

# MCSD: Study Guide: SQL Server 7 Database Design

7 Database Design Mistakes to Avoid (With Solutions) - 7 Database Design Mistakes to Avoid (With Solutions) 11 minutes, 29 seconds - Designing, a **database**, is an important part of implementing a feature or creating a new application (assuming you need to store ...

Intro

Mistake 1 - business field as primary key

Mistake 2 - storing redundant data

Mistake 3 - spaces or quotes in table names

Mistake 4 - poor or no referential integrity

Mistake 5 - multiple pieces of information in a single field

Mistake 6 - storing optional types of data in different columns

Mistake 7 - using the wrong data types and sizes

How to Design a Database - How to Design a Database 10 minutes, 57 seconds - If you've got an idea or requirements to create a **database**., and don't know how to **design**, it, then this is the video for you. You can ...

Going from an idea to a database design

Step 1 - write it down

Step 2 - find the nouns

Create tables

Step 3 - add attributes

Step 4 - add relationships

Step 5 - assess and adjust

Normalisation and next steps

Database Design Course - Learn how to design and plan a database for beginners - Database Design Course - Learn how to design and plan a database for beginners 8 hours, 7 minutes - This **database design**, course will help you understand database concepts and give you a deeper grasp of **database design**.,

Introduction

What is a Database?

What is a Relational Database?

RDBMS

Introduction to SQL

Naming Conventions

What is Database Design?

Data Integrity

Database Terms

More Database Terms

Atomic Values

Relationships

One-to-One Relationships

One-to-Many Relationships

Many-to-Many Relationships

Designing One-to-One Relationships

Designing One-to-Many Relationships

Parent Tables and Child Tables

Designing Many-to-Many Relationships

Summary of Relationships

Introduction to Keys

Primary Key Index

Look up Table

Superkey and Candidate Key

Primary Key and Alternate Key

Surrogate Key and Natural Key

Should I use Surrogate Keys or Natural Keys?

Foreign Key

NOT NULL Foreign Key

Foreign Key Constraints

Simple Key, Composite Key, Compound Key

Review and Key Points....HA GET IT? KEY points!

Introduction to Entity Relationship Modeling

Cardinality

Modality

Introduction to Database Normalization

1NF (First Normal Form of Database Normalization)

2NF (Second Normal Form of Database Normalization)

3NF (Third Normal Form of Database Normalization)

Indexes (Clustered, Nonclustered, Composite Index)

Data Types

Introduction to Joins

Inner Join

Inner Join on 3 Tables

Inner Join on 3 Tables (Example)

Introduction to Outer Joins

Right Outer Join

JOIN with NOT NULL Columns

Outer Join Across 3 Tables

Alias

Self Join

SQL Full Course 2025 | SQL Tutorial for Beginners | SQL Beginner to Advanced Training | Simplilearn - SQL Full Course 2025 | SQL Tutorial for Beginners | SQL Beginner to Advanced Training | Simplilearn 11 hours, 27 minutes - The **SQL**, Full Course 2025 by Simplilearn offers a comprehensive learning path for mastering **SQL**,. Begin with an Introduction to ...

Introduction to SQL Full Course 2025

What is DBMS?

SQL Basics

SQL ER Diagram

Normalization in SQL

Descriptive Analysis Vs Stat

What is ETL

SQL FC

Joining Tables

Views in SQL

SQL Server tutorial

PostgreSQL

SQL CTE

SQL Project for data analysis

SQL interview questions

SQL - Complete Course in 3 Hours | SQL One Shot using MySQL - SQL - Complete Course in 3 Hours | SQL One Shot using MySQL 3 hours, 16 minutes - Early bird offer for first 5000 students only! International Student (payment link) - <https://buy.stripe.com/7sI00cdru0tg10saEQ> ...

Start

Introduction to SQL

What is database?

Types of databases

Installation of MySQL

Database Structure

What is table?

Creating our first database

Creating our first table

SQL Datatypes

Types of SQL Commands

Database related queries

Table related queries

SELECT Command

INSERT Command

Practice Questions

Keys

Constraints

SELECT Command in Detail

Where Clause

Operators

Limit Clause

Order By Clause

Aggregate Functions

Group By Clause

Practice Questions

Having Clause

General Order of Commands

UPDATE Command

DELETE Command

Revisiting Foreign Keys

Cascading Foreign Keys

ALTER Command

CHANGE and MODIFY Commands

TRUNCATE Command

JOINS in SQL

UNION in SQL

SQL Sub Queries

MySQL Views

Database Design Step-By-Step Tutorial for Beginners - Database Design Step-By-Step Tutorial for Beginners 38 minutes - Database design, is the foundation of any application that manipulates or has dependencies on data and/or databases. This video ...

