Introduction

Behind every application lies data—whether it's user accounts, product listings, or financial transactions. Databases are the backbone of software systems, and SQL (Structured Query Language) is the universal language used to interact with them.

This ebook is designed to remove the complexity around databases and SQL. You'll start with the basics of relational databases, move into writing SQL queries, and progress to schema design and optimization techniques. Step by step, you'll build the skills to manage data effectively and integrate databases into your applications.

What You'll Learn

- **Database Fundamentals** – Tables, rows, relationships, and normalization.

- **SQL Basics** – `SELECT`, `INSERT`, `UPDATE`, and `DELETE` queries.

- **Advanced Queries** – Filtering, joins, aggregations, and subqueries.

- **Schema Design** – How to model data for real-world applications.

- **Transactions & Constraints** – Ensuring data integrity and reliability.

- **Integrating Databases** – Using SQL in Node.js, Python, and other applications.

Who This Book Is For

- Absolute beginners who want to learn SQL from scratch.

- Developers looking to strengthen their backend and full-stack skills.

- Anyone who wants to confidently design and query relational databases.

Sneak Peek: A Simple SQL Query

```sql
-- Find all products that cost less than $50
SELECT name, price
FROM products
WHERE price < 50;
```

With just a single query, you can filter and retrieve meaningful insights from your data. By the end of this ebook, you'll be able to design schemas, write complex queries, and integrate databases into full-stack projects.

✅ **By the time you finish this ebook, you'll have a strong foundation in SQL and databases—skills that every professional developer needs.**