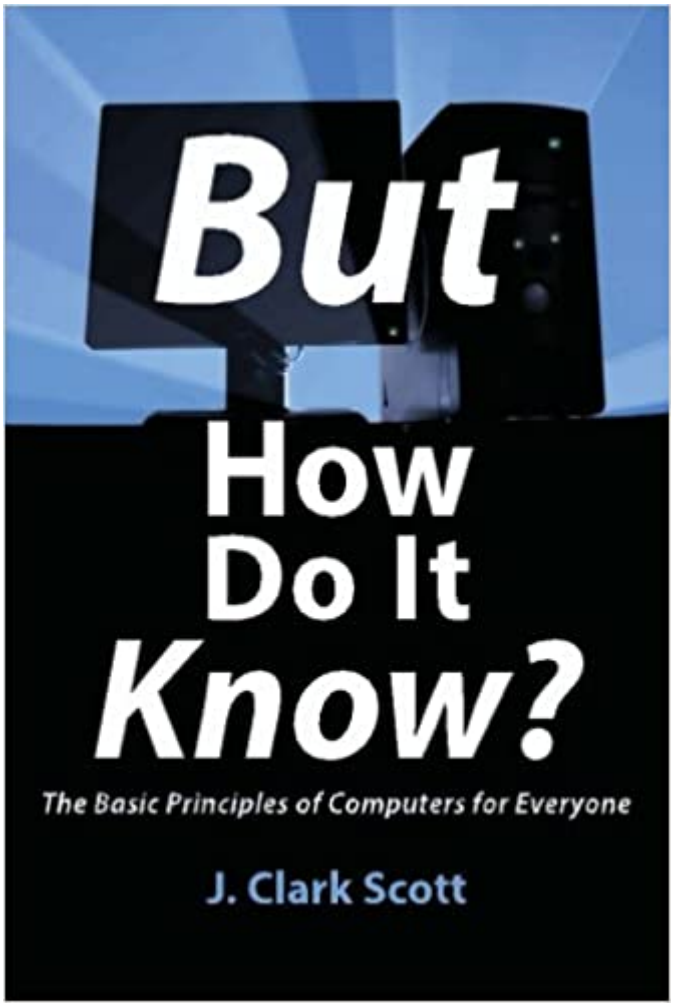
But How Do It Know? - The Basic Principles Of Computers For Everyone



Synopsis

Finally, this brand new book exposes the secrets of computers for everyone to see. Its humorous title begins with the punch line of a classic joke about someone who is baffled by technology. It was written by a 40-year computer veteran who wants to take the mystery out of computers and allow everyone to gain a true understanding of exactly what computers are, and also what they are not. Years of writing, diagramming, piloting and editing have culminated in one easy to read volume that contains all of the basic principles of computers written so that everyone can understand them. There used to be only two types of book that delved into the insides of computers. The simple ones point out the major parts and describe their functions in broad general terms. Computer Science textbooks eventually tell the whole story, but along the way, they include every detail that an engineer could conceivably ever need to know. Like Baby Bear’s porridge, But How Do It Know? is just right, but it is much more than just a happy medium. For the first time, this book thoroughly demonstrates each of the basic principles that have been used in every computer ever built, while at the same time showing the integral role that codes play in everything that computers are able to do. It cuts through all of the electronics and mathematics, and gets right to practical matters. Here is a simple part, see what it does. Connect a few of these together and you get a new part that does another simple thing. After just a few iterations of connecting up simple parts - voilÃƒÂ ! - it’s a computer. And it is much simpler than anyone ever imagined. But How Do It Know? really explains how computers work. They are far simpler than anyone has ever permitted you to believe. It contains everything you need to know, and nothing you don’t need to know. No technical background of any kind is required. The basic principles of computers have not changed one iota since they were invented in the mid 20th century. "Since the day I learned how computers work, it always felt like I knew a giant secret, but couldn’t tell anyone," says the author. Now he’s taken the time to explain it in such a manner that anyone can have that same moment of enlightenment and thereafter see computers in an entirely new light.