FULL SQL DATABASE COURSE | Learn SQL in 70 minutes - FULL SQL DATABASE COURSE | Learn SQL in 70 minutes 1 hour, 10 minutes - ABOUT ME I'm Mo and I work as a data analytics manager / content creator. I make videos about how you can stay competitive ...

Course outline

Databases

Queries, tables and keys

Windows postgresQL installation

MacOS postgresQL installation

CREATE TABLE

INSERT INTO

SELECT, WHERE, AND \u0026 OR

IN, NOT IN, IS NULL, BETWEEN

ORDER BY, LIMIT, DISTINCT and Renaming columns

EXTRACT

UPPER, LOWER, LENGTH, TRIM

Concatenation, Boolean expressions and Wildcards

SUBSTRING, POSITION, COALESCE

MIN, MAX, AVG, SUM \u0026 COUNT

GROUP BY \u0026 HAVING

CASE (with GROUP BY and for transposing data)

JOIN \u0026 UNION

Subqueries

Bonus - 30 day moving total

Outro

SQL Advanced Tutorial | Advanced SQL Tutorial With Examples | SQL For Beginners | Simplilearn - SQL Advanced Tutorial | Advanced SQL Tutorial With Examples | SQL For Beginners | Simplilearn 1 hour - This video on **SQL**, Advanced Tutorial will help you learn the important advanced **SQL**, queries for performing complex operations.

SQL Advanced Tutorial

Stored Procedures

Triggers in SQL

Views in SQL

Windows Functions in SQL

How database works | Engineering side - How database works | Engineering side 20 minutes - Welcome to a youtube channel dedicated to programming and coding related tutorials. We talk about tech, write code, discuss ...

Intro

Questions

Database

ORM

Client

Optimization

Document format

Storage engine

Recovery manager

Competition

Conclusion

Database Design for School Students for an Entire School - Database Design for School Students for an Entire School 18 minutes - Databases, for schools where students change grades each year is a little more complicated than your average \"university ...

Intro

Req 1: students

Req 2: parents and carers

Req 3: school years

Req 4: terms

Req 6: classes

Req 7: subjects

Req 8: departments

Req 9: teachers

Req 10: teacher details

Req 11: classes and terms

Req 12: classrooms

Req 13: class times

Req 14: multiple periods

Req 15: student scores

Req 16: score grade mapping

Further requirements

SQL Server Performance Essentials – Full Course - SQL Server Performance Essentials – Full Course 4 hours, 3 minutes - In this course, Essentials of **SQL Server**, Performance For Every Developer, you will see how to diagnose what is happening with a ...

