

Buy the Book!

Table of Contents

[Praise for *Test-Driven Development with Python*](#)

[Preface](#)

[Preface to the Third Edition: TDD in the Age of AI](#)

[Prerequisites and Assumptions](#)

[Acknowledgments](#)

[Additional Thanks for the Second Edition](#)

[Additional Thanks for the Third Edition](#)

[The Basics of TDD and Django](#)

[1. Getting Django Set Up Using a Functional Test](#)

[2. Extending Our Functional Test Using the unittest Module](#)

[3. Testing a Simple Home Page with Unit Tests](#)

[4. What Are We Doing with All These Tests? \(And, Refactoring\)](#)

[5. Saving User Input: Testing the Database](#)

[6. Improving Functional Tests: Ensuring Isolation and Removing Magic Sleeps](#)

[7. Working Incrementally](#)

[8. Prettification: Layout and Styling, and What to Test About It](#)

[Going to Production](#)

[9. Containerization aka Docker](#)

[10. Making Our App Production-Ready](#)

[11. Getting a Server Ready for Deployment](#)

[12. Infrastructure as Code: Automated Deployments with Ansible](#)

[Forms and Validation](#)

[13. Splitting Our Tests into Multiple Files, and a Generic Wait Helper](#)

[14. Validation at the Database Layer](#)

[15. A Simple Form](#)

[16. More Advanced Forms](#)

[More Advanced Topics in Testing](#)

[17. A Gentle Excursion into JavaScript](#)

[18. Deploying Our New Code](#)

[19. User Authentication, Spiking, and De-Spiking](#)

[20. Using Mocks to Test External Dependencies](#)

[21. Using Mocks for Test Isolation](#)

[22. Test Fixtures and a Decorator for Explicit Waits](#)

[23. Debugging and Testing Server Issues](#)

[24. Finishing "My Lists": Outside-In TDD](#)

[25. CI: Continuous Integration](#)

[26. The Token Social Bit, the Page Pattern, and an Exercise for the Reader](#)

[27. Fast Tests, Slow Tests, and Hot Lava](#)

[Appendix A: Obey the Testing Goat!](#)

[Appendix B: The Subtleties of Functionally Testing External Dependencies](#)

[Appendix C: Continuous Deployment \(CD\)](#)

[Appendix D: Behaviour-Driven Development \(BDD\) Tools](#)

[Appendix E: Test Isolation, and "Listening to Your Tests"](#)

[Appendix F: Building a REST API: JSON, Ajax, and Mocking with JavaScript](#)

[Appendix G: Cheat Sheet](#)

[Appendix H: What to Do Next](#)

[Appendix I: Source Code Examples](#)

[Appendix J: Bibliography](#)

Acknowledgments

Lots of people to thank, without whom this book would never have happened, and/or would have been even worse than it is.

Thanks first to "Greg" at \$OTHER_PUBLISHER , who was the first person to encourage me to believe it really could be done. Even though your employers turned out to have overly regressive views on copyright, I'm forever grateful that you believed in me.

Thanks to Michael Foord, another ex-employee of Resolver Systems, for providing the original inspiration by writing a book himself, and thanks for his ongoing support for the project. Thanks also to my boss Giles Thomas, for foolishly allowing another one of his employees to write a book (although I believe he's now changed the standard employment contract to say "no books"). Thanks also for your ongoing wisdom and for setting me off on the testing path.

Thanks to my other colleagues, Glenn Jones and Hansel Dunlop, for being invaluable sounding boards, and for your patience with my one-track-record conversation over the last year.

Thanks to my wife, Clementine, and to both my families—without whose support and patience I would never have made it. I apologise for all the time spent with my nose in the computer on what should have been memorable family occasions. I had no idea when I set out what the book

would do to my life ("Write it in my spare time, you say? That sounds reasonable..."). I couldn't have done it without you.

Thanks to my tech reviewers, Jonathan Hartley, Nicholas Tollervy, and Emily Bache, for your encouragements and invaluable feedback. Especially Emily, who actually conscientiously read every single chapter. Partial credit to Nick and Jon, but that should still be read as eternal gratitude. Having y'all around made the whole thing less of a lonely endeavour. Without all of you, the book would have been little more than the nonsensical ramblings of an idiot.

