

# 1

Monday, May 27, 2019 5:03 PM

- `ALTER TABLE tablename {ADD attributeName (Data Type)  
| DROP attributeName}`

`<> ↳ !=`

`= ↳ ==`

- Comparison of strings  $a < b, bbc > bba$

- `DELETE FROM tablename WHERE ...`

- FWGHDS

No aggregates allowed in `WHERE`

- If a query is not monotone then we cannot write it as a `SELECT-FROM-WHERE` query without nested subqueries.

- o A `SELECT-FROM-WHERE` query that does not have subqueries, and no aggregates, then it's monotone.

- SQL++

- o multisets `{ }`

- o Dataverse : database

Type: defines the schema

```
create type name as closed/open {  
    attr1 : type,  
    ...  
}
```

Dataset: relation/table

- o if-else

```
((CASE WHEN condition1 THEN operation1  
      WHEN conditionn THEN operation n  
      ELSE operation n+1 END))
```

- { pipeline  
 | block

- Key { Primary key  
 | Key of a sequential file  
 | index key

- o Primary/Secondary

- Primary key  $\leftrightarrow$  secondary key

- clustered  $\leftrightarrow$  unclustered.

- o CREATE UNIQUE INDEX Indexname ON table(attr)  
CLUSTERED  
...

- Spark

- $\leftarrow$  resilient distributed dataset

- map: flat map

- Rule 1: 1st normal, recoverable.

$\text{Seq} < T >$ : Local to one servers maybe nested.

- Data frames immutable  $\text{Dataset} < \text{Row} >$

Datasets  $\text{Dataset} < \text{Type} >$

- When a deadlock occurs, then the database system aborts one or more transactions.

Isolation Level	Dirty Reads	Nonrepeatable Reads	Phantoms
Read Uncommitted	Allowed	Allowed	Allowed
Read committed	Not Allowed	Allowed	Allowed
Repeatable Read	Not Allowed	Not Allowed	Allowed
Serialization	Not Allowed	Not Allowed	Not allowed.