

Errata and Addenda

As of May 31, 2022

This document describes corrections and additions to the book, *An Introduction to Python Programming for Scientists and Engineers*, by Johnny Wei-Bing Lin, Hannah Aizenman, Erin Manette Cartas Espinel, Kim Gunnerson, and Joanne Liu, published by Cambridge University Press in 2022. This document is copyright © 2012–2022 by the same authors, all rights reserved. All notices from the book also apply to this document.

- p. xxvi: Add, “Unicode® is a registered trademark of Unicode, Inc. in the United States and other countries. Wikipedia is a trademark of the Wikimedia Foundation,” in the Mark and Trademark Acknowledgments section Add, “Screenshots of Spyder sessions may contain elements from a variety of sources licensed under open source or other permissive licenses. A full list of these elements is given at <https://github.com/spyder-ide/spyder/blob/master/NOTICE.txt>,” in the Copyright Acknowledgments section.
- p. xxx: Change, “I thank my wife Karen,” to, “I thank my wife Karen”.
- p. 55: Change, “Jupyter Markdown,” to, “Jupyter markdown,” in the last paragraph before the “Positional Input Parameters for Required Input” section.
- pp. 44–45: Add, “See Resnick and Halliday (1977, p. 54) for the kinematic equations under constant acceleration. The equations in Try This! 3-5 are for the case of zero acceleration.”
- p. 104: Change, “Because variable `a` has type `int`, we know that its value is either a positive or negative whole number (or zero) and we can use the variable in an expression that are typically defined for integer values (e.g., arithmetic),” to, “Because variable `a` has type `int`, we know that its value is either a positive or negative whole number (or zero) and we can use the variable in an expression that is typically defined for integer values (e.g., arithmetic).”
- p. 120: Change, “Arrays are like lists except each element of an array has the same type,” to “Arrays are like lists except the total number of elements in an array cannot change and each element of an array has the same type.”
- p. 139: Change, “To recap: We have seen one-dimensional loops work,” to, “To recap: We have seen how one-dimensional loops work.”
- p. 145: Change, “The command `pass` is the way we tell the Python interpreter ‘do nothing’” to, “The command `pass` is the way we tell the Python interpreter to ‘do nothing.’”
- p. 189: Change, “Thus, the last column in `temp_sub` is the index one column, not the index 2 (or last) column,” to, “Thus, the last column in `temp_sub` is the index 1 column, not the index 2 (or last) column.”

- p. 239: Change, “While it is common to see the pattern of having both nested loops be `for` loops and the inner loop start at the line immediately following the outer loop ...,” to, “While it is common to see the pattern of having both nested loops be `for` loops and the inner loop start at the line immediately following the outer loop start ...”
- p. 243: Change, “Using nested branching, write a code that sets the value of `is_between` using the logic as given above but does not use the `and` operator,” to, “Using nested branching, write code that sets the value of `is_between` using the logic as given above but does not use the `and` operator.”
- p. 270: Change, “When that happens, refer to the final attribute through a ‘chain’ of attribute references,” to, “When that happens, we refer to the final attribute through a ‘chain’ of attribute references.”
- p. 285: Change, “Thus, we have the following: ... when an empty replacement fields (`{}`) are used,” to, “Thus, we have the following: ... when empty replacement fields (`{}`) are used.”
- pp. 395–396: Add a note to the captions for Figures 13.1–13.3 that the images are slightly altered (e.g., magnified, etc.) from the original in Volkman et al. (2004).
- p. 480: The text, `data['title']`, should be rendered with straight quotes instead of curly quotes, i.e., as `data['title']`.
- pp. 509–510: Occurrences of `'data0001.txt'` and `'mean'` should be rendered with straight quotes instead of curly quotes, i.e., as `'data0001.txt'` and `'mean'`, respectively.
- p. 517: Change, “The result of these methods are iterable and thus can be looped over,” to, “The results of these methods are iterable and thus can be looped over.”
- p. 534: The string `'density'` should use straight quotes, not curly quotes, i.e., `'density'`.
- p. 583: The string `'elev'` should use straight quotes, not curly quotes, i.e., `'elev'`.
- p. 586: The string `'Dongsihuan'` should use straight quotes, not curly quotes, i.e., `'Dongsihuan'`.
- p. 620: The text, `groupby('Color')`, should be rendered with straight quotes instead of curly quotes, i.e., as `groupby('Color')`.
- p. 635: To footnote 3, add, “Also see Section 22.4.1 for more on generators.”
- p. 652: In Self-Test Answer 20-5, after the answer code, add, “The `input_list[:-1]` command will return an empty list if `input_list` is an empty list. So, the recursive `input_list` call will continue until the maximum recursion depth is exceeded.”
- p. 657: Same correction as on p. 55, described above.
- p. 660: Change, “There are other docstring formats beside the NumPy format, with its own strengths and weaknesses,” to, “There are other docstring formats beside the NumPy format, each with its own strengths and weaknesses.”
- p. 704: Add, “[https://](https://www.cprogramming.com/tutorial/shared-libraries-linux-gcc.html)” to the URL www.cprogramming.com/tutorial/shared-libraries-linux-gcc.html at the beginning of footnote 3.

- p. 715: Add a line under “Lists and Tuples” in Appendix C.2.1 that is the topic “Concatenating lists” and gives as the location Section 20.2.2.
- p. 728: Add a period after “*PLoS Biol*” in the Volkman et al. (2004) reference.