conclusion:

The Hooke's Law Simulator app is a simple yet powerful tool for anyone studying Hooke's Law or working with springs. With real-time feedback and data analysis features, the app provides a comprehensive and interactive experience for users.