

Learning SQL the Right Way

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Abstract

SQL is one of the most popular topics within information systems and analytics curricula. There are many textbooks, workbooks, online courses, and tutorials that cover SQL. Most of these resources focus on technical aspects, including syntax, of SQL. This paper attempts to show how students can benefit from a visual approach to learning SQL. The heart of this approach is a visualization of SQL queries through Entity Relationship Diagrams. Development of queries is done by processes that use the ERD as a map to help developers to walk through the database entities, attributes, and relationships in order to combine them into the right queries. This approach is particularly useful for learning complex queries that require multiple joins. The paper offers a concept of the visual process of building SQL queries and shows working examples.

Keywords: SQL, query, relational database, design, ERD, learning, visualization.