***SQL Quick Study Guide***

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| Sr. No. | Topic | Resource |
| \* | SQL crash course | [Link](https://www.youtube.com/watch?v=hlGoQC332VM&t=9510s&pp=ygUQc3FsIGNyYXNoIGNvdXJzZQ%3D%3D) |
| \* | SQL Practice Questions (Important) | [Link](https://leetcode.com/studyplan/top-sql-50/) |
|  | **Beginner** |  |
| 1 | What are ACID properties? | [Link](https://www.youtube.com/watch?v=-GS0OxFJsYQ&pp=ygUZV2hhdCBhcmUgQUNJRCBwcm9wZXJ0aWVzPw%3D%3D) |
| 2 | What are levels of abstractions in DB? | [Link](https://www.youtube.com/watch?v=I_PrZ1NHZr8&pp=ygUmV2hhdCBhcmUgbGV2ZWxzIG9mIGFic3RyYWN0aW9ucyBpbiBEQj8%3D) |
| 3 | What are different types of relationships in SQL? | [Link](https://www.youtube.com/watch?v=O1bi5MjqsAc&pp=ygUvV2hhdCBpcyBkaWZmZXJlbnQgdHlwZSBvZiByZWxhdGlvbnNoaXBzIGluIFNRTD8%3D) |
| 4 | What is concurrency control? | [Link](https://www.youtube.com/watch?v=t5hsV9lC1rU&pp=ygUcV2hhdCBpcyBjb25jdXJyZW5jeSBjb250cm9sPw%3D%3D) |
| 5 | What is normalization, and different types of normalization? | [Link](https://www.youtube.com/watch?v=XcfxkHrHTVE&pp=ygUOcHl0aG9uIG1vZHVsZXM%3D) |
| 6 | What is denormalization? | [Link](https://www.youtube.com/watch?v=GFQaEYEc8_8&t=27s&pp=ygU8V2hhdCBpcyBub3JtYWxpemF0aW9uLCBhbmQgZGlmZmVyZW50IHR5cGVzIG9mIG5vcm1hbGl6YXRpb24_) |
| 7 | What are different types of keys? | [Link](https://www.youtube.com/watch?v=p3yJZH8_bsc&pp=ygUhV2hhdCBhcmUgZGlmZmVyZW50IHR5cGVzIG9mIGtleXM_) |
| 8 | What is ETL in SQL? | [Link](https://www.youtube.com/watch?v=Tq8oCFjP6kQ&pp=ygUTV2hhdCBpcyBFVEwgaW4gU1FMPw%3D%3D) |
| 9 | Explain different types of constraints | [Link](https://www.youtube.com/watch?v=uPOGPL2C0_8&pp=ygUmRXhwbGFpbiBkaWZmZXJlbnQgdHlwZXMgb2YgY29uc3RyYWludHM%3D) |
| 10 | What is difference between drop, truncate and delete commands | [Link](https://www.youtube.com/watch?v=_m1aJdD-oD8&pp=ygU9V2hhdCBpcyBkaWZmZXJlbmNlIGJldHdlZW4gZHJvcCwgdHJ1bmNhdGUgYW5kIGRlbGV0ZSBjb21tYW5kcw%3D%3D) |
| 11 | What is a view and how is it different from a table? | [Link](https://www.youtube.com/watch?v=UPko6Lqm17o&pp=ygU0V2hhdCBpcyBhIHZpZXcgYW5kIGhvdyBpcyBpdCBkaWZmZXJlbnQgZnJvbSBhIHRhYmxlPw%3D%3D) |
| 12 | What is purpose of joins and types of joins? | [Link](https://www.youtube.com/watch?v=H6988OpZKTU&pp=ygUsV2hhdCBpcyBwdXJwb3NlIG9mIGpvaW5zIGFuZCB0eXBlcyBvZiBqb2lucz8%3D) |