Thanks to everyone else who's given up their time to give some feedback on the book, out of nothing more than the goodness of their heart: Gary Bernhardt, Mark Lavin, Matt O'Donnell, Michael Foord, Hynek Schlawack, Russell Keith-Magee, Andrew Godwin, Kenneth Reitz, and Nathan Stocks. Thanks for being much smarter than I am, and for preventing me from saying several stupid things. Naturally, there are still plenty of stupid things left in the book, for which y'all can absolutely not be held responsible.

Thanks to my editor, Meghan Blanchette, for being a very friendly and likeable slave driver, and for keeping the book on track, both in terms of timescales and by restraining my sillier ideas. Thanks to all the others at O'Reilly for your help, including Sarah Schneider, Kara Ebrahim, and Dan Fauxsmith for letting me keep British English. Thanks to Charles Roumeliotis for your help with style and grammar. We may never see eye-to-eye on the merits of Chicago School quotation/punctuation rules, but I sure am glad you were around. And thanks to the design department for giving us a goat for the cover!

And thanks most especially to all my early release readers, for all your help picking out typos, for your feedback and suggestions, for all the ways in which you helped to smooth out the learning curve in the book, and most of all for your kind words of encouragement and support that kept me going. Thank you Jason Wirth, Dave Pawson, Jeff Orr, Kevin De Baere, crainbf, dsisson, Galeran, Michael Allan, James O'Donnell, Marek Turnovec, SoonerBourne, julz, Cody Farmer, William Vincent, Trey Hunner, David Souther, Tom Perkin, Sorcha Bowler, Jon Poler, Charles Quast, Siddhartha Naithani, Steve Young, Roger Camargo, Wesley Hansen, Johansen Christian Vermeer, Ian Laurain, Sean Robertson, Hari Jayaram, Bayard Randel, Konrad Korzel, Matthew Waller, Julian Harley, Barry McClendon, Simon Jakobi, Angelo Cordon, Jyrki Kajala, Manish Jain, Mahadevan Sreenivasan, Konrad Korzel, Deric Crago, Cosmo Smith, Markus Kemmerling, Andrea Costantini, Daniel Patrick, Ryan Allen, Jason Selby, Greg Vaughan, Jonathan Sundqvist, Richard Bailey, Diane Soini, Dale Stewart, Mark Keaton, Johan Wärlander, Simon Scarfe, Eric Grannan, Marc-Anthony Taylor, Maria McKinley, John McKenna, Rafał Szymański, Roel van der Goot, Ignacio Reguero, TJ Tolton, Jonathan Means, Theodor Nolte, Jungsoo Moon, Craig Cook, Gabriel Ewilazarus, Vincenzo Pandolfo, David "farbisch2", Nico Coetzee, Daniel Gonzalez, Jared

Contrascere, Zhao 赵亮, and many, many more. If I've missed your name, you have an absolute right to be aggrieved; I am incredibly grateful to you too, so write to me and I will try and make it up to you in any way I can.

And finally thanks to you, the latest reader, for deciding to check out the book! I hope you enjoy it.

Additional Thanks for the Second Edition

Thanks to my wonderful editor for the second edition, Nan Barber, and to Susan Conant, Kristen Brown, and the whole team at O'Reilly. Thanks once again to Emily and Jonathan for tech reviewing, as well as to Edward Wong for his very thorough notes. Any remaining errors and inadequacies are all my own.

Thanks also to the readers of the free edition who contributed comments, suggestions, and even some pull requests. I have definitely missed some of you on this list, so apologies if your name isn't here, but thanks to Emre Gonulates, Jesús Gómez, Jordon Birk, James Evans, Iain Houston, Jason DeWitt, Ronnie Raney, Spencer Ogden, Suresh Nimbalkar, Darius, Caco, LeBodro, Jeff, Duncan Betts, wasabigeek, joegnis, Lars, Mustafa, Jared, Craig, Sorcha, TJ, Ignacio, Roel, Justyna, Nathan, Andrea, Alexandr, bilyanhadzhi, mosegontar, sfarzy, henziger, hunterji, das-g, juanriaza, GeoWill, Windsooon, gonulate, Margie Roswell, Ben Elliott, Ramsay Mayka, peterj, 1hx, Wi, Duncan Betts, Matthew Senko, Neric "Kasu" Kaz, Dominic Scotto, Andrey Makarov, and many, many more.

