



Collective Wisdom from the Experts

97 Things Every Programmer Should Know

Table of Contents

| Introduction | 0 |
|---|----|
| Act with Prudence | 1 |
| Apply Functional Programming Principles | 2 |
| Ask "What Would the User Do?" (You Are not the User) | 3 |
| Automate Your Coding Standard | 4 |
| Beauty Is in Simplicity | 5 |
| Before You Refactor | 6 |
| Beware the Share | 7 |
| The Boy Scout Rule | 8 |
| Check Your Code First before Looking to Blame Others | 9 |
| Choose Your Tools with Care | 10 |
| Code in the Language of the Domain | 11 |
| Code Is Design | 12 |
| Code Layout Matters | 13 |
| Code Reviews | 14 |
| Coding with Reason | 15 |
| A Comment on Comments | 16 |
| Comment Only What the Code Cannot Say | 17 |
| Continuous Learning | 18 |
| Convenience Is not an -ility | 19 |
| Deploy Early and Often | 20 |
| Distinguish Business Exceptions from Technical | 21 |
| Do Lots of Deliberate Practice | 22 |
| Domain-Specific Languages | 23 |
| Don't Be Afraid to Break Things | 24 |
| Don't Be Cute with Your Test Data | 25 |
| Don't Ignore that Error! | 26 |
| Don't Just Learn the Language, Understand its Culture | 27 |
| Don't Nail Your Program into the Upright Position | 28 |
| Don't Rely on "Magic Happens Here" | 29 |
| | |

| Don't Repeat Yourself | 30 |
|---|----|
| Don't Touch that Code! | 31 |
| Encapsulate Behavior, not Just State | 32 |
| Floating-point Numbers Aren't Real | 33 |
| Fulfill Your Ambitions with Open Source | 34 |
| The Golden Rule of API Design | 35 |
| The Guru Myth | 36 |
| Hard Work Does not Pay Off | 37 |
| How to Use a Bug Tracker | 38 |
| Improve Code by Removing It | 39 |
| Install Me | 40 |
| Inter-Process Communication Affects Application Response Time | 41 |
| Keep the Build Clean | 42 |
| Know How to Use Command-line Tools | 43 |
| Know Well More than Two Programming Languages | 44 |
| Know Your IDE | 45 |
| Know Your Limits | 46 |
| Know Your Next Commit | 47 |
| Large Interconnected Data Belongs to a Database | 48 |
| Learn Foreign Languages | 49 |
| Learn to Estimate | 50 |
| Learn to Say "Hello, World" | 51 |
| Let Your Project Speak for Itself | 52 |
| The Linker Is not a Magical Program | 53 |
| The Longevity of Interim Solutions | 54 |
| Make Interfaces Easy to Use Correctly and Hard to Use Incorrectly | 55 |
| Make the Invisible More Visible | 56 |
| Message Passing Leads to Better Scalability in Parallel Systems | 57 |
| A Message to the Future | 58 |
| Missing Opportunities for Polymorphism | 59 |
| News of the Weird: Testers Are Your Friends | 60 |
| One Binary | 61 |
| Only the Code Tells the Truth | 62 |
| Own (and Refactor) the Build | 63 |
| | |

| Pair Program and Feel the Flow | 64 |
|--|----|
| Prefer Domain-Specific Types to Primitive Types | 65 |
| Prevent Errors | 66 |
| The Professional Programmer | 67 |
| Put Everything Under Version Control | 68 |
| Put the Mouse Down and Step Away from the Keyboard | 69 |
| Read Code | 70 |
| Read the Humanities | 71 |
| Reinvent the Wheel Often | 72 |
| Resist the Temptation of the Singleton Pattern | 73 |
| The Road to Performance Is Littered with Dirty Code Bombs | 74 |
| Simplicity Comes from Reduction | 75 |
| The Single Responsibility Principle | 76 |
| Start from Yes | 77 |
| Step Back and Automate, Automate, Automate | 78 |
| Take Advantage of Code Analysis Tools | 79 |
| Test for Required Behavior, not Incidental Behavior | 80 |
| Test Precisely and Concretely | 81 |
| Test While You Sleep (and over Weekends) | 82 |
| Testing Is the Engineering Rigor of Software Development | 83 |
| Thinking in States | 84 |
| Two Heads Are Often Better than One | 85 |
| Two Wrongs Can Make a Right (and Are Difficult to Fix) | 86 |
| Ubuntu Coding for Your Friends | 87 |
| The Unix Tools Are Your Friends | 88 |
| Use the Right Algorithm and Data Structure | 89 |
| Verbose Logging Will Disturb Your Sleep | 90 |
| WET Dilutes Performance Bottlenecks | 91 |
| When Programmers and Testers Collaborate | 92 |
| Write Code as If You Had to Support It for the Rest of Your Life | 93 |
| Write Small Functions Using Examples | 94 |
| Write Tests for People | 95 |
| You Gotta Care about the Code | 96 |

Your Customers Do not Mean What They Say

97

Click here to download full PDF material