

# SQL Tips to Improve Query Performance

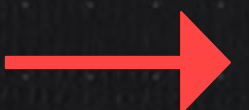


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# 1. Use **Limited Joins**

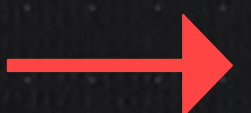
- Make a habit of **using as less join as possible**, using **more joins degrade the query performance**
- Use only when it's absolutely required





## 2. **Indexing** and **Primary Key**

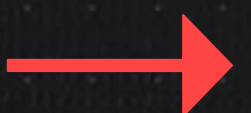
- Make sure to **create indexes** for **the columns being frequently searched**
- Make sure to put the primary key in the table, it also helps in boosting the performance



### 3. Use **Query Plan**

- **Query plan/optimization report breaks the query processing into multiple parts and tells you how much time each part is taking**
- Helps a lot in identifying the issue, and you can take necessary actions accordingly

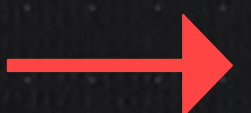
**Note:** Query Plan/Optimization Report's Name might depends on DB to DB.





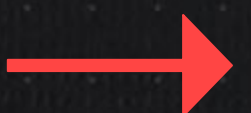
## 4. Restrict **Columns**

- **Avoid fetching all columns** or any unused columns, focus on the columns you need to accomplish the given task
- Don't try to reuse same query everywhere in which you're using unused columns
- Create another method, and write a separate query



## 5. **Avoid Wildcards**

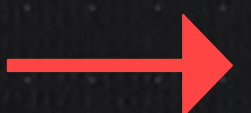
- The **wildcard-based search slows down the query** performance
- It scans all the records to find correct results
- Avoid them if the same job can be done with an alternate approach





## 6. **Avoid Subqueries**

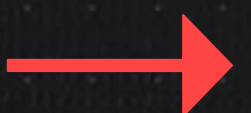
- Too much **subquery can degrade the performance** very badly
- They get executed for each row fetched so it is advisable to limit their use



## 7. Try **EXISTS** over Joins

- Sometimes, to check if a record exist or not, we use join with the main table
- If you are not retrieving the columns of the other table which you've joined, then try to use EXISTS instead of Join
- **EXISTS is blazing fast!**

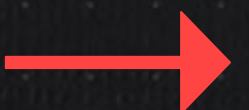
**Note:** Not in all cases Exists is fast, it depends on your DB server, Query execution plan used by your server so first try if EXISTS is performing better in place of Join, if yes then only use it.





## 8. Prefer **Primary Key**

- **Primary keys are optimised for searching**, whenever possible always use primary key in where clause Instead of using any non primary key column



❤️ **Thanks** for reading !

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