Book Information

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Customer Reviews

J. Clark Scott has had a long and diverse career in the computer industry, starting at large companies such as IBM and Intel, and eventually becoming the author of four successful consumer software packages. Early in his career, he noticed how confused some of his friends were about computers and gave them lectures to teach them how simple the basics really were. It was at that time that the idea for this book was born. This is his first book, but one that has been in the works for decades.

I am currently a 2nd year Electrical Engineering student and I am enrolled in a Digital Logic course. I found this subject to be very interesting and decided to research further into how computers use simple gates to do such complex functions. That is when I came across this book. Even with the little previous knowledge I had, this book broke everything down - from the simplicity of a register, to the building blocks of the RAM and CPU. It was enlightening to easily read more in depth on an otherwise extremely complex subject and finish the book with the knowledge of how most computers work. I highly recommend this book to my fellow Electrical and Computer engineering colleagues.But don’t think that just because engineering students find use of this book, that it is too complicated for those out of the discipline. The author does a great job of breaking down every little necessary nuance of each building block and thoroughly describes how each block works together to make a computer work; all wrapped up in a short ~200 page book. It is written without complex, technical jargon which avoids confusion wherever possible, and is readable by most who have a strong desire to learn more about how computers work.This was such an interesting and informative read. Again, I highly recommend this book to anyone with even the slightest curiosity about how a computer works.

It’s very easy to understand, you could read it even if all you’ve ever done on a computer is check your email and play minesweeper. I’m a computer engineering major and this book has given me a

better background understanding of hardware than any of my classes (and I'm going to one of the top 10 schools in the USA in the field, so that's saying something). I highly recommend this book to anyone who is going into the computer field, or to anyone who just wants to understand more about the magic grey box under their desk.Even good teachers seem to have trouble not explaining things as if you already know them. This author has mastered the art of explaining from the ground up. He assumes you know nothing, and gives you no more and no less than what you need to know to understand the current topic. It's not even boring if you already know a lot about computers, because he explains it so concisely and clearly that even if you already know it, it's fast to read it, and probably the simplest and most straightforward explanation you've ever gotten.

For as long as I can remember, I've been looking for a book that would actually explain down to the bare metal of how a computer actually works. Just about every book on computers gives you a purely abstracted "black-box" approach to what the various areas of the computers do, but none of them really reveals the actual nexus of how hardware performs software. Finally, this presently-obscure book does the job.Before this book, the best you got were books like STRANGERS IN COMPUTERLAND by Phil Bertoni or CODE by Charles Petzold. Both these books are indispensable for one's computer education, but they still lack sheer exhaustiveness of detail. But not this book. I dare say you will be extremely hard-pressed to ever find another book this sheerly exhaustive in pure detailed thoroughness.If you want to really and truly understand computers to the depth that typically only the old schoolers do, this is your book. Accept no substitutes.

Everything I learned from this book was absolutely necessary for my first steps to learning computers. I have more advanced books that will summarize this entire book within 30 pages- it was overwhelmingly to fast. This book has got me past that chapter and many more. My only complaint about this book was the first couple of chapters - of which were to basic for me, but if I didn't read "code" by Charles Petzold than these chapters would have been less repetitive for me and absolutely necessary. I would highly recommend this book to anyone. If you need help understanding this book, read the green book in the recommended list or code. All three of those books will give you a confident grasp on computers. "But - How do it know" helped me start on my fourth book inside the machine (more advanced; on 16, 32, and 64 bit computers).If you want to make sure you understand everything, the order I read all four of these books started with the "green one"(Rodger young), "Code" (Charles Petzold), "But How do it know" (Clark Scott), and

Inside The Machine (John Stokes)- not entirely finished with this one but is easy now. I understand everything %100 I have read in all of these books- but I believe the order I read the books helped me understand it all within a short amount of time. I am hoping to understand my fifth book "Elements on Computer Systems" (Noam Nissan) which a while back I thought looked like gibberish on paper. lol

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