



MySQL RDBMS

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DDL – ALTER statement

- ALTER statement is used to do modification into table, view, function, procedure, ...
- ALTER TABLE is used to change table structure.
- Add new column(s) into the table.
 - ALTER TABLE table ADD col TYPE;
 - ALTER TABLE table ADD c1 TYPE, c2 TYPE;
- Modify column of the table.
 - ALTER TABLE table MODIFY col NEW_TYPE;
- Rename column.
 - ALTER TABLE CHANGE old_col new_col TYPE;
- Drop a column
 - ALTER TABLE DROP COLUMN col;
- Rename table
 - ALTER TABLE table RENAME TO new_table;

Using ALTER TABLE on production db is bad practice / strictly prohibited.

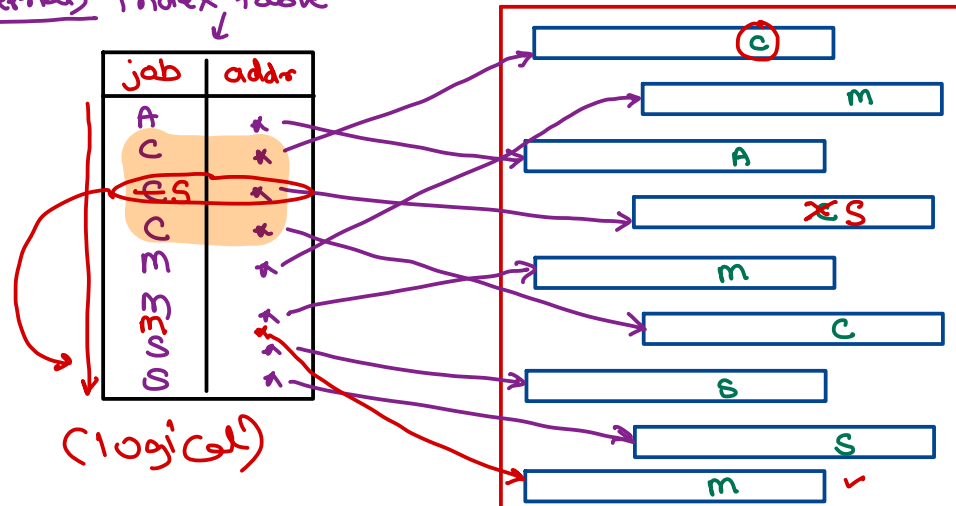


Index

- Index enable faster searching in tables by indexed columns.
 - CREATE INDEX idx_name ON table(column);
- One table can have multiple indexes on different columns/order.
- Typically indexes are stored as some data structure (like BTREE or HASH) on disk.
- Indexes are updated during DML operations. So DML operation are slower on indexed tables.

```
CREATE INDEX idx ON emp('job');
```

(internal) index, table



Auto
rotation

Query performance

- Few RDBMS features ensure better query performance.
 - Index speed up execution of SELECT queries (search operations).
 - Correlated sub-queries execute faster.
- Query performance can be observed using EXPLAIN statement.
 - EXPLAIN FORMAT=JSON SELECT ...;
- EXPLAIN statement shows
 - Query cost (Lower is the cost, faster is the query execution).
 - Execution plan (Algorithm used to execute query e.g. loop, semi-join, materialization, etc).
- Optimizations can be enabled or disabled by optimizer_switch system variable.
 - SELECT @@optimizer_switch;
 - SET @@optimizer_switch='materialization=off';





Thank you!

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