For all the buzz about trendy IT techniques, data processing is still at the core of our systems, especially now that enterprises all over the world are confronted with exploding volumes of data. Database performance has become a major headache, and most IT departments believe that developers should provide simple SQL code to solve immediate problems and let DBAs tune any "bad SQL" later. In The Art of SQL, author and SQL expert Stephane Faroult argues that this "safe approach" only leads to disaster. His insightful book, named after Art of War by Sun Tzu, contends that writing quick inefficient code is sweeping the dirt under the rug. SQL code may run for 5 to 10 years, surviving several major releases of the database management system and on several generations of hardware. The code must be fast and sound from the start, and that requires a firm understanding of SQL and relational theory. The Art of SQL offers best practices that teach experienced SQL users to focus on strategy rather than specifics. Faroult's approach takes a page from Sun Tzu's classic treatise by viewing database design as a military campaign. You need knowledge, skills, and talent. Talent can't be taught, but every strategist from Sun Tzu to modern-day generals believed that it can be nurtured through the experience of others. They passed on their experience acquired in the field through basic principles that served as guiding stars amid the sound and fury of battle. This is what Faroult does with SQL. Like a successful battle plan, good architectural choices are based on contingencies. What if the volume of this or that table increases unexpectedly? What if, following a merger, the number of users doubles? What if you want to keep several years of data online? Faroult's way of looking at SQL performance may be unconventional and unique, but he's deadly serious about writing good SQL and using SQL well. The Art of SQL is not a cookbook, listing problems and giving recipes. The aim is to get you and your manager to raise good questions.
The Art of SQL is a truly unique book. In sharp contrast to many other database books on the market, this one does not endeavor to provide an exhaustive SQL reference guide, a low-level vendor-specific DBMS implementation description, or a cookbook-style collection of FAQs. Instead it explains, in incredibly straightforward and clear language, how to think about SQL, schema design, and DBMS operation in general and apply that knowledge to real-world situations. It provides simple mental models for the inner workings of most modern database systems along with concrete examples of how these mental models can be used to speed up queries and design better-performing schemas. Throughout the book many commonly encountered design patterns query requirements are discussed, such as tree or hierarchy-based data structures, name/value pair tables and various common types of selection filtering and aggregation. For each of these, multiple implementation options are described and evaluated, with the pros and cons of each approach explained. This book assumes the reader is proficient at forming SQL statements, and thus spends its time exploring how restructuring tables and indexes or reforming queries can affect performance. There is a stronger focus on schema design considerations rather than query structure optimization, which I really appreciated because many SQL references focus almost exclusively on the latter. There are also a number of rather complicated real-world examples sprinkled throughout the book. These are carefully analyzed using the concepts presented in their respective chapters. The idea here isn’t that the reader might encounter these exact problems in their projects, but rather to illustrate the process of applying the book’s concepts to a concrete problem.

SQL being a declarative style language is intuitive in simplicity, and yet, the instincts are not enough when you enter the labyrinth of complex problems. From an application developer’s prospect, I’m
familiar with different mindsets of programmers. Those who despise writing SQL beside CRUD statements and consider it a lowly languages, to those who religiously believe the business logic should reside in business objects (hence the name) and the lingua franca of database should not contain any of the rules despite the performance gains. Then there is SQL zealots who prefer to write virtually everything in SQL and would like to use high level algorithmically sophisticated languages as sheer callers. Nevertheless, SQL is ubiquitously essential part of a developer’s everyday life and "The Art of SQL" by Stephane’s Farlout the best thing after SUN-TZU’s "Art of War" in the SQL warfare."The Art of SQL" is theory and practice blended; once you start reading it, it becomes something in between Knuth’s Art of Computer Science with C++ annotated reference manual. This 350 page book is divided into twelve chapters and written as a pseudo war-manual. The topics of chapters are as follows.

Download to continue reading...


Dmca