Additional Thanks for the Third Edition

Thanks to my editor, Rita Fernando, thanks to my tech reviewers Béres Csanád, David Seddon, Sebastian Buczyński, and Jan Giacomelli, and thanks to all the early release readers for your feedback, big and small, including Jonathan H., James Evans, Patrick Cantwell, Devin Schumacher, Nick Nielsen, Teemu Viikeri, Andrew Zipperer, artGonza, Joy Denebeim, mshob23, Romilly Cocking, Zachary Kerbo, Stephanie Goulet, David Carter, Jim Win Man, Alex Kennett, Ivan Schneider, Lars Berberich, Rodrigo Jacznik, Tom Nguyen, rokbot, Nikita Durne, and to anyone I've missed off this list, my sincere apologies, ping me and I'll add you, and thank you thank you once again.

Extra Thanks for Csanàd

Every single one of the tech reviewers for this edition was invaluable, and they all contributed in different and complementary ways.

But I want to give extra thanks to Csanàd, who went beyond the normal remit of a tech reviewer, so far as to do substantial actual rewrites of several chapters in [part3].

You can't blame him for anything in there though, because I've been over them since, so any errors or problems you might spot are definitely things I've added since.

Anyways, thanks so much Csanàd, you helped me feel like I wasn't entirely alone.

License: Creative Commons [CC-BY-NC-ND](https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode) (<https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode>). Last updated: 2025-10-27 16:48:45 UTC

Comments

ALSO ON OBEY THE TESTING GOAT!

Saving User Input: Testing the Database

2 years ago • 4 comments

We've already had a hint of it, and now it's time to start to get to know the real power of ...

Getting A Server Ready For Deployment

a year ago • 1 comment

With a PaaS, you don't get your own server, instead you're renting a "service" at a ...

Prettification: Layout and Styling, and What to

2 years ago • 4 comments

We're starting to think about releasing the first version of our site, but we're a bit ...

Finishing Outside-In

2 years ago • 1 comment

The @prope Python This feature of th



Join the discussion...



[Share](#)

[Best](#) [Newest](#) [Oldest](#)



[richardnpaul](#)

8 years ago edited

I think that Greg's publisher's name should be here not the var >> Thanks first to "Greg" at \$OTHER_PUBLISHER,

1

0

[Reply](#)



[Andrew](#)

2 years ago edited

Hey, Richard -- good eye!

Thanks first to "Greg" at \$OTHER_PUBLISHER, who was the first person to encourage me to believe it really could be done. Even though your employers turned out to have overly regressive views on copyright, I'm forever grateful that you believed in me.

I claim Harry intends to use `\\$OTHER_PUBLISHER` rather than the publisher's name.

I hypothesize he uses the variable instead of the name to avoid stating the publisher's name.

Stating the publisher's name in the remark would publicly criticize the particular publisher for its regressive views on copyright.

Using the variable allows Harry to acknowledge "Greg" without publicly criticizing the particular publisher for which "Greg" worked.

Publicly criticizing the company would be rude, according to some readers.

Using variables like this occurs in the jargon writers/readers of programs use.

Other examples include:

- "At \$PREVIOUS_EMPLOYER we used a buggy, hand-rolled system for continuous integration"
 - "\$BOSS told me to cut development time in half, so I wrote the tests but not the code"
 - "I called customer support at \$VENDOR, and the representative told me to read the manual"
-

This ^ response is based on reading your comment as a proposal to fix a typo.

If your comment is (a) a recommendation to share the name of the particular publisher whose views on copyright are overly aggressive instead of (a) a proposal to fix a typo, then the response above does not address your recommendation, and I leave that to Harry.

1

0

[Reply](#)

R

[richardnpaul](#)

↗ Andrew

2 years ago

You're probably right. I read it as a parsing issue when generating the page, but as you say it could well be that Harry is not wanting to out the specific publisher.

1

0 Reply


