



Create Index

Choosing the Best Index for your Application

```
WITH tmp_1 AS
(
    SELECT Calc1 =
        ( (SELECT TOP 1 DataValue
          FROM (
              SELECT TOP 50 PERCENT DataValue
              FROM SOMEDATA
              WHERE DataValue IS NOT NULL
              ORDER BY DataValue
            ) AS A
          ORDER BY DataValue DESC
        ) +
        (SELECT TOP 1 DataValue
         FROM (
              SELECT TOP 50 PERCENT DataValue
              FROM SOMEDATA
              WHERE DataValue Is NOT NULL
              ORDER BY DataValue DESC
            ) AS A
          ORDER BY DataValue ASC)
        )/2
),
tmp_2 AS
(
    SELECT AVG(DataValue) Mean, MAX(DataValue) - MIN(DataValue) AS MaxMinRange
    FROM SOMEDATA
),
tmp_3 AS
(
    SELECT TOP 1 DataValue AS Calc2, COUNT(*) AS Calc2Count
    FROM SOMEDATA
    GROUP BY DataValue
    ORDER BY Calc2Count DESC
```

Create Index Statement

```
CREATE [OR REPLACE] Index [IF NOT EXISTS] index_name...;
```

Create Index Statement

- `CREATE [UNIQUE|FULLTEXT|SPATIAL] INDEX index_name`

Unique Index

- CREATE TABLE `Employees` (column_name datatype, ...
...
UNIQUE KEY (`column_name`)
);

Plain Indexes

- `CREATE INDEX index_name on table table_name...;`

Unique Index

- ALTER TABLE table_name ADD UNIQUE index_name(column_name);
- CREATE UNIQUE INDEX index_name ON table_name(column_name);

Full-Text Indexes

- Select ... From... Where word like '%abc%'
- Can be used only with MyISAM, Aria, InnoDB and Mroonga
- Can be created only for CHAR, VARCHAR, or TEXT columns


Spatial Index

- `CREATE TABLE geom (g GEOMETRY NOT NULL, SPATIAL INDEX(g));`
- `ALTER TABLE geom ADD SPATIAL INDEX(g);`
- `CREATE SPATIAL INDEX sp_index ON geom (g);`

* SPATIAL INDEX creates an R-tree index


Create Index Statement

- `CREATE [UNIQUE|FULLTEXT|SPATIAL] INDEX index_name;`




index_type

- CREATE [...] INDEX index_name [index_type];




index_type

- USING BTREE | HASH | RTREE



index_type

- `CREATE INDEX index_name on table_name(column) using hash;`

- 
- CREATE [...] INDEX index_name on table_name(column,...)
[WAIT n | NOWAIT]

index_option

- CREATE [...] INDEX index_name [...] on table_name(column,...)
[index_option]

Options:

[KEY_BLOCK_SIZE [=] value
| WITH PARSER parser_name
| COMMENT 'string'
| CLUSTERING={YES| NO}]
[IGNORED | NOT IGNORED]

- CREATE [...] INDEX index_name [...] on table_name(column,...)
[algorithm_option | lock_option]

Options:

ALGORITHM [=] {DEFAULT|INPLACE|COPY|NOCOPY|INSTANT}

LOCK [=] {DEFAULT|NONE|SHARED|EXCLUSIVE}