Introduction

1.1 Course Introduction

1.2 Why Developers should Understand SQL Performance

1.3 Tools you Need

1.4 Restore the Sample Database

1.5 Table Concept

1.6 Index Concept

1.7 Summary

2.1 Introduction

2.2 Understanding How SQL Server Will Execute a SQL Statement

2.3 Reading and Interpreting an Execution Plan for a SQL Statement

2.4 Getting Execution Statistics for a SQL Statement

2.5 Improving Statement Performance by Adding an Index

2.6 Rewriting SQL Statements for Improved Performance

2.7 Common Execution Plan Operations

2.8 Summary

3.1 Introduction

3.2 Index Terminology Refresher

3.3 What Should I Index in My Database?

3.4 Why Index Column Order Matters

3.5 Index Selectivity Explained

3.6 LIKE Clauses and Index Selectivity

3.7 How Functions in the WHERE Clause Affect Indexes

3.8 Include Columns and Covering Indexes



### 3.9 Over-indexing

### 3.10 Interpreting SQL Server Index Recommendations

### 3.11 Summary

## 4.1 Introduction

### 4.2 Getting Information About SQL Server Sessions and Resource Usage

### 4.3 Finding What SQL Statements are Currently Executing

### 4.4 Finding the Slowest, Most Expensive SQL Statements

### 4.5 Getting SQL Server's Recommendations on Missing Indexes

### 4.6 Finding Indexes That are Not Being Used

### 4.7 Summary

## 5.1 Introduction

### 5.2 Setting up a SQL Profiler Trace

### 5.3 Running a SQL Profiler Trace

### 5.4 Running a Trace as a Server Side Trace

### 5.5 Introduction to Using Extended Events for SQL Tracing

### 5.6 Setting up an Extended Events Trace Session

### 5.7 Running and Configuring the Display Settings for an Extended Events Trace

### 5.8 Analyzing Extended Events Trace Data

### 5.9 Using Extended Events in SQL Azure

### 5.10 Summary

## 6.1 Introduction

### 6.2 Use Parameterized SQL

### 6.3 Are Stored Procedures Faster Than SQL in Application Code?

### 6.4 Commit Behavior and Performance

### 6.5 Object Relational Mappers Just Generate SQL

### 6.6 Solving the N+1 Selects Problem

### 6.7 Summary

SQL Create Table and Insert Data - A Complete Tutorial - SQL Create Table and Insert Data - A Complete Tutorial 15 minutes - In this tutorial we are going to look at how to create a table and insert data in **SQL**

**Server**,. We also look at how to insert multiple ...

Create a Database

How To Create a Table in SQL Server

Insert single row into Table

Column name or number of supplied values does not match table definition.

Insert multiple rows into Table

Create Table with Primary Key

IDENTITY insert - Auto Incrementing Id Columns

NULL VS NOT NULL

Considerations when creating SQL tables

Cannot insert the value NULL into COLUMN

How To Add a Column To Table in SQL

Add Primary Key To a table

Drop a Primary Key Column in SQL SERVER

Drop a column from A Table in SQL

How to create Table,Insert,Update,Delete in SQL Server very easy steps - How to create Table,Insert,Update,Delete in SQL Server very easy steps 7 minutes, 42 seconds - #sqlservermanagementstudio #**sqlserver**, #DawaCIT #CreateTable #UpdateTable #DeleteTable #sqlquery **SQL Server Database**, ...

Introduction

Create Database

Roadmap for Learning SQL - Roadmap for Learning SQL 4 minutes, 52 seconds - Animation tools: Adobe Illustrator and After Effects. Checkout our bestselling System **Design**, Interview books: Volume 1: ...

Introduction

SQL Operations

SQL Functions

Conclusion

What is SQL? [in 4 minutes for beginners] - What is SQL? [in 4 minutes for beginners] 4 minutes, 26 seconds - Structured Query Language - or **SQL**., is a language that communicates with **databases**,. Learn what **SQL**, is, and why it is an ...

Intro

How does SQL work

How to use SQL

Other features of SQL

Three things to remember

SQL Explained in 100 Seconds - SQL Explained in 100 Seconds 2 minutes, 23 seconds - Learn the fundamentals of Structured Query Language **SQL**,! Even though it's over 40 years old, the world's most popular ...

Intro

History

Relational Database

SQL Role

Syntax

Outro

How to Connect PHP to MS SQL (Part 2) – The DLL You Need! [TAGALOG] - How to Connect PHP to MS SQL (Part 2) – The DLL You Need! [TAGALOG] 11 minutes, 7 seconds - In Part 2 of our PHP + MS **SQL**, tutorial series, we go hands-on with the connection process. I'll **guide**, you through finding and ...

Basic SQL Commands #sql #sqlserver #basic #sqlbasics - Basic SQL Commands #sql #sqlserver #basic #sqlbasics by CydexCode 116,730 views 2 years ago 6 seconds – play Short - sqlcommand #commands #sqlinjection #basicsql #sqlcommands #sql #mysql #thisisqld #**sqlserver**, #sqlab #nosql #postgresql ...

Basic SQL commands #viral #youtubeshorts #study #shorts - Basic SQL commands #viral #youtubeshorts #study #shorts by Brain boosters 265,126 views 2 years ago 6 seconds – play Short - Basic **SQL**, commands #viral #youtubeshorts #**study**, #shorts.

Database Design Step-By-Step Beginner Tutorial Using SQL Server - Database Design Step-By-Step Beginner Tutorial Using SQL Server 40 minutes - In this installment of the API Series, we share the process of **designing**, a **database**, for a new **design**, in **SQL Server**,. Using SQL ...

