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TOM: the Totally Obedient Moron

TOM is a computer simulator and shows you the internal workings, the real bits and bytes of computing, and lets you learn what they are and what you can do with them. It is not specific to any one chip, although it deals with the sort of processors used in IBM clone PCs, the now rather long-in-the-tooth CISC or Complex Instruction Set Chip.

However, as TOM shows you the very guts of computing, from truth tables of the four basic logic gates right up to the architecture of the simulator, there will always be something of relevance to learn. The basics don't go out of date, they just get buried, and TOM digs them up and shines a light on them. TOM lets you write programs in machine code, lets you see the workings of a flip flop - the memory of a computer - lets you flip it from on to off, and also teaches you how to write programs yourself from the ground up.

This is real education, deep stuff. It was used in the introduction to computer science course at Coventry University, so its credentials as a real teaching system are impeccable. Even better, a proportion of the purchase price goes to the Imperial Cancer Research Fund.

TOM is not for the faint hearted but it is also not that off-putting once you have bitten the bullet. It comes on floppy disk with a 146 page A4 clip folder full of notes, directions, lessons and background information. This is the real thing. The exercises in the folder cover everything including Hexadecimal and Binary notation and conversion, subroutines, stack overflow, full and half adders... you get the idea. This course is a must for the aspiring computer scientist and is great background information for anyone who wants to know how any of the magic of computing is possible.

TOM does not train you in how to use the computer, it teaches you in general educational terms what a computer is and how it really works by using specific examples of real circuits, chips, bits and bytes. It's informative, accurate, interesting and recommended. I don't want to give it back.

Bottom Line

TOM is my favourite because it teaches the way I like to learn -a very important consideration when choosing either a learning package or a college, come to that. It is authoritative, accurate, entertaining, non-threatening and yet informative. TOM is for the high flyer want-to-be, 15 and up, in a quiet room at home or a supportive classroom at school, college or even university.

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