| 13 | What is a database transaction? | [Link](https://www.youtube.com/watch?v=t5hsV9lC1rU&pp=ygUfV2hhdCBpcyBhIGRhdGFiYXNlIHRyYW5zYWN0aW9uPw%3D%3D) |
| 14 | What is a subquery? | [Link](https://www.youtube.com/watch?v=i5acg3Hvu6g&pp=ygUTV2hhdCBpcyBhIHN1YnF1ZXJ5Pw%3D%3D) |
| 15 | How to do Transaction control? | [Link](https://www.youtube.com/watch?v=GOQVlrQohtM&pp=ygUeSG93IHRvIGRvIFRyYW5zYWN0aW9uIGNvbnRyb2w_) |
| 16 | How to take a backup and restore database? | [Link](https://www.youtube.com/watch?v=51H6U8BBhN0&pp=ygUpSG93IHRvIHRha2UgYSBiYWNrdXAgYW5kIHJlc3RvcmUgZGF0YWJhc2U%3D) |
|  | **Advanced** |  |
| 1 | What is database partitioning? | [Link](https://www.youtube.com/watch?v=wXvljefXyEo&pp=ygUeV2hhdCBpcyBkYXRhYmFzZSBwYXJ0aXRpb25pbmc_) |
| 2 | What is a checkpoint? | [Link](https://www.youtube.com/watch?v=IIPf4D6s6ZY&pp=ygUWV2hhdCBpcyBhIGNoZWNrcG9pbnQ_IA%3D%3D) |
| 3 | What are triggers and stored procedures? | [Link](https://www.youtube.com/watch?v=TtgH6NNDC8c&pp=ygUoV2hhdCBhcmUgdHJpZ2dlcnMgYW5kIHN0b3JlZCBwcm9jZWR1cmVzPw%3D%3D) |
| 4 | What are indexes and type of indexes | [Link](https://www.youtube.com/watch?v=E--yzX05_k8&pp=ygUlV2hhdCBhcmUgaW5kZXhlcyBhbmQgdHlwZSBvZiBpbmRleGVzPw%3D%3D) |
| 5 | What are intensions and extensions? | [Link](https://www.youtube.com/watch?v=3INaQgg2BZM&pp=ygUjV2hhdCBhcmUgaW50ZW5zaW9ucyBhbmQgZXh0ZW5zaW9ucz8%3D) |
| 6 | What is a cursor & Types of cursors? | [Link](https://www.youtube.com/watch?v=aT4CWStzP34&pp=ygUkV2hhdCBpcyBhIGN1cnNvciAmIFR5cGVzIG9mIGN1cnNvcnM_) |
| 7 | What is specialization and generalization | [Link](https://www.youtube.com/watch?v=4_vsGgy9cGs&pp=ygUpV2hhdCBpcyBzcGVjaWFsaXphdGlvbiBhbmQgZ2VuZXJhbGl6YXRpb24%3D) |
| 8 | Different types of integrity rules | [Link](https://www.youtube.com/watch?v=rXaxmKFvfmY&pp=ygUiRGlmZmVyZW50IHR5cGVzIG9mIGludGVncml0eSBydWxlcw%3D%3D) |
| 9 | What is data replication and types of data replication. | [Link](https://www.youtube.com/watch?v=bI8Ry6GhMSE&pp=ygU3V2hhdCBpcyBkYXRhIHJlcGxpY2F0aW9uIGFuZCB0eXBlcyBvZiBkYXRhIHJlcGxpY2F0aW9uLg%3D%3D) |
| 10 | What is database sharding? | [Link](https://www.youtube.com/watch?v=hdxdhCpgYo8&pp=ygUaV2hhdCBpcyBkYXRhYmFzZSBzaGFyZGluZz8%3D) |
| 11 | Explain Master Slave architecture of Database | [Link](https://www.youtube.com/watch?v=_RS78xr2Dc4&pp=ygUtRXhwbGFpbiBNYXN0ZXIgU2xhdmUgYXJjaGl0ZWN0dXJlIG9mIERhdGFiYXNl) |