Intro

About the channel (don't forget to subscribe)

Database design process outline

Diagram the necessary database entities needed

Create the new database using SSMS (SQL Server Management Studio)

Inserting new test data

Conclusion

How to Solve This Database Design Problem - How to Solve This Database Design Problem 8 minutes, 9 seconds - There's a type of **design**, that is possible in software development but hard to do in a **database**,. In

this video, I'll explain what this ...

The problem

Option 1

Option 2

Option 3

Option 4

Option 5

Which is best?

The Best Way To Add Audit Tables to Your Database - The Best Way To Add Audit Tables to Your Database 8 minutes, 48 seconds - Creating audit tables in your **database**, will allow you to keep a history of changes made to data. This is helpful for regulatory and ...

Option 1

Option 2

Option 3

My recommendation

Is SQL worth learning in 2024? - Is SQL worth learning in 2024? by codebasics 213,460 views 1 year ago 21 seconds – play Short - ... the data industry right now there is one common language that is used in all these fields which is **SQL SQL**, is also called the salt ...

Database Design for Custom Fields - Database Design for Custom Fields 18 minutes - The ability to allow custom fields to be added to a **database**, is a common requirement. This could be something the user wants to ...

EAV (Entity Attribute Value)

Modified EAV

Single Table

Class Table Inheritance

Concrete Table Inheritance

Normalised Tables

JSON

Dynamic Schema

SQL with certification #sql - SQL with certification #sql by Yashashvi Bhadauria 108,630 views 2 years ago 20 seconds – play Short - ... **SQL**, for free with certification the first course is Advanced databases and **SQL**, querying the second one is **database design**, and ...

Microsoft SQL Server 2022 Tutorial for Beginners | Amit Thinks | Class 11th 12th - Microsoft SQL Server 2022 Tutorial for Beginners | Amit Thinks | Class 11th 12th 1 hour, 54 minutes - This video covers the Microsoft **SQL Server**, course using the free and open-source Microsoft **SQL Server**.. The course consists of ...

## Course Introduction

1. SQL Introduction \u0026 Overview
2. SQL vs NoSQL
3. Install SQL Server 2022 on Windows
4. Create a new database
5. Create a new table
6. Insert Records
7. SQL SELECT Statement
8. SQL SELECT DISTINCT Statement
9. SQL WHERE Clause
10. SQL ORDER BY Clause
11. SQL AND Operator
12. SQL OR operator
13. SQL NOT operator
14. SQL IN Operator
15. SQL BETWEEN Operator
16. SQL LIKE Operator
17. SQL MAX() Function
18. SQL MIN() Function
19. SQL SUM() Function
20. SQL AVG() function
21. SQL COUNT() Function
22. SQL NOT NULL Constraint
23. SQL UNIQUE Constraint
24. SQL Primary Key Constraint
25. SQL Foreign Key Constraint

- 26. SQL Check Constraint
- 27. SQL ASC Command
- 28. SQL DESC Command
- 29. SQL ALTER TABLE Statement
- 30. SQL UPDATE Statement
- 31. SQL Aliases
- 32. SQL Stored Procedures
- 33. SQL CREATE INDEX Statement
- 34. SQL SELECT INTO Statement
- 35. SQL SELECT TOP CLAUSE
- 36. Backup Database in SQL
- 37. SQL Views
- 38. Drop a Table in SQL

Learn Basic SQL in 15 Minutes | Business Intelligence For Beginners | SQL Tutorial For Beginners 1/3 - Learn Basic SQL in 15 Minutes | Business Intelligence For Beginners | SQL Tutorial For Beginners 1/3 17 minutes - In this **SQL**, tutorial for beginners, you'll learn how to write basic **SQL**, queries to ask for data from **databases**, in just 15 minutes.

Introduction

Why learn SQL for BI?

Tutorial start

SQL SELECT statement

AS field alias

WHERE clause

ORDER BY clause

INNER JOIN

Aliasing tables

GROUP BY clause

HAVING clause

Outro

SQL Database \u0026 Microsoft SQL Server: Career Paths, Skills \u0026 Real-Time Training at SQL School  
- SQL Database \u0026 Microsoft SQL Server: Career Paths, Skills \u0026 Real-Time Training at SQL  
School 54 minutes - Looking to start or grow your career in the world of SQL **Databases**, and Microsoft  
**SQL Server**,? You're in the right place! At SQL ...

Best website to practice SQL #shorts - Best website to practice SQL #shorts by MyCaptain 18,245 views 1  
year ago 22 seconds – play Short

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