Conclusion

We hope that the previous chapters helped you learn the material in your introductory physics textbook a little better by giving you the opportunity to explore and play with the ideas in a concrete way. We also hope that these exercises made you appreciate the power of scientific computation. It can be an invaluable tool in finding and visualizing solutions and also in helping us build up our physical intuition and our conceptual understanding of physics.

We encourage you to use the sample codes provided in this book as a springboard for developing your own codes. These programs are pretty barebones and could be embellished in numerous ways. More importantly, we hope that you use the tools you have acquired to simulate your own favorite physical processes. Play around with the code! Tinker with it, and see what happens!

Keep VPython in mind also for the second semester of your introductory physics sequence. There should be plenty of chances to use it for, say, visualizing electric and magnetic fields and so on. In fact, there are a number of excellent sample programs already on the *glowscript.org* platform. Additional programs and resources can be found at multiple online repositories.[1]

Finally, if you think you want to pursue the physics major, remember VPython can come in handy for your upper-level physics coursework. At that time, it is likely that you have become more familiar with scientific computing and may be comfortable using the Python programming language. You can choose from a number of excellent

[1] see, for instance:
https://vpython.org/contents/contributed.html
https://bphilhour.trinket.io
https://phys221.wordpress.com/vpython-tutorials/

recent textbooks on computational physics using Python.[2] In fact, we consider VPython an excellent gateway into the broader world of computational physics and scientific computing.

[2]For instance:
R.H. Landau and M.J. Páez, *Computational Problems for Physics: With Guided Solutions Using Python* (CRC Press, 2018).
J.M. Kinder and P. Nelson, *A Student's Guide to Python for Physical Modeling* (Princeton U. Press, 2018).
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